English Medium Instruction (EMI) in higher education in Hong Kong



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Abstract

This research project involves a longitudinal mixed-methods study investigating challenges, attitudes, and perceptions among students, lecturers, and language instructors at English medium instruction (EMI) universities in Hong Kong. The study employs quantitative and qualitative methods in order to examine language-related academic challenges and the perceived effectiveness of EMI programmes at the tertiary level in Hong Kong. Additionally, it explores the interplay of language challenges with a range of background variables such as gender, L1, previous medium of instruction, academic discipline, and year of study.

Data collection for the study was derived from semi-structured multiple-perspective interviews and a large-scale multi-institutional survey administered at four different Hong Kong universities. The semi-structured interviews were conducted at one university, which involved a total of 153 interviews with undergraduate students, subject lecturers and EAP instructors. The study included 113 student interviews, with 26 students being tracked over four years throughout their undergraduate study, 20 instructor interviews, and 20 subject-content lecturer interviews. The lecturer interviews were conducted with lecturers representing seven faculties and schools and 14 departments within a university, and the 20 instructor interviews were conducted with English for academic purposes (EAP) language-support instructors from the university's English Language Centre (ELC). The online survey was administered at four Hong Kong universities: City University of Hong Kong (CityU), The Hong Kong Polytechnic University (PolyU), The Hong Kong University of Science and Technology (HKUST), and Hong Kong University (HKU), and a total of 1,982 students completed the survey.

By means of administering a large-scale multi-institutional questionnaire and employing multi-perspective qualitative longitudinal research by interviewing students, lecturers, and instructors, this study maximizes understanding of students' challenges in EMI programmes in higher education, as well as provides insightful knowledge from language instructors and subject-content lecturers who are well positioned to evaluate students' language-related challenges in EMI programmes in Hong Kong. Moreover, the study examines how the above-mentioned challenges and perceptions may vary based on variables such as background, such as gender and first language, previous medium of instruction, and academic discipline, and how such challenges may vary over the duration of students' four years of university study. This research represents one of the first mixed-method multiple-perspective four-year longitudinal studies in EMI contexts.

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List of abbreviations and acronyms

AD	Academic discipline
ANOVA	Analysis of variance
CEF	Common European Framework
CL1	Cantonese as a first language
CityU	City University of Hong Kong
CLIL	Content and Language Integrated Learning
CMI	Chinese-medium instruction (Cantonese)
EMI	English-medium instruction
ELA	English for Liberal Arts
EAP	English for Academic Purposes
ECS	EMI Challenges Scale
ELC	English Language Centre
ESP	English for Specific Purposes
EFL	English as a Foreign Language
FAST	Faculty of Applied Science and Textiles
FCE	Faculty of Construction and Environment
FHSS	Faculty of Health and Social Sciences
HE	Higher education
HEI	Higher education institution
HK	Hong Kong
HKU	University of Hong Kong
HKUST	Hong Kong University of Science and Technology
L1	First language
L2	Second language
MoI	Medium of instruction
OMI	Other medium of instruction
PMI	Putonghua medium of instruction
PMoI	Previous medium of instruction
PolyU	The Hong Kong Polytechnic University
QDAS	Qualitative data analysis software
MPI(s)	Multiple perspective interviews
RQ(s)	Research Question(s)
SHTM	School of Hotel and Tourism Management
UGC	University Grants Council
UK	United Kingdom
Y1(2,3,4)	Year 1 (2,3,4)

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Chapter 1 – Introduction

1.1 English as a medium of instruction (EMI)

Globalization has been the predominant force behind the modern spread of English, and there is now wide-spread agreement that English has become the global lingua franca (Coleman, 2006; Crystal, 2012; Jenkins, 2007; Lasagabaster, 2017; Seidlhofer, 2005; Smit, 2010). English is increasingly seen as an essential component for mobilization and success in developing and globalizing economies, and nowhere has the spread of English been more evident than in the area of higher education. The period over the past three decades has witnessed the unprecedented growth of English-medium instruction (EMI) on a global level. Higher education institutions (HEIs) in non-Anglophone countries continue to adopt EMI as a means to internationalise, increase their regional and global rankings, enhance their international collaboration, boost their global competitiveness and prestige, and attract international students and faculty from around the world (Dearden, 2014; Dimova et al., 2015; Doiz, et al., 2012; Galloway et al., 2017; Macaro et al., 2018; Marsh, 2006; Rose & McKinley, 2018). The increase in student mobility across international borders and between educational institutions, whether for short-term exchanges or full-degree programs, is seen by many as a means to enhance academic, personal, and professional development, as well as being a pathway to prepare students to be more competitive in a globalized world. HEIs also view the adoption of EMI as a means to attract a greater number of talented international research and teaching faculty to increase staff-student ratios and increase their institutions' research publication output (Galloway et al., 2017).

1.2 EMI in Hong Kong

Following the 1997 transfer of sovereignty of Hong Kong from Great Britain to China, the new Hong Kong government switched from what was largely an EMI policy to a 'mother-tongue' policy using Chinese as the language of instruction (Poon, 2010). This policy change decreased the use of EMI in public secondary schools from around 90 per cent to approximately 25 per cent (Evans, 2002). Not surprisingly, this policy change has drawn criticism and generated some controversy as secondary students generally need high levels of English proficiency for admission to universities in Hong Kong as well as for entry into large sectors of the workplace. Of the eight

Hong Kong universities funded by the University Grants Committee (UGC), six are EMI universities and two maintain a mixed medium of instruction policy using both Cantonese and English (Choi & Adamson, 2020). Although generally uncontroversial as a policy, EMI at the university level in Hong Kong has been seen as somewhat problematic given the large number of students speaking Cantonese as their usual language (Choi, 2010; Evans & Green, 2007; Poon, 2010) and the increasing number of students from mainland China who often enter Hong Kong universities with less exposure to English (Shepard & Rose, 2023). English proficiency is a standard requirement for admission to any of Hong Kong's publicly funded universities, and graduates of Hong Kong's EMI secondary schools are more likely to obtain places at local EMI universities than graduates from CMI schools (Choi, 2010). In 2010, the Hong Kong government implemented a 'fine-tuning' policy (Evans, 2011, 2013; Poon et al., 2013) giving CMI schools added flexibility to employ various MOI practices based on the schools' own determinations of students' needs. Presently, around 30 per cent of secondary schools in Hong Kong were EMI schools, while the large majority have retained a 'biliterate/trilingual' policy (Tsang & Dang, 2023; Yiu, 2026) aimed at enabling students to master written Chinese while learning to speak in Cantonese, Putonghua, and English. In the majority of these schools, CMI is typically used in all but one chosen academic subject, which is taught in English. In 2012, tertiary education in Hong Kong also underwent major reform when all eight government-funded public universities switched from a three-year curriculum to a four-year curriculum. Local Hong Kong students are now transitioning to university a year earlier than they were previously under the 3-year curriculum and are typically starting their undergraduate studies with a year less of exposure to English during primary and secondary school than they had under the previous system.

In addition to the changes in terms of the curriculum, Hong Kong educational institutions have been undergoing considerable changes in terms of student demographics. Although student populations in Hong Kong are still largely made up of mostly local Cantonese-speaking students, a growing number of non-Cantonese speaking students are emerging at all levels of education and are increasing diversity in classrooms. Between 2001 and 2016, the number of non-Chinese ethnic minorities in Hong Kong grew from 343,950 to 584,383 (CSD, 2002, 2016) resulting in a sizable increase of school-aged non-Chinese ethnic minorities who generally speak neither Cantonese nor Putonghua. At Hong Kong's tertiary level, this growing diversity has been even more evident. In

addition to the growing number of non-Chinese local students from various ethnic backgrounds that are now attending Hong Kong universities, there has also been a substantial increase of international students. As part of the push by the HK government to 'internationalize' local Hong Kong universities (Chan & Ng, 2008), the government has reduced student-visa requirements, removed quotas for fee-paying students, and encouraged local career opportunities for Chinese mainland students graduating from Hong Kong universities (Li & Bray, 2007). At the time of the handover in 1997, there were 1,355 international (non-local) students enrolled at the eight UGC funded universities comprising only 2% of the total student population (UGC, 2019). By the 2019/2020 academic year, the number rose to 19,213 international students, comprising approximately 19% of all Hong Kong university students (UGC, 2022), indicating an increase of more than 850% over the past two and a half decades.

This complex and changing context of EMI in Hong Kong warrants a renewed examination of language-related academic challenges faced by both local and non-local students studying subject content through English in EMI programmes in higher education in Hong Kong. This dissertation is divided into eight chapters. This Chapter 1 serves as the Introduction to the dissertation and provides an overview of the dissertation outlining Chapters 2 through 8.

Chapter 2 provides a review of the current and relevant literature on EMI in higher education as it pertains to this current study. This Chapter 2.1 provides an overview of key writings, theoretical concepts, and relevant empirical findings related to EMI from current existing literature. The purpose of this is threefold. First, the existing literature provides substantial background in terms of EMI-related challenges, concepts, and practices. Second, the review highlights relevant studies, noteworthy findings, and related issues that have influenced the conceptual and theoretical framework used to conduct my study. Third, a review of the existing literature, the limitations of the findings, and of the dearth of research in specific areas will more effectively situate my study in the context of EMI in HE in Hong Kong. Section 2.1 begins by introducing the chapter, and Section 2.2 provides a working definition of EMI. Section 2.3 provides a brief discussion of the differences and similarities of EMI and CLIL. Section 2.4 reviews the relevant literature on the growth of EMI on a global scale, and its inherent relationship with the internationalization of higher education. Section 2.5 reviews literature on the effectiveness of EMI in terms of its aims,

objectives, and policies. Section 2.6 provides an overview of relevant empirical studies examining numerous language-related challenges faced by students and teachers in EMI programmes at the tertiary level. Section 2.7 provides a review of relevant literature on classroom language use in EMI settings, particularly the use of code-mixing, code-switching, and translanguaging in multilingual classrooms. Section 2.8 reviews the status of EMI in Hong Kong, and Section 2.9 reviews literature on EMI challenges in Hong Kong. Section 2.10 concludes the chapter with a discussion of the limitations of the existing research, including the studies reviewed herein, and considers specific areas of research that may be lacking.

Chapter 3 outlines the methodological approach of the study. Section 3.1 introduces the chapter and provides an overview of the chapter's various sections. Section 3.2 presents the overall goals of the study, the research questions (RQs), and the corresponding research sub-questions. This is followed by Section 3.3 which provides an overview of the methodological framework. This includes an explanation and review of the mixed-methods multiple-perspective longitudinal research, the data collection timeline, the methods, and the triangulation of the data. Sections 3.4 and 3.5 present the data collection instruments. Section 3.4 presents the online questionnaire used for quantitative data collection, reviews the questionnaire's design, and outlines its various sections. Next it describes the questionnaire sampling and recruitment of participants. Lastly, it reviews the questionnaire's procedures and the timeline of its administration. Section 3.5 presents the semi-structured multiple-perspective interviews used for the qualitative data collection and an overview of the three different groups of EMI stakeholders interviewed. This section also provides a review of the transcription, coding, and thematic analysis (TA) of the interviews. This is followed by Section 3.6, which addresses the validity and reliability of this study. Section 3.7 addresses ethical considerations, and Section 3.8 presents a chapter summary.

Chapter 4 presents the quantitative findings related to language challenges faced by students at HK EMI universities. The chapter is divided into twelve sections and several sub-sections and correspond with findings from the online questionnaire as they relate to the RQs. Section 4.1 introduces the chapter, provides an overview of its content outlining the various sections, and presents the RQ it addresses. Section 4.2 presents an overview of the questionnaire participants including a breakdown in terms of gender, year of study, first language (L1), university, and the

students' previous medium of instruction (PMoI). Section 4.3 presents the quantitative findings from Sections B of the questionnaire, which measured students' responses to the four items related to the four language macro-skills: *listening, reading, speaking,* and *writing*, and Section C of the questionnaire, which measured students' language-related challenges through the mean scores of the 45-item 'EMI Challenges Scale' (ECS). Section 4.4 presents the findings of students' responses on the ECS in terms of 15 academic writing micro-skills. Section 4.5 presents the findings related to the 10 academic reading skills. Section 4.6 presents the findings related to the 10 academic speaking skills, and Section 4.7 presents the findings related to the 10 academic listening skills from the ECS. Section 4.8 presents findings related to the effect of gender and L1 in terms of differences between groups of reported language-related challenges. Section 4.9 presents findings on the effect of previous medium of instruction and examines differences between the four groups of MoI which are categorized as: English, Cantonese, Putonghua, and Other. Section 4.10 presents findings on differences in scores between students from the four universities included in this study: CityU, PolyU, HKUST, and HKU. Section 4.11 presents findings related to the effect of academic discipline on students' language related challenges. Section 4.12 presents findings related to the effect of the year of study on students' language-related challenges. Section 4.13 presents findings related to students' perceptions of language improvement through studying in an EMI university. Section 4.14 provides a summary of the chapter which highlights key findings from the quantitative data.

Chapter 5 presents the qualitative findings from the four-year longitudinal semi-structured students interviews pertaining to the research questions related to language challenges faced by students over their four-year UG study at an HK EMI university. The chapter is divided into ten sections and various sub-sections. The nine sections correspond with the main themes and subthemes based on the findings from the interview data. The findings from all four years of interviews have been brought together in this section to provide a more comprehensive and comparable representation of the data. Section 5.1 introduces the chapter, presents the RQ it discusses, and provides an overview of its content, outlining the various sections. Section 5.2 presents findings from the student interviews in terms of which language-related skills they found most and least challenging during the four years of their study. Specifically, this section highlights students' perceptions of the relative difficulty of the four language macro skills (i.e., reading, writing, speaking, listening)

each year as they progress through their UG study. The existing data from the author's MSc research presents the language skills students found most difficult (only) in their first year studying through EMI in a Hong Kong university. The data collected from years 2, 3, and 4 of the interviews presents a year-by-year analysis of which language skills students found most to least challenging during their second, third, and fourth (final) years. Section 5.3 presents the students' challenges related to writing and focuses on several sub-themes that emerged from the interviews. Section 5.4 presents the students' challenges with speaking. Section 5.5 presents findings related to students' challenges with listening, and Section 5.6 presents findings related to their challenges with reading. Section 5.7 presents the findings related to students' difficulty with vocabulary in EMI settings. and highlights various sub-themes related to challenges and contributing factors. Section 5.8 presents students' perceptions related to how the aforementioned challenges may vary based on background and previous medium of instruction (PMOI). Section 5.9 presents findings related to how these challenges may change over time, and Section 5.10 provides a summary of the chapter with a recap of key findings.

Chapter 6 presents the qualitative findings from the instructor and lecturer semi-structured interviews pertaining to the first research question related to language challenges faced by students at an HK EMI university in Hong Kong. The chapter is divided into ten sections and various sub-sections. The nine sections correspond with the main themes and subthemes based on the findings from the interview data. The findings from both the instructor interviews and the lecturer interviews have been brought together in this section to provide a more comprehensive and comparable representation of the data. Section 6.1 introduces the chapter, presents the RQ it discusses, and provides an overview of its content, outlining the various sections. Section 6.2 presents findings from the instructor and lecturer interviews of their perceptions of students' most challenging language-related skills. Specifically, this section highlights which of the four language macro skills (i.e., reading, writing, speaking, listening) instructors and lecturers consider to be most difficult for undergraduate students studying through English in Hong Kong. Section 6.3 presents the instructor and lecturer's perceptions of students' challenges related to speaking and focuses on several sub-themes that emerged from the interviews. Section 6.4 presents the instructor and lecturer's perceptions of students' challenges with writing. Section 6.5 presents findings related to instructor and lecturer perceptions of students' challenges with listening, and Section 6.6

similarly presents findings related to instructor and lecturer perceptions of students' challenges with reading. Section 6.7 presents the findings related to perceptions of students' difficulty with vocabulary in EMI settings and highlights various sub-themes related to challenges and contributing factors. Section 6.8 presents instructors' and lecturers' views related to how the aforementioned challenges may vary based on background, academic discipline (AD), L1, or previous medium of instruction (PMOI). Section 6.9 presents findings related to instructors' and lecturers' perceptions of how these challenges may change over time, and Section 6.10 provides a summary of the chapter with a recap of key findings.

Chapter 7 discusses the key findings of this study in relation to the existing empirical evident and relevant theory in literature. Chapter 7 is divided into ten sections. Section 7.1 introduces the chapter, provides an overview of its content outlining the various sections. Section 7.2 discusses the quantitative and qualitative findings related to perceptions of students' most challenging language skills. Section 7.3 discusses perceptions of students' challenges related to writing in terms of the specific micro-skills identified in the questionnaire, and the sub-themes from the interviews. Section 7.4 discusses perceptions of students' challenges related to speaking, the specific micro-skills identified in the questionnaire, and the sub-themes from the interviews. Section 7.5 discusses perceptions of students' challenges related to reading, the micro-skills, and the sub-themes from the interviews. Section 7.6 discusses students' challenges with listening with a specific focus primarily on the issue of 'understanding lecturers' accents. Section 7.7 discusses students' difficulty with vocabulary in EMI settings and the various sub-themes related to challenges and contributing factors. Section 7.8 discusses how the aforementioned challenges may vary based on gender, background, L1, academic discipline (AD), or previous medium of instruction (PMOI). Section 7.9 discusses how the challenges faced by students may change over time, and Section 7.10 provides a brief discussion of the implications of language-related challenges in EMI HEIs. Section 7.11 provides a summary of the chapter.

Chapter 8 concludes the dissertation and summarizes the results of the study. Section 8.1 begins by explaining how the RQs were answered. Section 8.2 presents a review of the aims and major findings of the study. Section 8.3 reviews the limitations of the study. Section 8.4 reviews the contributions of the study. Section 8.5 reviews the implications of the study

Chapter 2 – Literature Review

2.1 Introduction

This chapter provides an overview of key writings, theoretical concepts, and relevant empirical findings related to EMI from current existing literature. The purpose of this is threefold. First, the existing literature provides substantial background in terms of EMI-related challenges, concepts, and practices. Second, the review highlights relevant studies, noteworthy findings, and related issues that have influenced the conceptual and theoretical framework used to conduct my study. Third, a review of the existing literature, the limitations of the findings, and of the dearth of research in specific areas will more effectively situate my study in the context of EMI in HE in Hong Kong. The chapter begins by providing a working definition of EMI, and a brief discussion of the differences and similarities of EMI and CLIL. Next, the chapter reviews the relevant literature on the growth of EMI on a global scale, and its inherent relationship with the internationalization of higher education. The chapter then reviews literature on the effectiveness of EMI in terms of its aims, objectives, and policies. This section includes relevant studies examining a variety of EMI stakeholders including students, educators, curriculum designers, and local policy makers. This includes a review of the challenges and demands posed on lecturers teaching subject content in EMI settings in HE. Next, the chapter provides an overview of relevant empirical studies examining numerous language-related challenges faced by students in EMI programmes at the tertiary level. This is followed by a review of relevant literature on classroom language use in EMI settings, particularly the use of code-mixing, code-switching, and translanguaging in multilingual classrooms. The chapter concludes with a discussion of the limitations of the existing research, including the studies reviewed herein, and considers specific areas of research that may be lacking.

2.2 English as a Medium of Instruction (EMI)

As EMI continues to grow at the global level in a variety of culturally and socio-economically diverse settings, it is generally adopted and implemented at the local level with characteristics that may differ substantially from EMI programmes in other areas. As such, EMI as a term may, at least to some extent, take on dissimilar characteristics and meanings depending on local policies

and practices. As EMI can have different connotations in different settings, it is somewhat difficult to offer an exact definition that suits every context, and a variety of definitions of EMI have been put forth (Macaro et al., 2018, Pecorari & Malmström, 2018). Macaro et al. (2018) broadly define EMI as "the use of the English language to teach academic subjects (other than English itself) in countries or jurisdictions where the first language of the majority of the population is not English" (p. 37). Thus, there is distinction between the use of English to teach in countries where English is the predominant language, such as Australia, the United Kingdom and the United States, versus where English not the main local language, but it is used as a medium of instruction. However, strict adherence to this definition can be problematic, especially in specific areas in some English-speaking countries, such as the United States or the United Kingdom, where English is the official and predominant language, but a large portion, or even the majority of a local community speaks a different first language (e.g. Spanish, Chinese, or Vietnamese). In these circumstances, while English is generally the language of instruction to teach mostly non-native English speakers (NNES), a distinction is typically made between such programs in local smaller communities with diaspora languages, and what are generally considered as EMI programmes in non-anglophone, non-English speaking countries. For specificity and consistency, this study adopts the commonly used definition of EMI simply as the teaching of content through the use of English in settings where English is not the predominant language of the local population.

2.3 EMI and CLIL

Macaro et al. (2018) point to the variety of terminology describing educational settings where subject 'content' is delivered in a language (usually English) other than that of the local population:

> In North America the phenomenon is sometimes labelled 'immersion' or 'content-based learning' or 'content-based language learning' or 'content based language education'. In Europe, but not exclusively in Europe, it is usually labelled 'content and language integrated learning' (CLIL) or 'integrating content and language in higher education' or 'English-taught programmes'. EMI is a term used ubiquitously geographically and, usually but not exclusively, applied to HE (2018, p.37).

Scholars frequently distinguish EMI from Content and Language Integrated Learning (CLIL) as the former typically refers to teaching content *through* English, while CLIL is described as having two goals, learning subject content and improvement in the target language (Aguilar, 2017; Airey, 2016; Dearden, 2014; Macaro et al., 2018; Marsh & Frigols, 2007; Mehiosto et al., 2008; Smit &

Dafouz, 2012). In the European context, most English-taught programmes (ETP) or EMI programmes are typically known and referred to as CLIL programmes (De Graaff et al., 2007; Macaro et al., 2018). CLIL is promoted as a "dual-focused approach" (Mehisto et al., 2008, p. 9) that integrates the delivery subject content knowledge while simultaneously strengthening language proficiency in the target language being used for instruction (Dearden, 2014; Marsh, 2006). Marsh (2006) defines CLIL as using "diverse methodologies which lead to dual-focused education where attention is given to both topic and language of instruction" (p.32) and has been called "a catalyst for change in language education" (Marsh & Frigols, 2007, p.33). In other words, EMI is simply the instruction and delivery of subject content through English, while CLIL (using English) is the delivery of subject content with an added learning focus on the target language.

This apparent distinction, however, may be somewhat tenuous as both EMI and CLIL may have more in common than not (Airey, 2016; Macaro et al., 2018). While, as Coleman (2006) notes, "foreign language learning in itself is NOT the reason why institutions adopt English medium teaching" (p. 4), many EMI researchers argue that the exposure to English offered by EMI programmes while learning content knowledge provides students with an ideal learning environment in which they can achieve the same 'dual-focused' objectives of CLIL programmes: learning content knowledge and enhancing language proficiency (Coleman, 2006, Lo & Murphy, 2010; Rose et al., 2019; Smit & Dafouz, 2012). Rose et al. (2019) point out that "A widely purported benefit of EMI is that it kills two birds with one stone; in other words, students simultaneously acquire both English and content knowledge" (p. 2150). Yet, in terms of practice, while greater exposure to English in EMI programmes likely leads to language improvement, several empirical studies suggest that focus on language is rarely integrated into lessons by subject content lecturers (Airey, 2012; Hillyard, 2011). It can be argued that most EMI programmes are adopted, at least in part, due to the implicit goals of enhancing English language proficiency. On the other hand, some research suggests that the 'explicit' language enhancing components touted in CLIL are not, at least in practice, dissimilar from the implicit goals of EMI. CLIL and EMI programmes also often share some of the same pitfalls in terms of delivering subject content in an L2 (Wilkinson & Yasuda, 2013). As Fernández (2009, p.14) succinctly points out, "Language teachers are not trained for subject-matter teaching and content teachers are not trained to teach language". Studies have also shown that the purported language-focused components alleged

championed in some CLIL programmes are generally inconsistent and often vaguely defined (Badertscher & Bieri, 2009; Cenoz et al., 2014; Dalton-Puffer, 2007). CLIL programmes that do have established dual-focused objectives greatly differ from one another in terms activity content, scope, learning strategies, and teaching techniques. Furthermore, there is little agreement in terms of what percentage of the lessons should be devoted to each objective. Ting (2010, p.6) advocates "a 50:50/content:language ratio", while Marsh (2002) proposes that even a 90:10 split qualifies as CLIL. Moreover, scholars tend to point out that while the "L" in CLIL can stand for any target language, the language of instruction in most CLIL programmes is predominantly English (Dalton-Puffer, 2011; Fernández, 2009; Lin & Lo, 2017). Dalton-Puffer (2011) explains languages selected for CLIL instruction "tend to be recruited from a small group of prestigious languages, and outside the English-speaking countries, the prevalence of English as CLIL medium is overwhelming" (p.183). Lasagabaster and Sierra (2010) note that "After analysing CLIL programmes in 30 European countries, the Eurydice study concludes that different labels are used in different contexts. Thus, CLIL can mean many things and create much confusion in the mind of the reader" (p.368).

As noted above, however, in the Asian context, and specifically in the context of Hong Kong, the term used most widely, and almost exclusively by the Hong Kong educational institutions (at all levels), to refer to using English as the medium of instruction is 'EMI'. Additionally, Hong Kong tertiary institutions almost exclusively define their instructional systems as 'EMI', and state that the instruction and delivery of subject content is done through English, as opposed to using a dual-focused approach (CLIL) in which the delivery of subject content is combined with a proportional focus on the target language. Moreover, the large majority of the literature in the context of learning subject content through English in Hong Kong refers to 'EMI' rather than to 'CLIL'. In terms of the context of this research study, this dissertation predominantly refers to relevant EMI studies in this literature review and continues the standard practice of using the context-specific term 'EMI', following the considerable amount of previous Hong Kong EMI-related literature generated over the past three decades.

2.4 Globalization and internalization of EMI

Globalization has driven the modern spread of English, and the period over the past two decades has witnessed the unprecedented growth of EMI on a global level. There is wide-spread consensus that English has become the global lingua franca (Coleman, 2006; Crystal, 2012; Jenkins, 2007; Lasagabaster, 2017; Seidlhofer, 2005; Smit, 2010), and English is seen increasingly as an essential component for mobilization and success in developing and globalizing economies. EMI programmes in secondary schools and universities in non-English-speaking countries has been rapidly increasing since the 1990s (Dearden, 2014; Macaro et al., 2018, Marsh, 2006), and such programmes, especially at the tertiary level are increasingly seen as a pathway for local educational systems to internationalize (Rose & McKinley, 2018). EMI in HEIs has experienced rapid expansion in many parts of the world (Dearden, 2014; Dimova et al., 2015; Doiz, Lasagabaster, & Sierra, 2012; Macaro et al., 2018; Marsh, 2006), most notably in Europe (Hultgren, 2014; Lasagabaster, 2017; Maiworm & Wächter, 2002; Wächter & Maiworm, 2008, 2014), driven in large part by the 1999 Bologna Process, which has grown from 29 original signatory countries to 49 member states as of this writing (Lucio-Villegas Spillard et al., 2025). In 2002, Maiworm and Wächter surveyed 1,558 HE institutions in 19 European nations and identified 725 EMI programmes with more than half of them (380) in Germany, the Netherlands, and Finland. Follow-up studies by the researchers found that between 2001 and 2007 the number of EMI programmes had increased approximately 230%, and rose again approximately 239% over the following seven years from 2,389 in 2007 to 8,089 in 2014 (Wächter & Maiworm, 2008, 2014). Similarly, the researchers reported an estimated increase in EMI postgraduate programmes of 42% over one year between 2012 and 2013. Researchers also found that EMI has been adopted predominantly in countries such as Finland, Germany, the Netherlands, Norway, and Sweden, whose national languages are not widely used outside their respective countries (Wächter & Maiworm, 2008).

Although not at a similar level of growth as seen in Europe, EMI and CLIL programmes have also experienced rapid growth in many other parts of the world. EMI has seen rapid expansion occurring in Africa (Kamwangamalu, 2013; Malekela, 2010; van der Walt, 2013), Latin America (Fernández, 2009; Worthman, 2020), the Middle East (Dearden, 2014; Pessoa et al., 2014; Suliman & Tadros, 2011), and at very accelerated pace in Asia (Bolton & Botha, 2015; Bradford, 2013; Brown, 2014; Byun et al., 2011; Evans & Morrison, 2011a; Floris, 2014; Galloway & Rose, 2015;

Hashim, 2014; Kirkpatrick, 2017; Macaro et al., 2018; Mahboob, 2017; Piller & Cho, 2013; Sah & Li, 2018; Song & Tai, 2007). In particular, China, Japan, South Korea, Taiwan, and several ASEAN nations have been adopting EMI programmes in an effort to attract foreign students, internationalize, and provide local students with the experience of "internationalization at home" (Aizawa & McKinley, 2020; Galloway & Rose, 2015; Kim et al., 2014; Macaro & Han, 2020). South-Asian countries and territories former British colonies, such as India, Malaysia, Myanmar, and Singapore, also have experienced a substantial increase in EMI programmes (Altbach, 2004; Evans & Morrison, 2011a; Fen, 2005; Fenton-Smith et al., 2017; Kirkpatrick, 2017).

Lasagabaster (2016) contends that the rapid implementation of EMI programmes on such a wide-spread scale "has outpaced research on its effects" (p.316) As such, a number of EMI scholars have been advocating for increased scholarship and examination of EMI policies and practices (Jenkins, 2013; Lasagabaster, 2016). Marsh (2006) reasons that if EMI programmes are successful and result in language proficiency improvement and learning of subject content, then it is essential to establish the circumstances, situations necessary for the success. Alternatively, if EMI programmes obstruct or hinder learning due to low proficiency or other language-related challenges, it is imperative that the causes and circumstances be identified and addressed.

2.5 Effectiveness of EMI

While research has shown that learning content through an L2 may not be as effective as learning through an L1, other studies have revealed a number of other benefits of EMI programmes. The beneficial effects of EMI on L2 English improvement have been shown in a number of studies (Aguilar & Rodríguez, 2012; Byun et al., 2011; Park, 2017; Pecorari et al., 2011; Tatzl, 2011).

Aguilar and Rodríguez (2012) examined the perceptions of both lecturers and engineering students of a pilot CLIL programme implemented at a Spanish university and found that both groups were generally positive about learning and teaching through EMI. Students expressed satisfaction about learning specialized vocabulary and improving their listening and speaking skills, while lecturers felt that teaching through English enabled them to advance their spoken fluency without sacrificing the quality of their lectures. A survey of 38 Italian universities by Costa and Coleman (2013)

revealed consistent positivity among all respondents in terms of content learning and L2 English improvement.

A 2015 study by Huang exploring the effectiveness of EMI courses at a Taiwanese university surveyed 157 students via a self-assessment questionnaire, and found that the majority were in favor of the courses. Students considered EMI courses essential for improving their English skills and professional knowledge, and felt that interaction through English with students of other nationalities and L1s enhanced motivation.

Byun et al (2011) found that Korean students were generally satisfied with EMI and believed that it had positive overall effects in terms of proficiency improvement, but that "without regard to students'/instructors' language proficiency, the lack of a much-needed support system and available instructors to conduct EMI classes, the unilateral implementation of EMI across academic disciplines have brought about a number of side effects" (p. 447).

Research by Tatzl (2011) examining attitudes, challenges, and experiences of a random sample of 66 students and 8 lecturers in Austrian postgraduate programmes found that stakeholders generally were in favour of EMI because it enhances students' English language skills and contributes to "global employability of students and the international attractiveness of the degree programmes" (p.262). Conversely, both students and teachers felt EMI resulted in increased workload and posed linguistic challenges, particularly in spoken interaction and academic writing.

In the Turkish EMI context, a study by Collins (2010) examined attitudes and perceptions of both students and faculty of the effectiveness of EMI. Data were collected through two questionnaires written in Turkish, one for university students (n=1011) and another for instructors (n=117) at a private university in Turkey. Participants were randomly selected from each year level (1-4), and represented approximately ten percent of the students and instructors from each of the nine different faculties. The two questionnaires consisted of open and closed-ended questions using multiple choice and a Likert scale ranging from 1 (very ineffective) to 5 (very effective) and required participants to measure the effectiveness of the EMI. Findings were mixed and even contradictory at times. While 82% of instructors felt that subject content in English was "relevant

to Turkish context", almost two-thirds of students cited "irrelevant content due to using foreign books" (2010, p.102). Findings also showed that three-quarters of instructors reported that they were generally in favour of EMI and 'strongly agree' that English should be learnt by all students in Turkish schools. Additionally, more than half of instructors (58%) felt that English had a positive effect on students. However, more than two-thirds (67%) reported that teaching through EMI had "decreased [their] teaching satisfaction" (2010, p. 102). Furthermore, 40% strongly agreed that the "students' "general creativity was decreased" and that "self-confidence of the students is detrimentally affected" by learning subject content through a foreign language.

Also in the Turkish context, Findings from a study by Sert (2008) examining the effectiveness of EMI at three Turkish universities suggest that while EMI fostered improved language skills, it had a detrimental effect on learning subject content. Another study by Macaro and Akincioglu (2018) in Turkey examined attitudes and perceptions towards EMI tertiary programmes in Turkey, and investigated gender, university type (public vs. private), and year of study as potential influencing variables. Participants (n=989) were students from 18 universities, or students in a preparatory year programme (PYP) of intensive English instruction before commencing undergraduate study. The PYP students made up the largest group (n=597), followed by year-1 students (n=225) and year-2 students (n=167). Findings varied significantly based on year of study, university type, and gender. The researchers reported that the students generally reported positive attitudes about EMI and felt it contributed to their language improvement, both in terms of general fluency and subject-specific English vocabulary. Additionally, students in all three groups were motivated to participate in an EMI programme and considered it to be beneficial for their future, although analysis of variance (ANOVA) tests showed that the second-year cohort appeared less enthusiastic than the first year and PYP students. Additionally, independent sample t-tests revealed that students from the private universities (n=404) were more optimistic about EMI in general and were more confident than those from state universities that EMI would have a greater positive impact on their future. The private university students also were shown to be more positive about their own progress, and about their lecturers' level of English. In terms of gender, independent sample t-tests showed that female participants (n=535) were more positive about their English language improvement and progress, and they were more positive about some of the perceived

benefits of EMI than were males. However, gender played no role in terms of perceptions related to professional or career opportunities, either locally or internationally.

In the Chinese context, Lei and Hu (2014) investigated the effects and impact of an EMI programme on English language proficiency improvement of Chinese undergraduates and concluded that the programme was largely unsuccessful. However, the researchers concluded that the EMI programme may not have been effective due to additional factors. Moreover, the researchers' conclusions seem somewhat tenuous given the programme's problematic implementation, limited original sample size of the participants, noted attrition in the study, limited time devoted to actual use of English, and relatively few hours of instruction. Moreover, the two groups were identified by the researchers as not comparable in terms of English proficiency, and the study's participants were commonly cited reporting institutional and programme failures.

Alternatively, a study by Joe and Lee (2013) examining Korean medical students' (n = 61) lecture comprehension and overall satisfaction with EMI courses found that EMI had a positive pedagogical impact even though students viewed it negatively when compared with their L1. Using pre- and post-tests to measure comprehension of two lectures, one given in Korean and one given in English, the researchers compared comprehension scores after the lectures, and a questionnaire was administered to survey students' perception of EMI satisfaction and comprehension. Scores obtained by the post-tests of both lectures indicated no statistically significant difference between the two languages, while students' responses to the questionnaire indicated that they generally preferred lectures in their L1. The researchers point out that the students' "perceptive level of comprehending the English-medium lecture did not correlate with their actual performance of the lecture comprehension" (Joe & Lee, 2013, p. 205). In particular, the researchers noted that "Such negative opinions toward EMI, however, turned out to be an unwarranted misgiving, given that their performances on the post-tests for the EMI and KMI lectures were similar (p. 205), and that the students' apparent negativity toward EMI was not consistent with their performance. In other words, In Joe and Lee's study, the perceived burden of EMI by the medical students was not consistent with their actual performance, which was comparable to those studying the same subject content through Korean. While this study in particular highlights a potential misalignment between how students may perceive the

effectiveness of EMI programmes and their actual effectiveness, much of literature on EMI-related language challenges, as shown in Section 2.6 below, suggests that students often experience additional difficulties in EMI settings due to a variety of issues, such as English proficiency levels, lack of exposure to English, and a general lack of English use.

Lastly, in spite of the importance of the attitudes and perceptions of stakeholders in EMI programmes, Macaro et al. (2018) note that the majority of EMI-related studies have generally sidestepped direct questions to stakeholders regarding whether they are generally in favour of EMI or not. The researchers contend that "Virtually no studies in our review have asked an outright 'for or against EMI in your country' question to lecturers or students" (Macaro et al., 2018).

2.6 EMI Challenges

Implementation of EMI programmes in non-English-speaking countries is beset by a number of challenges (Ammon & McConnell, 2002; Björkman, 2010; Bradford, 2013; Coleman, 2006; Macaro *et al.*, 2018; Maiworm & Wächter, 2002; Smit, 2010; Tatzl, 2011; Wächter & Maiworm, 2008). Bradford (2013, 2016) highlights three types of challenges: *linguistic*, *cultural*, and *structural*. EMI language-related or linguistic challenges refer to the "difficulties experienced when instructors and/or students are working in a non-native language" (Bradford, 2016, p. 341). This definition, however, ignores the potential challenges of a small minority of instructors and/or students who may be speakers of English but are in non-anglophone EMI environments. In other words, language-related challenges that those L1 English speakers might encounter learning and/or teaching in a non-anglophone EMI setting where the large majority of students and teachers are non-native speakers of English. The large majority of linguistic, or language-related challenges in EMI settings, however, are related to challenges faced by L2 speakers of English. These can include: insufficient language skills of local lecturers, local students, and international students, as well as a lack of confidence in teaching staff by students. Potential cultural challenges include: "a perceived threat to cultural identity and the status of the native language"; "failure of international students to adapt to new academic culture", the failure of NS lecturers to adapt to the needs of NNS students; failure of international students to integrate into the local culture; and, "equity of assessment" for NES and NNES students (2013, p. 231). Structural challenges include: increased

teacher workload, shortage of capable EMI lecturers, training lecturers, retaining lecturers, motivating lecturers, lack of student interest; shortage of international students, and financing.

2.6.1 English language proficiency

In their 2018 systematic review of EMI-related research, Macaro *et al.* point out that in nearly all of the 83 studies reviewed, there were concerns by both students and lecturers related to "student English language proficiency, lecturer proficiency, or both" (p. 52). Maiworm and Wächter (2002) warn of a type of worst-case scenario where "students not able to properly understand, speak and write English might be taught by teachers incapable of expressing themselves in English" (p. 93).

Although adequate English proficiency level is a major ongoing concern among both lecturers and students, EMI research suggests that consensus in terms delineating adequate, appropriate, or even minimum levels of English proficiency for EMI learning or teaching is problematic and complicated by numerous challenges and inconsistencies. Research by Webb (2002) examining EMI in a South African university found that lower English proficiency impeded learning and advancement, and that student interaction in classes was reduced. EMI-related studies in Scandinavia have also shown that classroom interaction and student discourse can be reduced when students are learning through EMI (Pecorari et al., 2011; Tange, 2012), and research from the Netherlands found that lecturers need extra time to deliver EMI lectures than they would delivering them in their L1 (Vinke et al., 1998). A study by Hellekjaer (2010) of EMI students in Norway and Germany compared listening comprehension levels of EMI lectures with lectures delivered in students' L1 and found that comprehension was lower in the EMI lectures. The researchers attributed the lower levels in EMI lectures to "difficulties distinguishing the meaning of words, unfamiliar vocabulary, and difficulties taking notes while listening to lectures" (p. 11). In a similar vein, a four-year longitudinal study by Pessoa et al. (2014) investigating first year students' academic writing challenges in an EMI university in Qatar showed that reading and writing difficulties were generally attributed to "limited vocabulary knowledge, background knowledge, and reading stamina" (p. 127).

A survey by O'Dowd (2018) of 70 universities in 11 different European countries exposed "a remarkable lack of consensus as regards the minimum level of English for EMI" (p. 562). In the

Italian EMI context, Costa and Coleman (2013) reported that 31% of the respondents in their survey reported that local students possessed inadequate English language proficiency. Additionally, approximately 30% of respondents reported inadequate English proficiency levels among lecturers. The researchers note that none of the participants cited inadequate English proficiency levels among international foreign students.

In the Korean context, research by Kim et al. (2014) suggests that international students had a much higher level of confidence in terms of language proficiency than did their local Korean counterparts. Consequently, the international groups reported higher satisfaction and greater overall learning experiences than the Korean students who reported lower comprehension and satisfaction levels. In a similar vein, Huang (2015) noted significant differences between local Taiwanese students and non-local students in terms of learning anxiety, motivation, and perceived achievement. Local students' lower self-perception of their English proficiency resulted in experiencing higher anxiety levels and lower motivation and achievement than the international students. In the Japanese context, a study by Chapple (2015) revealed that participants reported such disparity among English proficiency levels between local Japanese students and international students, that the latter group believed that the EMI programme was a waste of time since they had to dramatically reduce their pace to accommodate the substantially lower English proficiency levels of the local students.

Aizawa and Rose (2019) examining EMI university students in Japan found that a level of English proficiency roughly equivalent to an IELTS score of 6.5 was the threshold between students who faced considerable challenges in EMI and those had substantially fewer language-related issues. Similarly, a study by Rose et al. (2019) found that TOEIC scores were shown to be statistically significant predictors of EMI success for second-year students at a Japanese university.

In the Hong Kong context, Shepard and Rose (2023a) examining language-related challenges among first-year undergraduates found statistically significant differences in scores between local Cantonese-speaking students, Putonghua-speaking students from China mainland, and non-Chinese speaking international university students. One-way ANOVA scores indicated that the

non-Chinese speaking international students experienced significantly fewer challenges in terms of academic writing, reading, and speaking.

Shepard and Rose (2023b) note that in Hong Kong's EMI universities, inconsistent admission policies in terms of English language proficiency may account for some of the disparity in terms of language-related challenges experienced by different groups of students. In Hong Kong, international students (other than from Mainland China) seeking admission to EMI universities in Hong Kong must produce higher test scores in English than their local counterparts. Of the six EMI universities in Hong Kong, two require a minimum IELTS score of 6, while four require an IELTS score of 6.5 or above. On the other hand, local students are generally required to obtain a minimum score of 3 in the English language portion of the Hong Kong Diploma of Secondary Education Examination (HKDSE), which is roughly equivalent to 5.5 on the International English Language Testing System (IELTS), or between 46 and 59 on the Test of English as a Foreign Language (TOEFL). This range of scores would generally be considered insufficiently low for university study (in English) in either the United Kingdom or the United States. In the U.K. a minimum IELTS score of 6.0 is required for undergraduate study, although most universities require a minimum score of 6.5 with several requiring a minimum score of 7.0 or 7.5.

In the Finnish tertiary context, Saarinen and Nikula (2013) note that contrary to university policies that ask for specific benchmarks on standardized language tests, students seeking admission to EMI programmes are required to meet ambiguous standards such as being 'sufficiently proficient' in English. Ill-defined university admission policies commonly refer to imprecise terms such as 'good' or 'sufficient' when describing required English skills.

In addition to unclear policies on English proficiency requirements, several studies have shown that satisfactory English proficiency levels among students and teachers are often assumed and taken for granted by curriculum designers and EMI policy makers (Ball & Lindsay, 2013; Byun et al., 2011; Dimova, 2017). Byun et al. (2011) point out that in the Korean EMI context, a number of unsubstantiated premises often result in the ineffective implementation of EMI programmes. In terms of adequate English proficiency levels for learning at the tertiary level, the researchers point out that students' proficiency "is largely assumed, since the average Korean student receives about

10 years of English language education in primary and secondary school" (p. 440). Their findings revealed that lower proficiency levels of both students and instructors were common, and they expressed concern that EMI may impede students' learning of the subject content, "even though it can possibly contribute to improving students' command of the English language" (p. 442). Similarly, Research by Floris (2014) examining the efficacy of EMI programmes at the tertiary level in Indonesia found that "the majority of students felt burdened" in EMI settings, "have insufficient English ability to cope with the material of the content subjects", and that "the language barrier seems to affect the students' academic performances" (p. 57).

Similarly, other studies have shown that students often face numerous challenges in EMI settings in terms of reading English texts (Guarda, 2021; Grabe & Zhang, 2013; Shepard & Morrison, 2021; Tatzl, 2011), especially academic texts (Eriksson, 2023; Hellekjaer, 2009, Jin et al., 2024). Grabe and Stoller (2020, p. 138) found that students often struggle with "heavy reading loads, challenging texts, and the need to make effective use of textual information for multiple purposes (e.g., writing papers, giving oral presentations, completing projects)."

A mixed-methods study by Aizawa and Rose (2020) examined language-related challenges of first-year undergraduates in an EMI program in Japan. Findings from the quantitative data collection revealed that undergraduate students (n=103) faced the most difficulty with academic writing, followed in order by reading, speaking, and listening. The researchers also assessed students' productive and receptive vocabulary knowledge, and found strong correlations between language-related challenges and students' levels of academic vocabulary. Semi-structured interviews uncovered similar findings showing that insufficient academic vocabulary correlated with many of the students' language-related challenges, particularly in terms of reading and writing. Another Japanese study (Aizawa et al., 2023) examining the relationship between academic challenges and English proficiency levels among EMI business students (n=264) at a Japanese university showed a positive linear relationship between proficiency and ease of academic study, but with no ascertainable level of proficiency at which point academic challenges are reduced.

In the context of EMI courses in South Korea, Kim and Kim (2021) found that business and engineering students (n=352) who participated in in formative feedback and experiential learning showed significantly higher motivation, overall satisfaction, and perceived subject comprehension than those in a more traditional lecture-oriented setting. In the Turkish context, Demirkol et al. (2021) found that students reported academic language tasks, such as summarising and synthesising, to be their most difficult language tasks. Also in Turkey, Kamaşak et al. (2021) surveyed 498 undergraduate students in EMI classes and found academic writing to be most challenging for students. In Iceland, Arnbjörnsdóttir and Prinz (2017) concluded that the lack of academic English skills is a challenge for EMI students, despite their relatively high levels of general English language proficiency. The study also revealed that while the majority of students surveyed felt sufficiently prepared to study in an EMI setting, they reported additional burdens in terms of their workload from using English.

In Brunei, a study by Athirah (2024) revealed that while undergraduate students (n = 198) in EMI courses reported only minor language challenges with speaking and writing, they were significant predictors of their perceived academic success at university. In a survey of 498 Turkish students, Kamaşak and Sahan (2023) found that students' language challenges and reported proficiency levels significantly predicted their academic success at university. In Thailand, Wilang and Nupong (2022) examined attitudes of engineering and nursing students (n=102) in EMI programmes and concluded that language difficulties influenced students' overall attitudes towards EMI courses. In Saudi Arabia, Alhamami and Almelhi (2021) found that instructors and students from healthcare disciplines perceived EMI as negatively impacting students' academic achievement, particularly those with lower proficiency levels. Sugimoto (2021) found the majority of first-year medical students taking EMI courses at a private university in Japan considered the workload in the EMI courses to be appropriate, while approximately 30% found it to be challenging. The latter also reported a lack of coping strategies to address such challenges. Also in the Japanese context, Aizawa and Rose (2020) surveyed 103 undergraduate students and found that even limited prior exposure to English in high school resulted in a positive impact in terms of their English vocabulary knowledge and their transition from a Japanese-medium secondary school to an EMI university.

In terms of academic writing alone, a considerable amount of EMI-related literature has shown that university students writing English academic essays in an L2 face far greater challenges than L1 writers in terms of: authorial stance, cohesion, lexical bundles, lexical diversity, linguistic accuracy, hedging and boosters, nominalisation, rhetorical moves, syntactic complexity, and topicalisation (Appel & Murray, 2020; Chang & Schleppegrell, 2011; Chen & Baker, 2010; Eckstein & Ferris, 2018; Gentil & Meunier, 2018; He, 2020; Hong, 2019; Hyland & Milton, 1997; Keck, 2014; Lin & Morrison, 2021; Mur-Dueñas, 2012; Pan, 2018; Pan & Liu, 2019; Pérez-Llantada, 2014; Shen et al., 2023; Wang, 2012).

2.6.2 Teaching Challenges

The issue of adequate English proficiency levels is not limited to students. EMI-related research in Europe has shown that non-Anglophone lecturers face unique challenges when delivering EMI lectures (Morell, 2007; Tange, 2010), and that the English proficiency levels is a frequent concern among both lecturers and students (Dearden & Macaro, 2016). Consequently, a large amount of EMI-related research in the last two decades has focused on lecturers' ability and preparedness to deliver subject content through English (Airey, 2012; Byun et al., 2011; Pecorari et al., 2011; Sert, 2008; Tange, 2010; Wilkinson, 2013, Vinke, 1998).

Research by Aguilar and Rodríguez (2012) revealed that students' perceptions of lecturers' English proficiency play a prominent role in their overall attitudes toward learning through EMI. According to the researchers, "the most outstanding negative aspect they found is lecturers' insufficient level of English" (p.183). Byun et al. (2011) note that in terms of English proficiency required for delivering EMI lectures, there is an assumption that "Korean professors who earned their doctoral degrees abroad, mostly at U.S. universities, will encounter little or no difficulty conducting classes in English" (p.440). Costa and Coleman (2013) surveyed 38 Italian universities (half of all Italian universities) and found that 77% provided no additional training for teachers delivering EMI lectures. A survey by O'Dowd (2018) of 70 universities in 11 different European countries found "a very eclectic range of approaches to training and accrediting" (p.562), and that 30% of the respondents felt that providing EMI-related training was not important, and that the same percentage of respondents offered no training. The study also revealed "a remarkable lack of consensus as regards the minimum level of English for EMI" (p.562). In terms of the Common

European Framework of References for Languages (CEFR), 44% of respondents reported requiring a C1 (advanced) level, and 13% reported requiring a C2 (high proficiency) level, while 43% of the respondents indicated that a minimum B2 (upper-intermediate) English level was sufficient. A study by Ali (2013) examining implementation of an EMI programme at a Malaysian university revealed that stakeholders were not included in discussions or consultations prior to implementation, and that documentation in terms of EMI policies or practices for the programme was either contradictory or non-existent. Similar findings were observed in a case study by Tsuneyoshi (2005) indicating that the implementation of EMI at the tertiary level in Japan is problematic due to a lack of instructors who are either capable or willing to deliver EMI lectures. Klaassen (2008) points out that relatively few EMI-related studies have explored to what extent native English-speaking (NES) lecturers are prepared to deliver EMI content courses to diverse groups of students in multilingual classes with mixed English proficiency levels. For example, Dimova (2020) found that 82% of 199 lecturers surveyed felt that a high level of English proficiency was essential for academic success of first-year students, while 86% felt that it was vital for mastering subject content. A study by Hendricks et al (2018) that included 293 Dutch students and 274 German students found that students held less favourable views of moderately-accented Dutch and German lecturers than they did of slightly-accented or native English-speaking lecturers. Galloway and Ruegg (2022) found through interviews, focus groups, and a survey of 702 students from five universities in Japan and four in China, that EMI teachers' level of English proficiency as well as their willingness to teach through English were the greatest challenges reported. Students reported difficulty comprehending lectures and understanding subject matter. In the Tunisian context, a study by Abdeljaoued (2023) found that the majority of students surveyed (n=434) considered their lecturers' English proficiency levels to be below their own, and roughly two thirds reported difficulty understanding them due to the lecturers' general lack of proficiency. In China, Wang (2021) found that there was a strong positive correlation between teacher's English proficiency and their teaching self-efficacy.

2.7 Language Use in EMI Settings

If there is an 'elephant in the room' in terms of EMI provision, it is likely to be the question of the language use in EMI classrooms. Spoken language use in classrooms, especially by students, typically falls outside the parameters of most EMI policies, and Macaro et al (2018) report a

shortage of empirical studies examining classroom interaction in EMI HEIs. A substantial amount of research has shown that while lectures are typically delivered in English, as is commonly mandated by EMI policies, in-class discussions between students, as well as informal discussions between students and lecturers, frequently occur using the local predominant L1.

2.7.1 Classroom Language Use

Research examining language-related challenges at HK EMI universities, suggests that while lectures are typically delivered in English, in-class student-led discussions, group discussions, and questions for lecturers in Hong Kong are conducted mainly in Cantonese (Evans, 2000; Evans & Green, 2007; Evans & Morrison, 2011a; Littlewood et al., 1996). Findings by Evans and Morrison (2011a) revealed that "academic related communication outside class, such as project and study-group discussions, is generally conducted in Cantonese, as, indeed, is much seminar, tutorial, and laboratory work" (p.394).

Lo and Macaro (2012) examined MOI in Hong Kong secondary schools and found that when instruction changed from Cantonese to English "lessons tended to become more teacher-centered and there were fewer opportunities for negotiation of meaning and scaffolding" (p.29). A subsequent study by Lo and Macaro (2015) found that when content-subject teachers provided scaffolding using Cantonese to explain more complex issues and complicated concepts, students found the information much easier to absorb. However, the practice by teachers of supplementing English with the local language in EMI programmes may have outlived its usefulness as not all students will be able to speak the local language. At the tertiary level, as HEIs continue to internationalize and EMI university classrooms experience increasing diversity, L1s other than the predominant local language are increasingly emerging. The traditional practice of supplementing EMI lectures with portions delivered in the local L1 will become more problematic as a larger portion of students will not belong to the local linguistic circle (Kuteeva, 2019; Shepard & Morrison, 2021; Shepard & Rose, 2023b).

2.7.2 Codeswitching and Translanguaging

Despite empirical studies exposing the beneficial learning aspects of codeswitching, the practice has generally been discouraged by teachers and policy makers, particularly in L2 learning

environments (Ferguson, 2009; Macaro, 2001; Saxena, 2009). In Hong Kong, code-switching between Cantonese and English is very common, especially at the secondary and tertiary levels where English is typically juxtaposed with Cantonese is the classroom. Nevertheless, Lin (1996) contends that Hong Kong traditionally has been particularly opposed to the practice: "Nowhere is disapproval more clearly documented than in Hong Kong where there have been repeated official calls for teachers to refrain from what is called 'mixed code' teaching. Lin (p. 49).

More recent studies have shown, however, that with increased numbers of international students, instead of reduced code-switching or an increased use of English, often there are simply more languages being used by students employing translanguaging. In other words, students take advantage of their multilingual linguistic resources, using their respective languages individually or in pairs or in small groups, before taking part in larger 'whole-class' discussions generally conducted in English. Research shows that translanguaging in multilingual and multicultural classrooms is becoming increasingly common and accepted by both students and teachers (Doiz & Lasagabaster, 2017; García & Kleyn, 2016; Lin & He, 2017; Mazak, 2017; Mazak & Herbas-Donoso, 2014; Park, 2013). Studies also indicate that translanguaging is becoming more wide-spread in EMI contexts (Doiz & Lasagabaster, 2017, Shah et al., 2019; Toth, & Paulsrud, 2017). Lin and He (2017) examined students' translanguaging practices in a Hong Kong secondary school and describe how ethnic minority students, mainly from India, Nepal, and Pakistan, who struggle with HK's 'biliterate and trilingual' policy, often employ their respective L1s along with L2s to "exploit multilingual and multimodal resources available in their learning" (p.228). Research by Mazak (2017) suggests that multilingual and multicultural HE classrooms are model settings for translanguaging: "Higher education is increasingly characterized by the global movement of people and ideas. For this reason, it is a particularly ripe context for translanguaging" (p.6).

In practice, however, translanguaging may have its potential drawbacks, particularly at the tertiary level. In large classrooms, translanguaging may not be ideal for promoting student interaction. Moreover, there may be limited time for stages of group activities (e.g. small group to whole class sharing), and information exchanges might be limited to members within specific linguistic circles, with speakers of minority languages often excluded. A study by Kuteeva (2019) examining perceptions of standard English and translingual practices among university students in an EMI

programme in Sweden showed that translanguaging, predominantly during student-led group work, at times had an adverse effect on non-Swedish-speaking students who were effectively excluded from discussions. One participant in the study reported that despite being in an EMI programme, her common use of German and Swedish led to an overall reduction of her use of English and a subsequent decline in her English proficiency. Shepard and Morrison (2021) found that several international undergraduate students at an EMI university in Hong Kong reported being routinely excluded from other groups of students, especially the larger linguistic circles of Cantonese and Putonghua speakers, as the Chinese-speaking students preferred to use their respective L1s rather than English for student-led discussions in small groups or pairs.

2.8 History of EMI in Hong Kong

Coleman et al. (2018) assert that Hong Kong is the archetypical EMI context having a well-established history of using English as the medium of instruction in a non-anglophone context for more than 150 years. Not surprisingly, EMI in Hong Kong has been a source of some controversy and debate since its beginnings in the mid-19th century, when the British Hong Kong government introduced English-medium education to a portion of the local Hong Kong ethnic Chinese population in an effort to "cultivate an English-speaking elite to work in the administrative and commercial sectors" (Evans, 1996, p.38). During the late 19th century, EMI grew as a result of government authorities offering financial incentives to schools that selected English over Cantonese as a medium of instruction. By the 1950s, around half of all secondary schools were EMI schools, while the other half adhered to Chinese medium of instruction (CMI) policy (i.e., spoken Cantonese and written standard Chinese). However, starting in the early 1960s when Hong Kong was transforming from an entrepôt to an industrial manufacturing hub, EMI began to expand rapidly (Evans, 1996; Poon, 2010). During the 1970s, the territory saw a massive expansion of secondary schools. Moreover, in 1974, the Hong Kong government adopted a non-intervention policy allowing individual schools to determine which medium of instruction (MoI) they wished to adopt (Poon, 2010), which led to further increase of EMI at the secondary-school level. This substantial increase of EMI schools during the second half of the 20th century was not fuelled by the Hong Kong business community or the government, but rather it was "entirely driven by parents, who perceived that access to further education or careers in business and government

depended on proficiency in English" (Evans, 1996, p.38). By the 1990s, more than 90% of secondary-school students in Hong Kong were studying through EMI.

The 1997 handover of sovereignty of Hong Kong from Great Britain to China saw the newly formed Hong Kong government switch to a 'mother-tongue' policy using Chinese medium of instruction (CMI), which went into effect one year later in 1998 (Poon, 2009). This policy change substantially decreased the use of EMI in public secondary schools from around 90 per cent to approximately 25 per cent (Evans, 2002), which generated considerable backlash and concern as public perception was that students' overall levels of English were already in decline. Hong Kong parents believed that a massive switch to CMI secondary schools would greatly diminish local students' English skills and limit their future educational and career options. As secondary students generally need high levels of English proficiency for admission to universities in Hong Kong as well as for their future in the workplace, Hong Kong parents have long held the view that students learning through CMI at secondary schools are at a disadvantage. This concern seems reasonable given the fact that of the eight Hong Kong universities funded by the University Grants Committee (UGC), six are EMI universities and two maintain a mixed-medium of instruction policy using both Cantonese and English. Although generally uncontroversial as a policy, EMI at the university level has proven to be somewhat problematic in Hong Kong given the large number of students speaking Cantonese as their usual language (Choi, 2010; Evans & Green, 2007; Poon, 2010). Additionally, graduates of Hong Kong's EMI secondary schools are much more likely to obtain places at local EMI universities (Choi, 2010; Tsang, 2009). In 2010, the HK government implemented a 'fine-tuning' policy (Evans, 2011; Poon, 2013) giving CMI schools added flexibility to employ various MOI practices based on the schools' own determinations of students' needs. Presently, around 30 per cent of secondary schools in Hong Kong were EMI schools, while around 70% employ a 'biliterate/trilingual' policy (Tsang & Dang, 2023; Yiu, 2026) aimed at enabling students to master written Chinese while learning to speak in Cantonese, Putonghua, and English. In these schools, CMI is typically used in all but one chosen academic subject, which is taught in English.

In 2012, tertiary education in Hong Kong underwent major reform when all eight government-funded public universities switched from a three-year curriculum to a four-year curriculum. Local

Hong Kong students are now transitioning to university a year earlier than they were previously under the 3-year curriculum, and are typically starting with one year less of exposure to English during primary and secondary school. Moreover, they are now spending an additional fourth year at Hong Kong's EMI universities, rather than completing a 3-year undergraduate degree programme as was done previously. Less exposure to English in primary and secondary school, combined with an earlier transition from secondary school to university, and finally, an additional year of EMI study may be substantially impacting students' language-related challenges and learning experiences at university.

In addition to the changes in terms of the curriculum, Hong Kong educational institutions have been undergoing considerable changes in terms of student demographics. Although student populations in Hong Kong are still largely made up of mostly local Cantonese-speaking students, a growing number of non-Cantonese speaking students are emerging at all levels of education and are increasing diversity in classrooms. Between 2001 and 2016, the number of non-Chinese ethnic minorities in Hong Kong grew from 343,950 to 584,383 (CSD, 2002, 2016) resulting in a sizable increase of school-aged non-Chinese ethnic minorities who generally speak neither Cantonese nor Putonghua. At Hong Kong's tertiary level, this growing diversity has been even more evident. In addition to the growing number of non-Chinese local students from various ethnic backgrounds that are now attending Hong Kong universities, there has also been a substantial increase of international students. As part of the push by the HK government to 'internationalize' local Hong Kong universities (Chan & Ng, 2008), the government has reduced student-visa requirements, removed quotas for fee-paying students, and encouraged local career opportunities for Chinese mainland students graduating from Hong Kong universities (Li & Bray, 2007). At the time of the handover in 1997, there were 1,355 international (non-local) students enrolled at the eight UGC funded universities comprising only 2% of the total student population (UGC, 2019). Just one year later, the percentage doubled to 4% and doubled again to 8% in 2004 (Li & Bray, 2007). In 2007, the percentage international students rose to almost 10%. By the 2019/2020 academic year, the number rose to 19,213 international students, comprising approximately 19% of all Hong Kong university students (UGC, 2020), reflecting an increase of more than 850% since 1997.

2.9 EMI challenges in Hong Kong

It is clear from the existing EMI-related empirical research in Hong Kong that even prior to the substantial decrease in the number of EMI secondary schools following the 1997 handover of Hong Kong sovereignty from the United Kingdom to China, local Cantonese-speaking students faced considerable language challenges transitioning from secondary school to EMI universities. Flowerdew and Miller (1992) study of listening challenges faced by year-1 undergraduates in Hong Kong revealed that students experienced considerable difficulties comprehending lectures due to unfamiliar vocabulary, unknown concepts and terms, lack of concentration, and the accelerated rate of delivery of some native-English-speaking lecturers. Subsequently, a territory-wide study by Littlewood et al (1996) that included six EMI Hong Kong universities found that a substantial proportion of first-year university students experienced considerable challenges communicating in English. They concluded that local students "have grown accustomed to passive speech roles in class and had limited experience of speaking" (p.70), and that their lack of practice led to lower confidence and greater anxiety.

A study by Flowerdew et al. (2000) examining students' listening comprehension of EMI lectures delivered by local HK Cantonese-speaking lecturers found that speakers' rate of delivery and unfamiliar vocabulary were found to be the main problems faced by students during lectures. In addition, the researchers found that although local Cantonese-speaking lecturers generally adhered to the university's 'English only' policy, they adopted a more flexible approach using code-mixing and code-switching. Flowerdew et al. caution that such "flexibility may be confusing for students if it is applied on an ad hoc basis. Some students may expect more English, while others may want English to be supplemented by Cantonese" (2000, p.134).

An ethnographic case study by Miller (2007) exploring listening coping strategies of lower proficiency engineering students at an EMI Hong Kong university underscores the importance of students' understanding of various genres in different lectures and various subjects. Data collection was carried out over two years through "focus groups; in-depth semi-structured interviews; student and lecturer journals; questionnaires; life histories; participant observations; and participants' verifications" (p.749), and participants included 17 male students and nine departmental lecturers. Among the observations and recommendations highlighted were: students' understanding of active

(versus passive) listening roles (See Flowerdew & Miller, 1992; 1997) and classroom language policy; the need for students to be cognizant of and develop appropriate listening strategies; background knowledge, the importance of lecturers making explicit the differences between general and technical language used in class.

Retroactively examining corpora of academic essays, Lin and Morrison (2010) examined the effect of previous medium of instruction (EMI vs CMI) on English academic writing proficiency and, in particular the L2 English vocabulary size of year-1 undergraduates in Hong Kong. The researchers found that students from EMI secondary schools typically exhibited significantly larger L2 English vocabulary knowledge than students from CMI secondary schools. As a result, the EMI secondary students were able to produce academic essays of greater quality, implying a greater chance of both admission to and academic success at university. Lo and Murphy (2010) examined L2 English vocabulary knowledge of local Cantonese-speaking students in two Hong Kong secondary schools, one CMI and the other EMI, and found that as the students in the EMI schools had greater exposure to English as well as more opportunities to use it on a daily basis, they "consistently demonstrated superior vocabulary knowledge" in their academic writing (p. 228).

A study by Tsang (2009) indicates that students in Hong Kong CMI schools only have around half as much chance of attaining the qualifications necessary for admission to Hong Kong's EMI universities as those coming from EMI secondary schools. Not surprisingly, this policy continues to generate controversy as most Hong Kong secondary school students attend CMI schools. Even those students who are admitted to local universities generally experience substantial challenges when making the transition from CMI secondary schools to the tertiary level.

A longitudinal study by Evans and Morrison (2011a) exploring language-related challenges faced by Cantonese-speaking students at an EMI university in Hong Kong found that students experienced a variety of difficulties learning content through EMI, including "understanding technical vocabulary, comprehending lectures, achieving an appropriate academic style and meeting institutional and disciplinary requirements" (p.198). The researchers found that year-1 undergraduate students at a university in Hong Kong reported academic writing to be the most challenging of the four language 'macro-skills', particularly in terms of achieving academic

writing style, developing cohesion in texts, and using complex grammatical structures. The students' self-reported scores indicated that reading was the second most challenging skill, particularly due to a lack of knowledge of academic and technical vocabulary. The findings also revealed that insufficient vocabulary knowledge impeded students' speaking abilities in terms of communicating ideas effectively and fluently. Students' speaking skills were also negatively affected by grammatical issues and pronunciation. Generally, the students reported fewer problems with listening but acknowledged difficulties understanding lectures due to unfamiliar vocabulary. Vocabulary knowledge has been shown to play a critical role in listening comprehension. Evans and Morrison (2018) compared the language challenges faced by first-year EMI university students (n=828) coming from EMI and Chinese-medium (CMI) schools in Hong Kong and concluded that previous exposure to EMI was a significant factor in predicting students' learning at EMI universities. In Hong Kong, Moorhouse and Wan (2023) employed an online survey and group interviews to explore challenges faced by postgraduate students from mainland China and found that they faced difficulties in lecture comprehension, speaking, academic writing, and understanding course materials. Student participants suggested support strategies including academic writing workshops, informal English activities, detailed information about courses and lecturers, and providing lecturers with students' background information.

Shepard and Morrison (2021) examined language-related challenges among first-year undergraduates in Hong Kong (n=636) and revealed that that academic writing was still considered to be the most challenging, followed by reading, speaking, and listening, echoing similarly designed research (Aizawa & Rose, 2020) and the previous Hong Kong study by Evans and Morrison (2011a) a decade earlier. Students' self-reported scores revealed that the three most difficult writing tasks were: using appropriate academic style, planning written assignments, and expressing ideas in English. In terms of reading, students' responses show the three most challenging tasks were understanding specific vocabulary, working out the meaning of difficult words, and reading quickly to find specific information, also echoing the findings of Evans and Morrison (2011a), and reiterating that the underlying theme in students' reported reading challenges is a lack of rich academic or technical vocabulary in English. Shepard and Morrison (2021) also note that although academic listening was considered less demanding than academic writing, reading, or speaking, a considerable portion of students reported great difficulty

understanding or following lectures. Listening comprehension issues ranged from lower proficiency students' not understanding academic, specialized, or technical vocabulary in English, to lower and higher proficiency students not being able to understand lecturers' spoken accents.

Shepard and Rose (2023) further examined the abovementioned dataset on language-related challenges among first year university students in Hong Kong and found that these challenges varied significantly based on student demographics. The researchers examined language-related challenges compared across three main groups of students: local Cantonese speakers (*n*=484), Putonghua speakers from China mainland (*n*=106), and non-Chinese speaking international students (*n*=46). The findings indicated that there were statistically significant differences between the three groups in terms of writing, reading and speaking challenges. One-way ANOVA revealed that the group of international students reported fewer challenges difficulties than the other two groups in writing, reading, and listening, and the Putonghua group experienced greater difficulties in writing than the local Cantonese speakers did. In terms of academic writing, Putonghua-speaking students found academic writing significantly more challenging than the non-Chinese speaking international students. In terms of reading, findings revealed significant differences between non-Chinese international students and both the Cantonese-speaking and Putonghua-speaking students. Findings also revealed that the Putonghua-speaking students found academic reading significantly more challenging than the Cantonese-speaking local students, no statistically significant differences among scores among the three groups in listening.

Alternatively, and diverging from much of the EMI-related research in Hong Kong, a study by Pun and Jin (2021) explored language challenges and perceptions of 73 science undergraduate students in Hong Kong and concluded that the students faced relatively few English language-related challenges.

The overwhelming majority of EMI-related research conducted in Hong Kong, however, indicates an abundance of language-related challenges experienced by students in EMI higher education, and much of it suggests that a large portion of these challenges are rooted in a lack of English vocabulary (Evans & Green, 2007; Evans & Morrison, 2011; Flowerdew et al., 2000; Lin & Morrison, 2010; Littlewood et al., 1996; Lo & Murphy, 2010; Shepard & Morrison, 2021; Shepard

& Rose 2023a, 2023b). This is also likely due, in no small part, to the vast differences between English and Cantonese languages. Lo and Lo (2014) point out that while many of the challenges faced by both students and teachers in terms of gaps in L2 proficiency are common to EMI programmes in many parts of the world, these gaps can be substantially more apparent and substantially more acute depending on the linguistic distance between English and the local predominant language. Thus, learners in European or Latin American EMI programmes may have some advantages over their counterparts in EMI programmes in Asia in terms of linguistic distance, crosslinguistic influence, and language transfer. English is a Germanic language in terms of its core vocabulary, sound, and structure, yet much of its vocabulary also comes from non-Germanic languages, particularly French and Latin. Thus, vocabulary similarity and overlap is common for speakers of many European languages, such as Dutch, French, German, Norwegian, Spanish, and Swedish, which can substantially benefit L1 speakers of these languages while learning English. Alternatively, in the context of EMI in Hong Kong, the two languages, Cantonese and English have very little in common in terms of morphology, phonology, or syntax.

2.10 Limitations of previous research

The main objectives of this research study are to provide current, original, and relevant knowledge related to students' attitudes, challenges, and perceptions of EMI programmes in Hong Kong that has not previously been addressed by existing EMI-related research. This study will address four areas that have limited coverage in previous EMI-related empirical research studies conducted in Hong Kong. First, with the exception of a limited number of studies (Chapple, 2015; Kim et al., 2014; Kamaşak et al., 2021), EMI research on language-related challenges has, in large part, focused primarily on the difficulties faced by local speakers of their respective predominant L1 when learning through English (Macaro et al., 2018). In the context of Hong Kong, EMI-related studies have been concerned primarily with the challenges, attitudes, and perceptions of the local Cantonese-speaking student population (Evans, 2017; Evans & Green, 2007; Evans & Morrison, 2011a, 2011b; Flowerdew, Li, & Miller, 1998; Flowerdew & Miller, 1992, 1997, 2010; Flowerdew, Miller, & Li, 2000; Gow et al., 1991; Hyland, 1997; Li et al., 2001; Lucas et al., 1997). As local universities continue the global trend of 'internationalization' of higher education, continued and increased classroom diversity is expected. Therefore, this original research provides an examination of attitudes, challenges, and perceptions of EMI in Hong Kong from the experiences

of a wide range of students from diverse backgrounds and with varying L1s, employing both quantitative and qualitative methods conducted with participants in their fourth and final year of undergraduate study. It widens the context of its investigation by exploring factors such as L1, previous MOI, and academic discipline (AD). In addition to the homogenous nature of previous HK EMI-related empirical studies, much of the previous research examining attitudes towards EMI and language related challenges at the tertiary level in Hong Kong (Evans & Green, 2007; Evans & Morrison, 2010, 2011; Flowerdew, Li, & Miller, 1998; Flowerdew & Miller, 1992, 1997, 2010; Flowerdew, Miller, & Li, 2000) was conducted prior to 2012, when all eight government-funded public universities switched from a three-year to a four-year curriculum. As educational reforms in Hong Kong in 2012 replaced the 3-year curriculum with a new 4-year program, most local HK students are transitioning to university with one less year of exposure to English at secondary school, and an additional year of EMI at university. As such, previous studies were not able to take into account the additional year added to the duration of university studies that could influence the pedagogical experiences, challenges, and practices of undergraduate students.

Third, Macaro *et al.* (2018) note a dearth of research on classroom interaction in EMI universities. As such, there is a need for empirical studies to investigate students' and teachers' spoken language-use in EMI university classrooms in Hong Kong, especially now that Hong Kong classrooms are becoming more linguistically diverse due to the growing numbers of local non-Chinese students and international students. Although previous EMI-related studies have found that student-led discussions in Hong Kong universities are largely conducted in Cantonese (Evans & Green, 2007; Evans and Morrison, 2010, 2011a, 2011b; Littlewood et al., 1996), there is a shortage of current research that takes into account the interaction in Hong Kong classrooms between Cantonese-speaking local students and non-Cantonese speaking students, and the dynamics of classroom, interactions between students with varying L1s, and translingual practices, and how these may relate to the delivery of subject content, the exchange of information between students, students' content learning, and students' English proficiency. The growing diversity at Hong Kong universities raises questions in terms of factors that may influence students' attitudes, challenges, and experiences of learning at EMI universities in Hong Kong. The importance of this scholarship has been made even more pressing since the above-mentioned educational reforms of 2012, as undergraduate students are now spending an additional (fourth) year in Hong Kong

tertiary classrooms. Furthermore, factors such as background, first language, and previous medium of instruction may also substantially affect students' classroom interaction experiences.

Fourth, unlike more recent European EMI-related studies examining teaching challenges in EMI settings, most research on EMI at the tertiary level in Hong Kong has largely focused on students' challenges related to their own levels of English proficiency rather than their attitudes and perceptions related to the language proficiency of lecturers or how they deliver content courses in English. Yet, as Macaro *et al.* point out in their 2018 systematic review of 83 EMI-related studies, there were substantial concerns related to the proficiency of both students and lecturers. EMI-related studies in Europe indicate that non-Anglophone lecturers face unique challenges when delivering lectures in EMI settings (Dafouz et al., 2007; Morell, 2007; Tange, 2010) and that lecturers' English proficiency level is a frequent concern among both lecturers and students (Dearden & Macaro, 2016). Macaro et al (2018) have also pointed out that previous EMI studies in large part have typically avoided questions directly querying stakeholders, in particular students and lecturers, as to whether they were in favour of EMI or not, or whether students consider EMI to be as effective for content learning as learning content through their first language. While many consider EMI to be a means to improving students' overall English proficiency, there is concern that it negatively impacts overall learning of subject content and is often implemented without sufficient planning or well-defined policies (Briggs et al., 2018; Hellekjaer, 2010; Kirkpatrick, 2017; Pecorari et al., 2011; Tange, 2012; Tsuneyoshi, 2005).

The majority of previous EMI studies in Hong Kong related to students' attitudes, challenges, and perceptions have involved either cross-sectional studies or 3-year longitudinal studies conducted prior to the educational reforms of 2012 (Lo & Lo, 2014). As the educational reforms of 2012 have substantially increased the duration of undergraduate study in Hong Kong but a full year, there currently exists a dearth of empirical longitudinal research that provides a more comprehensive, systematic, and updated study of the experiences of undergraduate students at EMI universities in Hong Kong.

Chapter 3 – Methodology

3.1 Introduction

This chapter presents the research methodology for this project, which involves a mixed-methods approach employing both quantitative and qualitative methods to investigate the challenges, attitudes, and overall perceptions of students, instructors, and lecturers at English medium instruction (EMI) universities in Hong Kong. Data collection includes semi-structured interviews of three different groups of EMI stakeholders in Hong Kong and a multi-institutional large-scale student questionnaire for undergraduate students at four Hong Kong universities. The study first examines language-related academic challenges faced by undergraduate students in Hong Kong EMI universities. The study also investigates the interplay of language challenges with a range of background variables such as English language proficiency, academic discipline, EAP performance, previous medium of instruction (PMOI), student demographics, and background.

The chapter is divided into eight sections and provides an overview of the research methodology and conceptual framework. This section, **Section 3.1**, provides a broad overview of the chapter, how it has been organized into eight sections, with a brief summary of each section. **Section 3.2** presents the research questions (RQs). The individual RQs have been formulated to address separate but overlapping issues, which when answered collectively can provide further knowledge and insight, at both the micro and macro level, into the attitudes, challenges, and perceptions of students, lecturers, and language instructors at EMI HEIs in Hong Kong. **Section 3.3** provides an overview of the methodological framework, sample of participants, and the aims of the study, and data collection stages, methods and instruments corresponding to the individual research questions (RQs). **Section 3.4** presents the questionnaire survey for the quantitative method of data collection in this study. The section provides a comprehensive overview of the questionnaire survey exploring students' attitudes, challenges, and perceptions of EMI programmes in HEIs in Hong Kong. It also presents a review of the survey's design and development, size and scope, type, survey questions, piloting, sample, recruitment of participants, administration and distribution, security, and tools used for data analysis. **Section 3.5** presents the qualitative portion of this study which involves the semi-structured interviews. The section presents the three groups that were

interviewed: the final-year undergraduate students (n = 26) in their fourth year who have been tracked throughout their four years of study, alongside the 20 EMI lecturers, and the 20 English Language Centre (ELC) instructors who teach EAP and language support courses. The section also describes the six-phased approach for thematic analysis (Braun & Clarke, 2006) adopted for this study to be used for the analysis of the semi-structured interview data. Lastly, the section provides an overview of the transcription and coding tools and processes to be employed for the qualitative data analysis. **Section 3.6** describes the various steps taken to address, ensure, and maximize *validity* and *reliability* in the study during the various stages of design, planning, implementation, and data analysis. The section provides a description of the numerous means used to address statistical conclusion validity, internal validity, construct validity, external validity, and reliability. Lastly, **Section 3.7** addresses various ethical considerations related to the research study. The ethical considerations are discussed in terms of both the quantitative methods and the qualitative methods and present key factors including the necessary permissions and approvals to conduct the study, informed consent, assurance of anonymity and confidentiality, data security, and a statement of reflexivity by the researcher. Lastly, **Section 3.8** provides a summary of this chapter.

3.2 Research Questions

3.2.1 Research questions (RQs) and sub-questions

This research study is being undertaken with the goal of addressing the following overarching research question: 'What English language-related challenges do undergraduate students at EMI universities in Hong Kong face?' To address this, the following specific research questions are put forward:

- What English language-related challenges do students face during their four years at Hong Kong EMI universities?
- Do these challenges vary based on background, academic discipline, gender, L1, or previous medium of instruction? If so, how?
- Do students' challenges change over the duration of their four years of study? If so, how?

3.3 Methodological framework

3.3.1 Mixed-methods multiple perspective longitudinal research

The methodological framework chosen involved a mixed-methods multiple perspective approach with a modified sequential explanatory design (Ivankova et al., 2006). Data collection was derived from a two-part multi-staged sequential study that included administering a multi-institutional questionnaire for undergraduate students at four Hong Kong universities and conducting semi-structured interviews with three different groups of EMI stakeholders in Hong Kong. The three groups of stakeholders included a total of 32 undergraduate students, 26 of whom were tracked over four years (from 2019 to 2022) throughout their degree program; 20 university lecturers from various disciplines who deliver subject content courses in English; and 20 English-language support instructors who teach various English for academic purposes (EAP) and language-support courses. By means of administering a large-scale questionnaire and interviewing students, lecturers, and instructors, the study aimed to maximize understanding of students' challenges and classroom language in EMI programmes, their attitudes and perceptions of EMI, and their perceptions in terms of the overall effectiveness for content learning, and how it relates to students' English proficiency. Lastly, the study examines how the above-mentioned attitudes, challenges, and practices may vary over time, or how they may differ among students based on background, first language, previous medium of instruction, and academic discipline.

By employing a longitudinal mixed-methods multi-phased approach using quantitative and qualitative data collection methods, the study allows for a more robust analysis (Creswell, 1999; Dörnyei, 2007) of the multidimensional phenomena and complex issues associated with EMI-related challenges at the tertiary level in Hong Kong. Tashakkori and Teddlie (1998) define mixed-method studies as "those that combine the qualitative and quantitative approaches into the research methodology" p.17). Johnson and Onwuegbuzie (2004) advocate for mixed-methods approaches and cite the benefit of "methodological pluralism or eclecticism, which frequently results in superior research" (p.14), and a growing number of researchers have espoused the benefits of mixed-methods research (Guest & Fleming, 2015). Hence, this study employs a pluralistic and complementary methodological approach (Johnson & Onwuegbuzie, 2004) in which the quantitative data collection and analysis is followed and complemented by more refined in-depth qualitative analysis of data from different sources. Moreover, mixed-methods studies provide and

expound more information than mono-method research (Brewer & Hunter, 1989; Ivankova & Wingo, Johnson & Onwuegbuzie, 2004; Lund, 2012; 2018; Patton, 2002; Tashakkori & Creswell, 2007), and they can facilitate the collection of more comprehensive rich data enabling the researcher to analyse and compare findings in a pluralistic and complementary manner. By employing this comprehensive approach using data triangulation, where data was collected from several different sources for the same research questions, this study allows for a more extensive and comprehensive understanding from varying perspectives of students' language-related challenges, perceptions, and attitudes towards their overall experience during their studies at EMI universities in Hong Kong.

3.3.2 Data collection stages

As can be seen below in Figure 2.1, data collection for this study was conducted over four stages. Stage 0 refers to the initial pre-DPhil data collection involving the student interviews. In the summer 2019, a total of 32 student interviews were conducted as part of this author's research for the MSc in Teaching English Language in University Settings (TELUS). In the summer of 2020, a second round of student interviews was conducted with 29 of the 32 students from the original cohort as part of a potential continuation of the initial study. Stage 1 involved semi-structured interviews of 26 year-3 undergraduate students during the summer of 2021. Stage 2 involved the administering of a multi-institutional questionnaire survey on attitudes, challenges, and perceptions of undergraduate students at four EMI universities in Hong Kong. Also in Stage 2 were the first rounds of interviews of both the instructors who teach EAP and language support classes, and the EMI university lecturers who teach subject content through English. Stage 3 included the fourth and final round of semi-structured interviews of undergraduate students in their fourth and final year. These 26 students were tracked over four years in the longitudinal component of the study (through Stages 0, 1, and 3). Stage 4 marked the final stage. Although not originally planned, Stage 4 included the continuation of both lecturer and instructor interviews during early 2023. This stage was added due to the low numbers of recruited interview participants from these two groups during Stage 2, mainly due to the COVID 19 restrictions in Hong Kong in early 2022. As a result of Stage 4, an additional 15 interviews were conducted, which included 10 more lecturer interviews and five more instructor interviews, bringing the total number of participants to 20 for each of these two groups. This stage also marked the end of the data collection.

Figure 3.1 Research data-collection stages

Stage 0 (2019-2020) (existing data)	***Stage 1*** (Summer 2021)	***Stage 2*** (Winter/Spring 2022)	***Stage 3*** (Summer 2022)	***Stage 4**** (Spring 2023)
Year-1 student Interviews, Summer 2019 (conducted as part of Shepard 2019) Year-2 student Interviews, Summer 2020	Year-3 student interviews	Student online questionnaire Instructor interviews Lecturer interviews	Year-4 student Interviews	Instructor interviews Lecturer interviews

3.3.3 Data collection methods

Table 3.1 shows the data-collection methods, sample, and corresponding research instruments.

Table 3.1 Data collection methods, samples, and instruments

Research questions	Methods		Sample		
	Quantitative	**Qualitative**	**Students**	**Instructors**	**Lecturers**
What English language-related challenges do students face during their four years at Hong Kong EMI universities?	**Survey**	**Interviews**	**Interviews & Surveys**	**Interviews**	**Interviews**
Do students' language-related challenges decrease over their four years of study?	**Survey**	**Interviews**	**Interviews & Surveys**	**Interviews**	**Interviews**
Do these challenges vary based on background, academic discipline, L1, or previous medium of instruction? If so, how?	**Survey**	**Interviews**	**Interviews & Surveys**	**Interviews**	**Interviews**

3.3.4 Triangulation

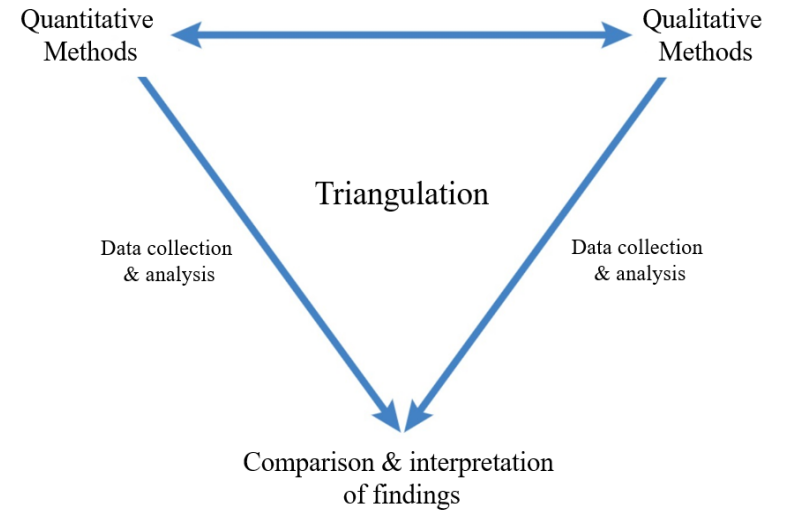
The term 'triangulation' within the realm of social research has been predominantly attributed to Campbell and Fiske (1959) who expanded on Fiegl's (1958) notion of 'triangulation in logical space'. Later, Campbell and others (Webb et al., 1966) brought more prominence and specificity to the term with the publication of their book, *Unobtrusive Measures*, in which the researchers

advocated for the benefits of triangulation through 'multiple method' (i.e., mixed method) approaches.

Greene et al (1989) propose five reasons, or 'purposes' for carrying out mixed-methods research: *triangulation, complementarity, development, initiation,* and *expansion*. The researchers suggest that these five purposes are separately defined by inherently different rationales and theoretical foundations, yet the underlying theoretical concepts associated with these do not appear to be mutually exclusive. In particular, the purposes and rationales associated with *triangulation* and *complementarity* can be used in conjunction. While complementarity relates to "elaboration, enhancement, illustration, clarification of the results from one method with the results from the other method (p.259), the researchers explain that the purpose of triangulation is to attain "convergence, corroboration, correspondence of the results from the different methods" (p.259). As an example of a mixed-method approach with the intention of triangulation, Greene et al (1989) cite "the use of both a qualitative interview and a quantitative questionnaire" (p.258). Thus, the methodology used in this research study achieves triangulation on two planes.

First, as can be seen in **Figure 3.2**, the study realizes triangulation on a 'macro' level through its mixed-methods approach, which uses more than one data collection method from multiple sources to examine similar data sets.

Figure 3.2 Triangulation in a mixed-methods research design



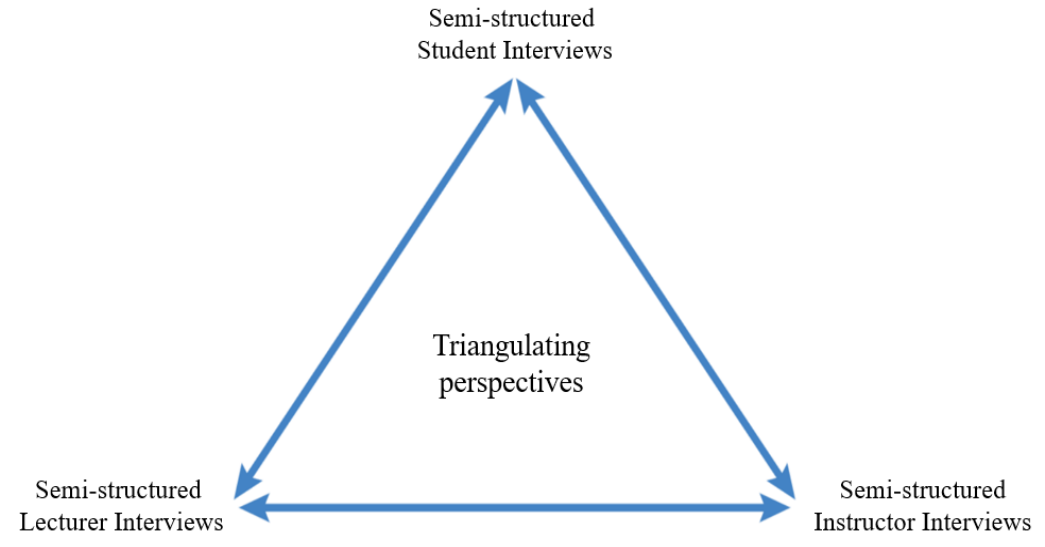
Second, and in line with Grabe's (2006) assertion that "complex issues have to be viewed from multiple perspectives" (p. xi), this methodology also adopts a multi-perspective research approach that "incorporates multiple perspectives into its study design, data collection, and analysis" (Paltridge, 2019, p. 29). Accordingly, interviews were conducted with three separate and distinct groups of EMI stakeholders: undergraduate students, EAP instructors, and EMI lecturers. Santoro (2014) advocates for multiple perspective approaches as they are useful for analysing complex interview data and allow for systematic comparison from different perspectives. Vogl et al. (2019) point out that "A growing body of research advocates the use of multiple-perspective interviews (MPIs) in which the viewpoints of members of the same social unit are collected separately and triangulated in the analysis" (p. 611). MPIs are separate sets of interviews conducted with different members of a single social group (Vogl et al., 2019). The 'social group' and its members are typically characterized by the situational context in which they act as participants. In the context of this study on EMI in higher education in Hong Kong, members of the social group selected for participation include the following three groups of EMI practitioners:

- 26 undergraduate students who were tracked throughout their degree program from first to fourth year (26 x 4 interviews in total).[1]
- 20 EMI lecturers who deliver subject content courses in a range of academic disciplines
- 20 English-language support instructors teaching various English for academic purposes (EAP) courses.

As can be seen in Figure 3.3, by using multiple perspective interviews (MPIs) and triangulating perspectives, this framework allows for further in-depth analysis of the same data set from the three different stakeholders, thereby allowing for greater insight and different forms of knowledge (Vogl et al., 2019).

[1] A total of 113 student interviews were conducted. In years 1 and 2 there were 32 and 29 participants respectively. In years 3 and 4 there were 26 participants each year.

Figure 3.3 Triangulating perspectives in multiple perspective interviews (MPIs)



3.4 Questionnaire

3.4.1 Questionnaire design

The questionnaire was divided into seven sections (A through G) and designed to elicit information related to students' backgrounds (e.g., age, gender, L1, previous MOIs, academic discipline), perceptions of their strengths and weaknesses in academic reading, writing, listening, and speaking in English (identifying and tracking micro-skills in each area), classroom language use, and attitudes towards learning subject content in an EMI setting. The format includes multiple choice items and items with psychometric scaling (Likert-type scales). Sections B through E use Likert-type scales, named after Renis Likert (1932), the American social psychologist credited for the development of this type of scale, which are the most common type of questionnaire scales used in most surveys. The Likert scale is a type of psychometric response scale used mainly to examine and investigate attitudes, beliefs, feelings, and/or opinions related to a subject or topic by requiring respondents to evaluate or rate a number of items, often in the form of a question or statement.

Questionnaires using Likert-type scales have been shown to be particularly effective in social science research, particularly in studies examining attitudes, motivation, and self-efficacy (Croasmun & Ostrom, 2011), and they have been used in an increasing number of EMI-related

studies (Curle & Derakhshan, 2021). Respondents completing a Likert-type scale survey generally circle, mark, or otherwise select an option within a series, usually on a continuum, to indicate their attitudes, beliefs, or opinions on a specific issue. A topic-specific statement typically would be followed by a number of answer options, commonly displayed in five, six, or seven-point categories. The options are shown on the continuum by labeling each of the separate categories or labeling only the two extremes, such as 'strongly disagree' and 'strongly agree' (Bearden & Netemeyer, 1999; Bruner et al., 2005). Weijters et al. (2010) maintain that the scale format has "strong effects" on response distribution, and Greenleaf (1992) contends that the number of response categories and response category labels can influence the level of response bias. Thus, all of these effects were carefully considered when designing the scale items for the current study.

Section A of the questionnaire consisted of several background questions to establish students' age, gender, first-language (L1), year of study, faculty or school, university, and previous medium of instruction (PMOI). Scales used in this section were *nominal* (also known as *categorical* scales). Nominal scales are used when variables are differentiated by category, label, name, or type. Generally, there is no implicit order or sequence in nominal scales, and no quantitative value is immediately associated with the different variables as they are distinct and generally not ordered. The information collected in Section A was essential for subsequent comparison of scores between the various groups and based on the different variables.

Section B consisted of only four items related to students' perceptions of the four language macro skills: *listening, reading, speaking,* and *writing*. Participants were asked to estimate on a Likert-type scale ranging from 1 (very easy) to 7 (very difficult) their perception of the degree of difficulty of the four language macro skills. This purpose of this section was to identify and examine what students generally consider to be the most and least challenging of the four skills, an aspect that has generally not been directly queried in previous empirical studies using the model collectively known as the 'EMI Challenges scale', first developed by Evans and Green (2007) and used in Evans and Morrison (2011). This model has been used in several subsequent studies (Aizawa & Rose, 2020; Kamaşak et al, 2021; Shepard & Morrison, 2021; Shepard & Rose, 2023a; Zhou et al., 2022). However, in these studies, overall aggregate mean scores based on the 45 individual tasks, or 'micro-skills', were used to determine the overall order of most to least challenging

language macro skills (i.e., reading, writing, speaking, and listening), whereas Section B required students to directly rate each of the four macro skills. This was thought to be able to provide a more simplified representation of students' perceptions of the difficulty of each macro skill, as well as a means to provide further comparison and validation to the 'EMI Challenges Scale' in Section C.

Section C adopted the 'EMI Challenges scale' (Evans & Morrison, 2011) and contained a total of 45 items. Specifically, this section included the 45 different micro-skills divided into four sub-sections related to: academic writing (15), reading (10), speaking (10), and listening (10). This section was originally developed by Evans and Green (2007)[2] to elicit information pertaining Hong Kong university students' self-efficacy in academic tasks and activities related to reading, writing, speaking, and listening. As mentioned above, this design has been used is several other studies and has been shown to be effective at measuring students' perceptions of the difficulty of common academic language activities and tasks associated with the four language skills. While Evans and Morrison (2011) opted for a 5-point scale, participants in this were asked to estimate their degree of difficulty of the 45 micro skills on a 7-point scale ranging from 1 (very easy) to 7 (very difficult). This researcher opted for a 7-point Likert-type scale as previous studies have shown that 7-point scales are more appropriate for unsupervised electronically-distributed questionnaires, and that they typically provide "a more accurate measure of a participant's true evaluation" (Finstad, 2010, p. 104). Moreover, Lewis (1993) asserts that 7-point scales are capable of displaying stronger correlations between mean differences and significance levels in *t*-tests, and Johns (2010) asserts that data from Likert type scales become considerably less accurate when the number of scale points are fewer than five or greater than seven. In terms of scale direction (decremental vs. incremental) and response order, both were reversed from Evans and Morrison's (2011) original model. Specifically, 'very easy' was placed at the left (or top) while 'very difficult' was placed at the other end of the spectrum. This was done purposely for two reasons. Firstly, numerous studies have established left-side or top-down selection bias, also known as 'primacy effect', which involves the tendency of respondents to select the first (left or top) choice from a response-option list. As this study sought to identify skills, activities, and tasks that were more

[2] The 45-item questionnaire model by Evans and Green (2007) frequently has been ascribed incorrectly to Evans and Morrison (2011) who subsequently used it in their study.

difficult than others, a more conservative approach was chosen so that any primacy effect bias by respondents would not be skewed towards difficulty but rather towards ease. Hence, in contrast to primacy effect, respondents' selection of items at the far end of the response-option list could be more resolute and might result in a more definite identification of items that are indeed challenging. Additionally, while the values (1 through 7) could have been assigned either in the ascending or descending order, and either before or after the survey was completed, it seemed both practical and sensible to assign values early on to avoid potential miscalculations. The second reason was that the author simply felt that higher levels of difficulty (or disagreement) should be represented by higher numbers rather than lower ones (See Shepard, 2024).

Section D was adapted from Evans (2000) study examining classroom language-use in EMI secondary schools in Hong Kong and included six items related to students' language use during in-class speaking activities. Participants were asked to estimate and compare the frequency of their language use in terms of both their L1 and English. Using a 7-point Likert-type scale ranging from 1 (always in English) to 7 (always in first language), participants estimate how much they use English vs their L1 in the classroom during different types of speaking activities, such as working together in pairs, in small groups, in large groups, asking or answering the lecturer questions, and presenting to the whole class. Findings from Section D are not included in this dissertation.

Section E included six items related to students' attitudes and perceptions in terms of the overall effectiveness of EMI programmes and three related to students' perception of their success in EMI. Of the seven items related to effectiveness, two were adapted from a model used in Byun et al. (2011) and later in Shepard and Morrison (2021), and four are based on a model adopted from research on success in EMI in Japanese HE (Rose et al., 2019; Thompson et al., 2019). These four items were also used in semi-structured interviews by Shepard and Morrison (2021). In terms of the Likert-type scale, a 6-point scale ranging from 1 (strongly agree) to 6 (strongly disagree) was chosen for several reasons. First, unlike Sections B, C, and D, which measure students' abilities, perceptions, or frequencies through 7-point scales, Section E aims to measure students' attitudes and perceptions of overall effectiveness and success. Accordingly, eliminating the neutral, or middle point reduces indifference to the topic (Nadler et al., 2015), and reduces social desirability bias by compelling participants to commit to either one side or the other (Garland, 1991). With the

exception of one question related to overall language improvement (Q40-4), findings from Section E are not included in this dissertation.

Section F was an optional section which included one question related to students' scores on previous external standardized language attitudes tests. This section was included in order to compare reported test scores with data from the other sections to examine possible thresholds in terms of reported levels of difficulties. **Section G** was also an optional section which included four items related to students' perceived English language proficiency. On a 10-point proficiency rating scale with ten separate descriptors ranging from 0 (none) to 5 (adequate) to 10 (perfect), respondents were asked to select their proficiency level in four categories: reading, writing, speaking, and listening. Findings from Sections G and F are not included in this dissertation.

3.4.2 Use of English for questionnaire

In terms of the questionnaire, the use of English was necessary for several important reasons. First, the participants' level of English proficiency was considered to be more than sufficient to participate in the questionnaire designed and developed for this study. The survey participants were undergraduate students who had been studying in EMI universities in Hong Kong from between one to four years, where English is the language used for their lectures, course materials, textbooks, assessments, (both spoken and written), and other presentations and projects. Although entry requirements differ for local and non-local students, all students admitted to the UGC universities in Hong Kong are required to pass various English proficiency examinations before being admitted. Next, the questionnaire has been developed using common, everyday high-frequency vocabulary and simple Likert-type scales to ensure that participants can easily comprehend all items and answer in a simple and expeditious manner. For these reasons, no language comprehension issues were expected or reported during piloting. Additionally, the largest section of the survey, Section A, is related to language-related academic challenges faced by students in EMI settings and was adopted from the model by Evans and Green (2007), which was originally developed and administered in English for students in Hong Kong. This model has been used successfully in its original English version in subsequent studies in various EMI contexts in Hong Kong (Evans & Morrison, 2011; Shepard & Morrison, 2021), China (Rose et al., 2020), Japan (Aizawa et al., 2020), and Turkey (Kamaşak et al., 2021). Lastly, if the questionnaire were

to be made available in students' L1s, it would have required several versions and would have been a complex and difficult undertaking given that the 2019 study by this researcher identified twelve different L1s, including Cantonese, Putonghua, Kazakh, Korean, Indonesian, Russian, Hokkien, French, Kinyarwanda, Taiwanese, Thai, and English. Moreover, previous studies have shown that studies using translated instruments can be problematic with information being altered, diminished, or lost in translation (Chang et al.,1999; Chapman & Carter, 1979; Harkness et al., 2010; McGorry, 2000; Yu et al., 2004). Chapman and Carter (1979) describe how meaning can be easily misrepresented or lost in translation of survey items, and Harkness et al. (2004) point out that "small differences in formulation across languages can affect understanding and that inappropriate design or inappropriate translation can result in respondents not being asked what the researchers intended to ask" (p.454). In summary, in the case of this research study, using translated versions of the questionnaire would have been excessive and potentially problematic.

3.4.3 Questionnaire sampling and participants

The questionnaire on 'English medium instruction (EMI) in higher education in Hong Kong' (EMHEHK) was designed to form a representative depiction of the challenges, attitudes, and perspectives of undergraduate students at EMI HEIs and was administered at four of the eight Hong Kong public universities funded by the government through the University Grants Council (UGC). The universities selected were The Hong Kong Polytechnic University (PolyU), one of the largest universities in Hong Kong and where this author worked as an instructor from 2013 to 2024, City University of Hong Kong (CityU), The Hong Kong University of Science and Technology (HKUST), and The University of Hong Kong (HKU). These four universities were selected for specific reasons. First, in terms of English language requirements for admission to undergraduate programmes, these four universities have similar admission policies and generally require high levels of English proficiency. Another large UGC university, The Chinese University of Hong Kong (CUHK), is generally considered a 'bilingual' university employing a mix of EMI and CMI depending on the faculty, department, school, and course. As CUHK has not adopted an overall or comprehensive EMI policy, the researcher decided that it falls outside the purview of this study. The Education University of Hong Kong (EdUHK), formerly the Hong Kong Institute of Education, was granted university status in 2016, and is a specialized institution dedicated to teacher education and training. EdUHK has three undergraduate faculties: Education and

Development, Humanities, and Liberal Arts and Social Sciences. As such, for the purposes of this research, EdUHK was not included in the data collection as students in these three focused areas may not reflect a representative sample of the EMI-related challenges faced by the wider undergraduate student population in Hong Kong. Lastly, the researcher opted not to include Lingnan University in the data collection for this study for two reasons. First, as of the 2020/21 academic year, the university reported a total undergraduate enrolment of fewer than 3,000 students and is a much smaller school compared to all other UGC universities. Second, as a liberal arts university, Lingnan has no STEM programmes, so there would be no representation from students enrolled in maths, sciences, or engineering programmes. Lastly, the Hong Kong Baptist University (HKBU) was contacted through the language centre, but there seemed to be little interest in participation, and the author decided it was preferable to proceed only with the four other universities given their similarities, sizes, and characteristics. As can be seen from Table 2.2, the four selected HK universities are also similar in terms of MOI, enrolment, and global university ranking.

Table 3.2 Overview of Hong Kong's UGC institutions (2023)

UGC University	*MOI*	*Enrolment*	*QS*	*Included*
University of Hong Kong	EMI	18,087	21	Yes
Hong Kong University of Science & Technology	EMI	9,864	40	Yes
City University of Hong Kong	EMI	9,099	54	Yes
Hong Kong Polytechnic University	EMI	19,046	65	Yes
Hong Kong Baptist University	EMI	8,358	281	No
Education University of Hong Kong	EMI	8,139	n/a	No
Chinese University of Hong Kong	Mixed	18,468	38	No
Lingnan University	Mixed	2,669	600+	No

Students at Hong Kong universities typically fall into one of three categories: Local Cantonese-speaking students from Hong Kong; Putonghua-speaking students from Mainland China; and non-Chinese speaking students (both local and non-local). While Hong Kong is a 'Special Administrative Region' within China, it is separated from the Chinese mainland by borders and immigration controls, and the Hong Kong government requires student visas for entry into Hong Kong for all non-local students. All students from outside Hong Kong are considered 'non-local' students, including those from mainland China. Additionally, the spoken language of Hong Kong is Cantonese, while students from mainland China are generally speakers of Putonghua. There is

also some variation in terms of written Chinese between Hong Kong and mainland China. Hong Kong (along with Macau and Taiwan) typically uses traditional Chinese script, whereas in mainland China simplified Chinese script is generally used. Apart from the linguistic differences, as Hong Kong was a British colony from 1842 until the handover in 1997, it has a rather unique history and culture, as well as a changing and growing relationship with mainland China. Accordingly, and corresponding with the Hong Kong government, all Hong Kong universities, and the UGC, this study classifies students from mainland China as 'non-local'. The third group of students is generally comprised of non-Chinese-speaking local students or non-local international students from other parts of Africa, Asia, Europe, the Americas, and elsewhere, often referred to as 'Internationals'. According to the UGC (2022) local Cantonese-speaking students currently account for more than three-quarters of undergraduate students in Hong Kong.

3.4.4 Recruitment of survey participants

The sample of student participants from the Hong Kong Polytechnic University (PolyU) was sought from all eight faculties and schools. This author has considerable familiarity and knowledge of the day-to-day workings at PolyU as he was employed at the university's English Language Centre as an Instructor from 2013 to 2024. The sample of student participants from City University of Hong Kong (CityU), Hong Kong University of Science and Technology (HKUST), and the University of Hong Kong (HKU) was sought from all colleges and schools offering undergraduate programmes. Instructors and lecturers from all four universities were sought to participate and to inform students about the questionnaire using a brief 3-slide PowerPoint presentation (provided by the researcher). The short PowerPoint presentation provided information about the survey and simple instructions on how to access and complete it by displaying a link to the online survey, a separate QR code to be scanned, and a password to access the survey.

At the three 'external' universities (CityU, HKU, HKUST) instructors, lecturers, and the heads of the language centres were contacted and invited to participate in the study. The invitations to participate initially involved emails to the centre directors, which included a brief overview of the study, a description of the online questionnaire, its intended aims and objectives, and a tentative proposed schedule for administering the survey. Subsequently, online meetings were scheduled to meet with the respective heads and/or directors of the language centres and explain the study's

aims and objectives in greater detail. All three heads from the external universities agreed to inform their language instructors via general announcements and a forwarded an email from this author, which included the aims of the survey, a brief invitation for students, the PowerPoint, and the survey link with a separate QR code. The external participants were subsequently sent emails and invited to facilitate the administering and distribution of the electronic online questionnaire survey by either hosting or promoting the online questionnaire during classes or breaks, or by promoting the survey through email and/or social media with their students. Unfortunately, as there were no means for this author to directly contact the individual instructors at the three external universities who would be administering the online survey, overall participation by the three respective language centres was shown to be limited. Moreover, this author was not copied on any of the external universities 'internal' emailsor announcements related to the invitations to participate sent out by the heads or associate heads to the instructors of the three language centres who were reported to be hosting the surveys. Accordingly, very few options were available to this author to ensure that invitations to participate from the three external universities were distributed adequately or that they were sent to students in a timely manner. While this author did monitor the participation coming from students from the external centres in real time on the Qualtrics (survey host) website, there was no permission or means to send out further invitations and/or reminders as was done internally with the students at the PolyU, this author's home university. Consequently, the participation of students at the three external universities was limited to a total of 195 respondents. Accordingly, as explained in the next chapter, inclusion of the data from the three external universities was used for limited analysis.

3.4.5 Questionnaire timeline and procedures

Design and development of the questionnaire was ongoing from October 2020 to April of 2021. This author scheduled consultations with supervisors for review and evaluation of the survey's content, size, and structure. The final version of the questionnaire was completed by the end of Trinity Term of 2021 and piloted on 12 November 2021. The piloting of the questionnaire was intended to act as the "small-scale test of the methods and procedures to be used on a larger scale" (Porta, 2008) in order to evaluate the feasibility of using the instrument and to identify any potential issues or problems. The questionnaire was administered to an intact EAP class of year 1 students (n=16) taught by the researcher. Subsequently, with no issues reported during or after the

piloting, the questionnaire was published online and made available to students from 15 November 2021 to the end of April of 2022. The survey was monitored regularly during this period for progress and the response rate, and the survey was closed after a suitable response rate was achieved.

3.4.6 Data Screening

The online student questionnaire was hosted on Qualtrics, and when the survey closed in late April 2022, a total of 2,321 'responses' had been reported. However, these responses can range from completing the survey in its entirety to only completing initial background information. Accordingly, the review and 'screening' of the questionnaire data resulted in the elimination of a substantial number of respondents (n = 339) due to a variety of reasons. These included: failure to complete required sections[3] of the survey (n = 73), completing the survey too quickly (n = 18), and failure to meet criteria, which in this case meant responses (n = 3) from a university not included in the study. Further review within specific sections of the survey resulted in the removal of additional respondents (n = 111) due to 'straightlining' or 'streamlining' (selecting the same choice repeatedly resulting in inconsistent or incongruous responses). In addition, and strictly to ensure data consistency for the findings presented in this dissertation, additional responses were eliminated (n = 105) as these had only completed Section B, the 4-item scale of the questionnaire, but not Section C, the 45-item ECS portion of the questionnaire. It was considered important in terms of both consistency and reliability to ensure that the same respondent answered both Sections B & C, as the means scores from these two were being analyzed and compared. The remaining data set was screened further (n = 29) to identify univariate outliers and Z-scores > 3.29 were confirmed through SPSS per standard conventional criteria (Tabachnick et al., 2007). After data screening, the remaining sample's total number of respondents included was 1,982. All statistics generated from the quantitative data analysis were calculated using IBM SPSS (Version 30). Cronbach's alpha coefficients of reliability were calculated to measure the internal consistency of the research instrument, the version of the ECS, to determine how well the items correlate with each other to measure the underlying concepts (Appendix H) As can be seen in **Table 3.3**, the Kolmogorov-Smirnov test and Shapiro-Wilk test were calculated using descriptive statistics, and both indicated significant level of statistical normality. Histograms and Q-Q plots were generated

[3] Sections required to be completed for this study were Sections A, B, C, and E. Sections D and F are not included.

that indicate normal distribution curves for each variable (Appendix I). Both tests indicated acceptable ranges of skewness[4] and kurtosis in terms of normal distributions.

Table 3.3 Kolmogorov-Smirnov test and Shapiro-Wilk test results

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Section B	.080	1982	<.001	.987	1982	<.001
ECS Writing	.038	1982	<.001	.996	1982	<.001
ECS Reading	.042	1982	<.001	.996	1982	<.001
ECS Speaking	.036	1982	<.001	.994	1982	<.001
ECS Listening	.057	1982	<.001	.989	1982	<.001
Language Improvement	.199	1955	<.001	.884	1982	<.001

Descriptive statistics were calculated to summarize the main features of the dataset and present numerical summaries (i.e. means and standard deviation). To measure differences between groups, independent samples *t*-test and analysis of variance (ANOVA) were conducted. The data and findings are presented in the following Chapter 4.

3.5 Semi-structured multiple-perspective interviews

3.5.1 Overview of interviews

The semi-structured interviews for students, lecturers, and instructors included both open-ended and closed-ended questions. In social science research methodology, open-ended qualitative interviews (INT-QUAL) are typically more common than closed-ended quantitative interviews (INT-QUAN) because they tend to be more unrestricted and nondirective (Teddlie & Tashakkori, 2009). Patton (2002, p.349) classifies four different types of open-ended interviews based on their level of structure and formality: 1) *Informal conversational interview*; 2) *Interview guide approach*; 3) *Standardized open-ended interview*; and 4) *Closed, fixed-response interview*. For this study, a modification of Patton's *Standardized open-ended interview* approach was adopted, albeit with

[4] ECS Listening skewness was shown to be low to moderate, and Language Improvement indicated a moderately positively skewed (or right-skewed) distribution, but both were within the acceptable ranges (See Appendix data).

slight modification. The exact wording of each question and the order in which they were asked was determined in advance and shown on the question list. For interview questions for each group, see Appendices: C (students), D (instructors), and E (lecturers). Prior to the interviews, participants were provided with the questions, given time to review them, and given ample time to ask questions if they felt that any items still were unclear. The researcher asked all interviewees in each group (i.e., students, instructors, lecturers) the same basic questions (mostly about the students' challenges and practices) and generally in the same order. This proved to be a sensible and effective approach as it ensured that the structure of the interviews was generally similar interviewees in standard open-ended interviews may, at times, unknowingly provide extraneous answers to questions which may necessitate the need for the item to be repeated and/or modified. In such cases, it was prudent to modify the wording of question(s) or probe for more information.

While the open-ended nature of the standardized approach used in this study allowed interviewees the opportunity to provide uninhibited and unrestricted responses without time constraints to each of the questions, the consistent and comparable structure used for the interviews for all three groups ensured that all respondents were provided with similar questions, which were presented within the same contexts, and which were organized in a similar order. This consistent and uniform approach was employed to bolster reliability while still allowing for the collection of diverse, rich, and meaningful data from the three separate interview groups. This method also proved to facilitate a more straightforward analysis of the data.

The conducting of the interviews followed McNamara's (2009) eight principles. The researcher sought to ensure that all interviews were conducted in comfortable, quiet settings with little distraction. Following the initial year-1 student interviews, which were mainly conducted in person and face-to-face, all subsequent interviews were conducted online. This change was made for several reasons. First, unlike the first round of year-1 student interviews which were conducted between early June and early July of 2019, all subsequent interviews were conducted after the COVID-19 outbreak of early 2020. By the spring of 2020, the Hong Kong government's 'Zero-COVID' policy had essentially closed the territory's borders, and virtually all of Hong Kong's educational institutions were conducting classes online. These restrictions, combined with Hong Kong's 'third wave' of COVID during the summer of 2020, resulted in all of the year-2 student

interviews taking place online. Recent studies show that the COVID pandemic has resulted in many researchers switching to online interviews (Khan & MacEachen, 2022; Pocock et al., 2021), and that they offer some advantages. Nonetheless, given this study's research design, the aforementioned constraints, and unfortunate timing, online interviews were the only plausible option. It should be noted that although it would have been possible to conduct face-to-face in-person meetings in Stage 4 for the final 15 interviews, the online option allowed for much more flexibility, which contributed to the author reaching the desired sample size. Additionally, the author concluded that the uniformity of the online interviews maintained the consistency of the interview setting and structure, thereby fostering greater reliability.

The online interviews were conducted using Microsoft Teams and Zoom. Previous studies have used video streaming platforms effectively for in-person interviews, and they allow for face-to-face synchronous interaction between parties (Lo-Iacono et al., 2016). Next, the aims and objectives of the interviews were reviewed with each participant, and each interviewee was provided with a short document explaining the research study (See Appendix A) which included a list of the interview questions, and a consent form that required permission to be obtained from participants to audio-record the interviews. This was read and signed prior to commencing the interviews.

In terms of privacy and anonymity, all participants were given assurances of complete anonymity and confidentiality in terms of the data. Next, the interview structure was briefly explained, including the interview topics, and participants were informed of the expected duration, but no minimum or maximum time requirements were given. Next, participants were asked if they understood what was been explained, and if they had any questions or concerns before beginning the interviews. Lastly, after the interviews were concluded, the researcher's contact information was provided in case the participants had any post-interview questions or concerns. In terms of confidentiality, steps were taken to ensure anonymity based on criteria recommended by Saunders et al. (2015). The student participants in the ongoing semi-structured student interviews had already been anonymized through the use of pseudonyms for the author's 2019 study. As such, additional corresponding details related to academic disciplines and countries of origin background have been concealed so that participants cannot be identified. For the semi-structured lecturer and

instructor interviews, additional steps to ensure anonymity and confidentiality included withholding identifiable information and anonymizing participants using non-identifying labels and numbers such as 'Lecturer 8' and 'Instructor 12'. Additionally, lecturers and instructors are only identified by gender, L1 (instructors only), years of teaching experience, and academic discipline (lecturers). All information related to lecturers and instructors has been provided only in limited, non-identifiable parts.

The use of participants such as instructors and lecturers with 'insider' knowledge can have advantages and disadvantages. As members of the university who teach and interact with the student participants in this study, these insiders benefit from unique specialist knowledge that observers from outside the university community do not enjoy. Participants' willingness to share this knowledge, however, may be limited. Alternatively, participants may feel obligated to respond to questions in ways that align with official university policies or protocols, and this may lead to participants relaying exaggerations, falsehoods, or misrepresentations. To maximize the probability of candid, open, and reliable answers, it is essential to ensure that participants are comfortable in discussing their attitudes and perceptions in terms of various learning and teaching related challenges, and that they enjoy a sense of security in terms of anonymity and confidentiality. Additionally, all interviews were conducted by the researcher, so interviewer effect and bias were either reduced, or at least it remained consistent.

3.5.2 Longitudinal student interviews & participants

The student interview participants were originally selected in 2019 as part of the author's Masters' degree research examining language-related challenges faced by first-year students at an EMI university in Hong Kong. Some of the findings of that study have been reported in Shepard and Morrison (2021) and Shepard and Rose (2023). The original 32 students were also among those (N=636) who participated in the 2019 study's questionnaire. From an original pool of 96 student volunteers, 32 students were ultimately selected and interviewed, who embodied a diverse range of characteristics in terms of background, gender, L1s, PMOIs, and academic disciplines. Shepard and Morrison (2021, p.175) reported that the year-1 student participants represented "seven different faculties and nine different L1s, including Cantonese (12), Putonghua (7), Indonesian (3), Russian (3), Kazakh (2), Korean (2), French (1), Kinyarwanda (1) and English (1)". Student

participants also represented 15 different majors, or areas of study. All Cantonese speakers were from Hong Kong and the Putonghua/Mandarin speakers were from Mainland China, Taiwan and Inner Mongolia. The students ages in year-1 were reported as ranging "from 17 to 20 years (M = 18.43, SD = .669) with 66% female (21) and 34% male (11)". Shepard and Morrison (2021) explain the rationale for the purposeful sampling as follows:

> The main objective in the selection of participants for student interviews was to form a diverse sample representing the wide variety of first-year students in order to capture a broader range of variation in the study, rather than form a precise representative sample corresponding to the survey demographics since two of the 11 L1s account for more than 90% of all participants" (p.175).

In total, the year-1 student interviews took approximately 9 hours and 22 minutes, with a mean average of approximately 17 and a half minutes and standard deviation of approximately 4 and a half minutes. The longest year-1 interview was slightly under 32 minutes, and the shortest interview was approximately 10 and a half minutes. In the summer of the following year, a second round of interviews was conducted with 29 participants from the original group of students as part of the continued EMI research collaboration between this author and the author's former (MSc) and present (DPhil) supervisor.

In the second round of interviews, the number of participants decreased by three from 32 to 29 from the year-1 round of interviews. This occurred because three of the students from the Year-1 interviews did not reply to invitations sent to their student email addresses. The researcher was informed that at least one of the students had transferred to another university in Hong Kong but was not able to confirm this. No other information regarding the three students was available. Moreover, by the summer of 2020, all communication and summer classes were being held online due to the COVID pandemic.

The majority of the second round of interviews took place between 16 June 2020 and 21 July 2020, with one student being interviewed two months later in September 2020 due to a summer internship. In total, the Year-2 student interviews took approximately 15 hours and 3 minutes, with a mean average of approximately 31 minutes and a standard deviation of approximately 9 minutes. The longest year-2 interview was approximately 56 minutes, and the shortest interview was

slightly more than 18 and a half minutes. All students were again compensated for their time with local Hong Kong supermarket vouchers roughly equivalent to £10.

Student interviews for year 3 were conducted between June and August during the summer of 2021. For both the third and fourth rounds of interviews, the compensation for the interviews increased, and students received local Hong Kong supermarket vouchers roughly equivalent to £15.

The third round of interviews also saw another equal decline (n=3) in the number of participants from 29 to 26. However, this time the researcher had been contacted by all three students and was informed why they were not available. One student had transferred to a UK university at the beginning of her third year and was no longer studying in Hong Kong. Another student was unavailable due to work over the summer, and a third student had taken a break from her studies at the beginning of her third year. As a result of not participating in the year-3 interviews, none of these students were able to participate in the year-4 (final) round of interviews.

While the attrition rate over the first three rounds of interviews was unfortunate, it should be noted that the six participants who were left the study represented an equal number of female (3) and male (3) participants. As a result, the gender ratio was impacted proportionately and only slightly. Moreover, the four L1s of the six participants who left continued to be represented proportionately by other participants who remained in the study.

In total, the Year-3 student interviews took approximately 12 hours and 9 minutes, with a mean average of approximately 25 minutes and a standard deviation of just under 7 minutes. The longest year-3 interview was approximately 40 and one-quarter minutes, and the shortest interview was slightly more than 16 minutes. Year-4 student interviews were conducted between April and June of 2022, corresponding with the end of students' fourth and final year of study.

Table 3.4 Student interview participant list: Years 1 - 4

No.	*Student*	*Gender*	*L1*		*Y1*	*Y2*	*Y3*	*Y4*
1	Adelle	F	Russian	Chemical Technology	✓	✓	✓	✓
2	Alex	M	Kazakh	Civil Engineering	✓	✓	✓	✓
3	Andrei	M	Russian	Hotel & Tourism Management	✓	✓	✓	✓
4	Angel	F	Putonghua	Hotel & Tourism Management	✓	✓	✓	✓
5	Armand	M	French	Computer Science	✓	✓	✓	✓
6	Carol	F	Cantonese	Accounting	✓	✓	✓	✓
7	Carrie	F	Cantonese	Hotel & Tourism Management	✓	✓	✓	✓
8	Derek	M	English	Hotel & Tourism Management	✓	✓	✓	✓
9	Edward	M	Cantonese	Computer Science	✓	✓	✓	✓
10	Elizabeth	F	Putonghua	Accounting	✓	✓	✓	✓
11	Hyun	F	Korean	Hotel & Tourism Management	✓	✓	✓	✓
12	Jackie	M	Indonesian	Computer Science	✓	✓	✓	✓
13	Janine	F	Indonesian	Civil Engineering	✓	✓	✓	✓
14	Jessica	F	Putonghua	Language Studies	✓	✓	✓	✓
15	Joy	F	Putonghua	Building Engineering & Management	✓	✓	✓	✓
16	Kay	F	Cantonese	Surveying	✓	✓	✓	✓
17	Kelvin	M	Cantonese	Computer Science	✓	✓	✓	✓
18	Linda	F	Cantonese	Computer Science	✓	✓	✓	✓
19	Lucy	F	Putonghua	Global Supply Chain Management	✓	✓	✓	✓
20	Marcus	M	Cantonese	Surveying	✓	✓	✓	✓
21	Olivia	F	Cantonese	Computer Science	✓	✓	✓	✓
22	Sherry	F	Cantonese	Hotel & Tourism Management	✓	✓	✓	✓
23	Stacy	F	Russian	Applied Biology & Biotech	✓	✓	✓	✓
24	Tatiana	F	Kazakh	Environmental Engineering	✓	✓	✓	✓
25	Tiffany	F	Cantonese	Aviation Engineering	✓	✓	✓	✓
26	Victoria	F	Kinyarwanda	Biomedical Engineering	✓	✓	✓	✓
27	Celeste	F	Putonghua		✓	✓		
28	Jee	F	Korean		✓	✓		
29	Guy	M	Indonesian		✓	✓		
30	Ilene	F	Cantonese		✓			
31	James	M	Cantonese		✓			
32	Peter	M	Putonghua		✓			

As can be seen from **Table 3.4**, the number of interview participants remained the same in both the third and fourth years (n = 26). In total, the year-4 student interviews lasted just under 18 hours and 34 minutes, with a mean average of approximately 38 and a half minutes and a standard deviation of slightly more than 13 minutes. The longest year-4 interview was just over 1 hour and

18 minutes, and the shortest interview was slightly more than 24 minutes. Of the 26 students tracked over four years, approximately 69% were female (18) and 31% were male (8), and they were from seven different academic faculties. They also represented and nine different L1s, including Cantonese (10), Putonghua (5), Russian (3), Indonesian (2), Kazakh (2), Korean (1), French (1), Kinyarwanda (1), and English (1). All ten Cantonese speakers were from Hong Kong, while the Putonghua speakers were from Mainland China (2), Taiwan (2), and Inner Mongolia (1). The Russian and Kazakh speakers (5) were all from Kazakhstan, while the two Indonesian speakers were from Indonesia. The Korean, French, and Kinyarwanda speakers were from South Korea, Morrocco, and Rwanda respectively.

Design and development of the interview protocol initially took place in 2019, and questions focused on several topics. The first set of questions were related to students' backgrounds, particularly their L1, type of secondary school, location, and previous medium of instruction. Subsequent questions were adapted from a study by Evans (2009) examining language-related challenges when learning subject content through English. The next set of questions focused on students' language use in EMI classrooms. This was followed by questions about students' perceptions of the efficacy of EMI at the university. Additional questions were adapted from Rose and McKinley's (2018) main themes of internationalization as a result of EMI programmes. In subsequent years, as the students had been learning partially through online classes as a result of the COVID-19 pandemic, several additional questions focused on students' perceptions of the challenges, benefits, advantages, and disadvantages of online learning in an EMI HEI setting (See Appendix B for Student Interview Questions).

3.5.3 Lecturer interviews

Participants for the EMI lecturer interviews comprised of a purposive sample of 20 academic staff members from PolyU's seven faculties and schools who delivered subject content through English. A balanced mix was sought from the different faculties and schools, as well as from the respective various departments within the different faculties/schools, and with various backgrounds, teaching experience, and L1s. Invitations to participate were sent via email in two rounds between February 2022 and April of 2022, and again between January 2023 and March of 2023.

Between the first and second rounds of invitations, individual emails were sent to approximately 165 lecturers in each of PolyU's faculties and within different departments. Each of the emails included the lecturer's name and title, a short summary of the project, the invitation to participate, and an offer of compensation for their time should they accept (See Appendix E). These emails also included an attachment explaining the purpose and aims of the study (See Appendix A 'Participant information Sheet') and a consent form (See Appendix F) to be signed and return prior to the interview taking place.

The lecturers were targeted based on their respective faculties and departments in an effort to recruit a diverse, broad, and representative sample of 20 lecturers from all the faculties/schools within the university. The invited lecturers were not acquainted with the author, and they were identified using the various faculty/departmental webpages of the university's website, www.polyu.edu.hk, where the majority of academic staff have their email addresses listed publicly.

From the first round of emailed invitations, there were 16 lecturers who responded. Of these, six declined and 10 accepted. Those who accepted were sent a second email which included scheduling options for the online interviews based on their availability and two more attached documents. These included a consent form to be signed and returned electronically prior to the interview and a broad list of the interview questions. Follow up emails were exchanged to pinpoint interview dates and times. The majority of the first round of lecturer interviews (9) were conducted online between February 2022 and April 2022, with the exception of one being held in August 2022. As there had been only 10 lecturers interviewed by late 2022, a second round of emails was initiated in December 2022 and continued until February 2023. These emails were sent to faculty members at the university who had not yet been invited to participate and resulted in 10 additional lecturers agreeing to be interviewed. The majority of these interviews (9) took place between January 2023 and March 2023, with the exception of one which was scheduled in May 2023, thus bringing the total number to 20.

As shown in Figure 3.4, participants for the lecturer interviews were from each of PolyU's seven faculties and schools and taught in 14 different departments within those faculties.

Figure 3.4 Breakdown of faculties and departments of 20 lecturers



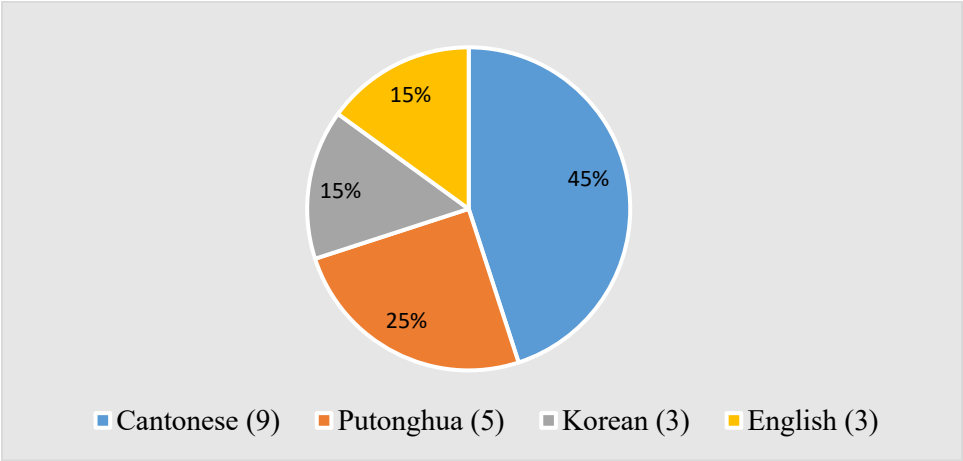
As can be seen from **Table 3.5**, the lecturer interview participants (n = 20) represented seven different faculties and/or schools and 14 different departments. Experience in terms of years teaching ranged from approximately two years to 20 years. Five of the lecturers had between 2 to 5 years of experience, while nine lecturers had between 6 to 9 years of experience. Six of the lecturers had more than 10 years of experience. Four had more than 15 years of experience, and one reported 20 years of experience. A total of 11 lecturers were female (55%) and 9 were male (45%).

Table 3.5 Lecturer participant list

Participant	*Gen.*	*Exp. (years)*	*Faculty / School*	*Department*
Lecturer 01	F	20	Health & Social Sciences	Nursing
Lecturer 02	M	18	Business	Logistics & Maritime Studies
Lecturer 03	M	7	Humanities	English & Communication
Lecturer 04	M	6	Construction & Environment	Building & Real Estate
Lecturer 05	F	7	Construction & Environment	Building & Real Estate
Lecturer 06	M	9	Humanities	English & Communication
Lecturer 07	M	3	Construction & Environment	Civil and Environmental Engineering
Lecturer 08	M	15	Science	Applied Mathematics
Lecturer 09	F	12	Construction & Environment	Civil and Environmental Engineering
Lecturer 10	F	16	Humanities	Chinese & Bilingual Studies
Lecturer 11	F	8	Hotel & Tourism Management	Hospitality & Hotel Management
Lecturer 12	F	5	Hotel & Tourism Management	Hospitality & Hotel Management
Lecturer 13	M	9	Health & Social Sciences	Applied Social Sciences (Sociology)
Lecturer 14	F	4	Design	Digital Media Design
Lecturer 15	F	2	Health & Social Sciences	Applied Social Sciences (Social Work)
Lecturer 16	F	6	Health & Social Sciences	Applied Social Sciences (Social Work)
Lecturer 17	M	6	Health & Social Sciences	Applied Social Sciences (Psychology)
Lecturer 18	F	7	Health & Social Sciences	Applied Social Sciences (L.E.D.)
Lecturer 19	F	2	Health & Social Sciences	Applied Social Sciences (Psychology)
Lecturer 20	M	12	Design	Design Psychology

As shown in **Figure 3.5**, the lecturer interview participants (n = 20) represented four different L1s, including Cantonese (9), Putonghua (5), Korean (3), and English (3). All nine Cantonese speakers were from Hong Kong, while the five Putonghua speakers were from Mainland China. The three Korean-speaking lecturers were from South Korea (4), and the three English speakers were from the UK (2) and Canada (1). Participants were not asked to report their ages.

Figure 3.5 First languages (L1s) of lecturers



The 20 lecturer interviews were conducted online in two phases. The first phase of 10 interviews took place between February and August 2022, and the second phase of 10 additional interviews took place between January and May 2023. In total, the lecturer interviews took approximately 14 hours, with a mean average of approximately 42 minutes and standard deviation of approximately 12 minutes.

3.5.4 English Language Instructor interviews

The 20 EAP instructors that were invited to participate were recruited from The English Language Centre (ELC) at the PolyU. As of this writing, the ELC is one the largest of its kind in Hong Kong with 80 academic staff members, including 15 full-time teaching fellows, 61 full-time instructors, and seven part-time visiting lecturers. The majority of the ELC's credit-bearing Language and Communication Requirement (LCR) subjects, Cluster Area Requirement (CAR) subjects, Service Learning (SL), and Discipline-Specific Requirement (DSR) subjects are taught by the large instructor pool, more than half of which is comprised of local Cantonese-speaking English language instructors.

The majority of the instructors generally teach between four to six courses per semester with between 16 to 18 contact hours per week plus additional duties. Courses are typically scheduled as weekly 3-hour sessions that continue for 13 weeks (39 hours total), and class sizes range on average from between 18 and 25 students. Consequently, most ELC instructors teach between 90 and 120 students each semester. ELC courses generally include a range of academic language

activities using all four 'macro' skills, reading, writing, speaking, and listening. This generally allows instructors to interact with students on a regular basis, during classroom activities, student led discussions, individual student consultations, and assessments, offering instructors unique insight in terms of students' English language skills. As can be seen from **Table 3.6**, the instructor interview participants (n = 20) were evenly split between females (50%) and males (50%). Of the 20 instructors, 55% (11) identified English as their L1, 35% (7) reported to be L1 Cantonese speakers, and 10% (2) indicated Putonghua as their L1.

Table 3.6 Instructor participant list

Participant	*Gen.*	*Exp. (years)*	*L1*
Instructor 01	M	20	Cantonese
Instructor 02	M	30	English
Instructor 03	M	34	English
Instructor 04	M	13	English
Instructor 05	F	14	Cantonese
Instructor 06	M	16	Cantonese
Instructor 07	F	15	Cantonese
Instructor 08	F	12	Putonghua
Instructor 09	F	4	Putonghua
Instructor 10	F	9	Cantonese
Instructor 11	F	20	English
Instructor 12	M	25	English
Instructor 13	F	20	Cantonese
Instructor 14	M	15	English
Instructor 15	F	10	Cantonese
Instructor 16	F	17	English
Instructor 17	M	30	English
Instructor 18	F	21	English
Instructor 19	M	10	English
Instructor 20	M	21	English

All the instructors reported having postgraduate degrees at the Master's level along with professional teaching qualifications, such as the CELTA, DELTA, and RSA Dip. Several instructors reported having multiple degrees and professional qualifications. Experience in terms of years teaching ranged from approximately four years to 34 years. Two instructors each reported

four and nine years of experience respectively. Seven of the instructors had between 10 and 15 years of experience, while eight instructors had between 16 and 25 years of experience. Three instructors reported 30 years or more of experience. Participants were not asked to report their ages.

Invitations to participate were sent between December 2021 and March of 2022, and the 20 instructor interviews were conducted online in two phases. The first phase of 15 interviews took place between December 2021 and January 2022, and the second phase of five additional interview took place between March and April 2023. In total, the instructor interviews took approximately 15 hours, with a mean average of approximately 44 and a half minutes and standard deviation of approximately 13 minutes. Both the lecturer and instructor interviews followed the same basic format and structure, and the interview questions are focused on same five main topics covered in the student interviews. In this way, the same questions and topics are addressed through MPIs from three different subgroups of a single social group (Vogl et al., 2019) as described earlier in Section 3.3.3.

3.5.5 Transcription, coding & thematic analysis

In this study, the qualitative data collection involves 153 semi-structured interviews involving three different groups of EMI stakeholders. Accordingly, a large amount of data was generated from the interviews, and the implementation of appropriate identification and organization methods was imperative. Boyatzis (1998) has defined TA as "a way of seeing" and "making sense out of seemingly unrelated material" (p. 4). Braun and Clarke (2006, p.79) define TA as a "method for identifying, analysing and reporting patterns (themes) within data". The researchers explain that TA is a way to categorize and organize data sets in a way that rich information and detail can be observed. Researchers often point out that thematic analysis is not simply a sequential process of progressing step by step, but rather a more iterative and non-linear process returning to previous steps and repeating stages as required. This type of analysis typically involves the analyst moving from phase to phase frequently revisiting the various steps non-sequentially in order to better identify and interpret information. The following presents an overview of the transcription, coding, and subsequent thematic analysis.

Audio recordings from the first and second years of the student semi-structured interviews were converted from advanced audio coding (AAC) files to mp3 files enabling them to be transcribed using Wreally Transcribe. Audio recordings for year 3 (Y3) and year 4 (Y4) of the student interviews were transcribed using Otter.ai as the software was more advanced and suitable. Subsequently, the Y1 and Y2 interviews were re-transcribed using Otter.ai for ease of analysis and comparison, and to ensure consistent use with the NVivo qualitative data analysis software (QDAS). Lecturer and Instructor interviews were also transcribed using the Otter.ai software. Transcriptions were then compared with the original audio recordings for accuracy and subsequently corrected and edited as required. Although the thematic analysis of the Y1 student interview transcripts had been originally performed using NVivo 12, it was re-analysed along with all of the student interview transcripts from the subsequent years (Y2, Y3 & Y4) using NVivo 14. Similarly, the instructor and lecturer interview transcripts were analysed using NVivo 14 for coding consistency and ease of analysis.

Coding techniques are generally used in most qualitative research methods to facilitate the organization of the large amount of data typically generated. This frequently results in a hierarchy of categories and sub-categories (Joffe & Yardley, 2004), which can generate themes, codes and subcodes (Boyatzis, 1998). Fereday and Muir-Cochrane (2006) argue for a hybrid approach to thematic analysis involving both deductive and inductive coding. The hybrid approach employs the *A priori* type of codes, which are generally pre-determined through identification in previous literature or generated based on logic or assumptions, as well as *grounded* types, which are not generally assumed and emerge directly from the data. As the three groups of EMI stakeholders were asked similar questions, a consistent coding method was applied to all participants to increase the reliability of the study.

The initial coding scheme for the first RQ related to students' language-related challenges (presented for COS) included pre-determined *A priori* type codes based on 6 main themes and 45 sub-themes. These 6 main themes followed the six main topics related directly to the interview questions for students, instructors, and lecturers regarding their perceptions of students' language-related challenges at an EMI university. Four of the initial main themes and the initial 45 sub-themes were based on the 'EMI Challenges Scale (Evans & Green, 2007). Accordingly, these four

main themes were: *listening, reading, speaking*, and *writing*, and the 45 initial subthemes followed the 45 'micro-skills' withing each of the four main language skills as included in the EMI challenges scale (See Section C of Appendix J). The other two initial main themes were: *Vocabulary* and *Language challenges changing over time*. In order to clearly delineate the *A priori* type codes from the *grounded* codes that emerged from the interview data, all of the initial *A priori* codes were designated in two colours: light blue for the six initial main themes, and yellow for the 45 initial sub-themes (micro-skills). These 45 micro-skills were selected as a starting point for the initial *A priori* codes for sub-themes because they represent a broad range of language skills and tasks within each of the four language macro-skills. Moreover, the 'EMI Challenges Scale', which was developed through research on students' linguistic challenges in EMI settings in Hong Kong (Evans & Green, 2007), is comprised of these 45 micro-skills, and has been used in numerous studies examining students' language-related challenges in EMI settings (Aizawa & Rose, 2020, Evans & Morrison, 2011; Kamaşak et al, 2021; Shepard & Morrison, 2021; Shepard & Rose, 2023; Zhou et al., 2022).

The subsequent thematic analysis involved the emergence of *grounded* codes, which were not part of the initial main themes or sub-themes but instead emerged and were identified from the interview data. This was a reiterative process which involved identifying sections or passages of text that were linked by common themes or ideas. This analysis resulted in various codes being added, removed, revised, and combined, which allowed for more appropriate categorization. Four main codes (main themes) were added, which included *productive skills*, *synchronous skills*, *EMI vs CMI backgrounds*, and *Local & non-local students*. While these new main codes did not include any sub- or 'child' codes, they were categorized as main, or 'parent' codes in order identify them as separate, albeit related themes, which likely play multiple roles in terms of students' challenges. In addition, a number of new *grounded* subcodes also emerged from the data. These subcodes represented either additional challenges, or other difficult tasks or activities (i.e., additional micro-skills) reported by the students, instructors or lecturers, or they represented specific causes or factors that challenges were attributed to by those interviewed. In Chapters 5 and 6, all subcodes are presented as either specific 'challenges' or 'causes/factors'. Additionally, in each section where codes are presented, they are described as either *A priori* or *grounded* codes, and are clearly listed in the findings. Lastly, a number of the initial *A priori* type subcodes were either combined, if they

were essentially identical in meaning, or deleted if they were not identified or did not emerge from the data in any of the interviews.

Codebooks were generated using NVivo 14 to identify all of the codes in terms of the main themes and sub-themes, as well as the number of corresponding files and references. A total of eight codebooks were created, which included five codebooks for the student interviews (one for each year and a combined CB for all four years), an instructor codebook, a lecturer codebook, and a combined codebook for both instructors and lecturers (See Appendix G). These codes are presented in the findings and shown either as main themes or sub-themes corresponding to the data from the student, instructor, and lecturer interviews.

3.6 Validity and Reliability

3.6.1 Validity

Validity in research generally can be improved by using multiple methods and/or data sources. This study has employed a mixed-methods approach using quantitative and qualitative data collection methods. The quantitative methods included a large-scale online survey which was administered to Hong Kong undergraduate students in diverse academic disciplines, in various years of study, and at four different universities. In terms of construct validity, which is used to determine how well or to what extent an instrument actually measures the construct it is intended to measure (Strauss & Smith, 2009) of the questionnaire items has been previously established by their use in other studies (Evans & Green, 2007; Evans & Morrison, 2011; Shepard & Morrison, 2021; Shepard & Rose; Zhou et al., 2022). Other studies have also confirmed the factor structure of constructs in the questionnaire in the contexts of Japan (Aizawa et al., 2020) and Turkey (Kamaşak et al., 2021). In terms of the qualitative methods in this study, the semi-structured interviews were conducted from three different groups of EMI stakeholders. These multiple perspective interviews (MPIs) from multiple sources of data allowed triangulation and comparison from multiple sources. Moreover, the interview participants' attitudes, experiences, perceptions, and reflections are all conveyed in their own words, which increases the validity of the research (Patton, 2002).

3.6.2 Reliability

Reliability generally refers to the overall consistency of results and scores (Fraenkel & Wallen, 2003). Reliability is enhanced by determining and evaluating the internal consistencies of the various data collection instruments to be used. In terms of the qualitative data collection, the triangulation of the MPIs of the 3 groups of EMI practitioners allows for comparison in terms of consistency of the responses, and it allows for greater in-depth analysis of the same data set from various stakeholders. Additionally, the longitudinal component of the semi-structured student interviews (tracked over four years) allows for analysis and comparison of consistency of results across time. In terms of the quantitative data collection, the most common measure of internal consistency is the Cronbach's alpha test (Sijtsma, 2009; Taber, 2018). As mentioned above, Section C of the survey, the largest section, relates to language-related academic challenges and uses a 45-item Likert-type model (Evans & Green, 2007). This model has been used in previous studies (Aizawa & Rose, 2020; Evans & Morrison, 2011, Kamaşak et al., 2021; Shepard & Morrison, 2021) and has shown high internal consistency. Nonetheless, reliability for the constructs in the questionnaire was measured before further analysis was conducted. A total of five of the questionnaire's subscales were used for this current study and the internal consistency of each construct was measured using a Cronbach's alpha test. The first subscale was from Section B of the questionnaire which consists of four items related to students' perceptions of the four language macro skills: *listening, reading, speaking,* and *writing*, and has a 7-point Likert scale with a range of possible scores from 4 – 28. This was shown to have a high internal consistency reliability coefficient Cronbach's alpha ($\alpha = .86$). The other four subscales are from Section C of the questionnaire and make up the 'EMI Challenges Scale'. The academic writing micro-skills subscale contains 15 items and has a 7-point Likert scale with a range of possible scores from 15-105. It was found to have a very high internal consistency reliability coefficient Cronbach's alpha ($\alpha = .95$). The academic reading subscale, with 10 items with a 7-point scale and a range of possible scores from 10-70, showed the value for Cronbach's alpha was ($\alpha = .94$). The academic speaking subscale includes 10 items with a 7-point scale and a range of possible scores from 10-70. It showed the value for Cronbach's alpha was ($\alpha = .95$). The academic listening subscale, also with 10 items and a 7-point scale with possible scores from 10-70, measured the value for Cronbach's alpha at ($\alpha = .95$).

3.7 Ethical Considerations

There are numerous well-established ethical guidelines and principals pertaining to research in the social sciences (Munhall, 1988; Van den Hoonaard & Van Den Hoonaard, 2013). In her discussion of the Economic and Social Research Council's (ESRC) *Research Ethics Framework* of 2005, Aldred (2008, p. 889) suggests six core ethical principles to follow:

(1) integrity and quality;
(2) full disclosure about the research to staff and subjects;
(3) confidentiality and anonymity;
(4) voluntary participation by participants;
(5) avoidance of harm to participants and;
(6) avoiding or disclosing conflicts of interest.

The quantitative data collection method involved a large-scale online questionnaire survey administered to undergraduate students in Hong Kong in the Spring of 2022. The electronic online questionnaire survey was voluntary, and participants' consent and confirmation that they were over the age of 18 was required at the beginning of the survey in order to take part. Permission to contact students of PolyU and to conduct the study was approved by the PolyU's Human Subjects Ethics Application Review System (HSEARS) of (See Appendix H). In addition, in accordance with the ethical standards and procedures set forth by the Departmental Research Ethics Committee (DREC) of the University of Oxford, a completed CUREC application form was submitted and approved (See Appendix I). The CUREC documentation covered the entire research study, and no separate applications were needed for any other data collection methods. The quantitative data collection method involved only the voluntary online questionnaire, and the qualitative data collection was derived from the semi-structured interviews of undergraduate students, lecturers, and language instructors. In both the quantitative and qualitative data collection, numerous steps were taken to ensure that this research conformed to both the CUREC and HSEARS guidelines, and well as Aldred's (2008) six aforementioned core ethical principles.

Another ethical consideration involves this study's use of pre-existing data. A sub-set of the qualitative data, specifically, 32 of the 113 student interviews, were conducted in 2019 as part of this author's MSc research. This subset represents the original year-1 undergraduate cohort that initiated the subsequent expanded longitudinal study, and the data collected as part of the MSc

research does not constitute original data for the DPhil. After my acceptance to the doctoral programme in March of 2020, and based on further discussions with my DPhil supervisor, I conducted another round (round 2) of student interviews with 29 of the original 32 students during the summer in 2020. Continuing the student interviews with the existing 2019 cohort allowed for the possibility of an expanded longitudinal study, combining the original data collected by from the MSc research with new and original data collected over the next three years (2020-2022). To ensure complete transparency, in the final thesis submission, all use of this existing data will be declared and appropriately attributed to the MSc dissertation and or any publications (Shepard & Morrison, 2021; Shepard & Rose, 2023). On occasions that excerpts are used from the Year-1 interviews in the 'Findings' chapters (4 through 6), these will be attributed appropriately. Even though this data constitutes a small portion of the overall data collected, the benefits of drawing on the 2019 dataset allowed the project to investigate student experiences over their four years of study, thus offering a greater contribution to knowledge.

3.8 Chapter Summary

In summary, this chapter has presented the methodology of this study. The overall design employs a mixed-methods longitudinal approach, collecting quantitative data from a multi-institutional online questionnaire and qualitative data from semi-structured multiple perspective interviews from three different EMI stakeholders in Hong Kong, with the student interviews being conducted over all four years of their undergraduate study. By means of administering a large-scale multi-institutional questionnaire and interviewing students, lecturers, and instructors, this study attempts to maximize understanding of students' challenges in EMI programmes in higher education, as well as gain insightful knowledge from language instructors and subject-content lecturers who are well positioned to evaluate students' language challenges and the efficacy of EMI programmes in Hong Kong

The chapter has presented the research questions and the data collection instruments which have been used to answer them. The chapter described how the data collection instruments were designed and developed and how the participants were recruited and selected. Additionally, this chapter has described the transcription, coding, and the subsequent thematic analysis of the

qualitative data from the semi-structured multiple-perspective interviews, specifically in terms of the instructor and lecturer interviews. The chapter also presented the various steps taken to ensure and maximize validity and reliability in the study and addressed various ethical considerations. The following chapter presents the quantitative findings related to the various language-related challenges faced by undergraduate students at EMI universities in Hong Kong.

Chapter 4 – Quantitative Findings: Students' English language-related challenges

4.1 Introduction

This chapter presents the quantitative findings related to English language challenges faced by students at HK EMI universities. The chapter is divided into twelve sections and several sub-sections. These sections correspond with findings from the online questionnaire as they relate to the RQs. **Section 4.1** introduces the chapter, provides an overview of its content outlining the various sections, and presents the RQ it addresses. **Section 4.2** presents an overview of the questionnaire participants including a breakdown in terms of gender, year of study, first language (L1), university, and the students' previous medium of instruction (PMoI). **Section 4.3** presents the quantitative findings from Sections B of the questionnaire, which measured students' responses to the four items related to the four language macro-skills: *listening, reading, speaking,* and *writing*, and Section C of the questionnaire, which measured students' language-related challenges through the mean scores of the 45-item 'EMI Challenges Scale' (ECS). **Section 4.4** presents the findings of students' responses on the ECS in terms of 15 academic writing micro-skills. **Section 4.5** presents the findings related to the 10 academic reading skills. **Section 4.6** presents the findings related to the 10 academic speaking skills, and **Section 4.7** presents the findings related to the 10 academic listening skills from the ECS. **Section 4.8** presents findings related to the effect of gender and L1 in terms of differences between groups of reported language-related challenges. **Section 4.9** presents findings on the effect of previous medium of instruction and examines differences between the four groups of MoI which are categorized as: English, Cantonese, Putonghua, and Other. This section also examines differences between Cantonese L1 speakers who previously studied in EMI secondary schools and those who studied in a CMI (Cantonese) secondary schools. **Section 4.10** presents findings on differences in scores between students from the four universities included in this study: CityU, PolyU, HKUST, and HKU. **Section 4.11** presents findings related to the effect of academic discipline on students' language related challenges. **Section 4.12** presents findings related to the effect of the year of study on students' language-related challenges. **Section 4.13** presents findings related to students' perceptions of language improvement through studying

in an EMI university. **Section 4.14** provides a summary of the chapter which highlights key findings from the quantitative data.

4.1.1 Research questions

- What English language-related challenges do undergraduate students face during their four years at Hong Kong EMI universities?
- Do these challenges vary based on background, previous medium of instruction, or academic discipline? If so, how?
- Do students' challenges change over their years of study? If so, how?

4.2 Participants and variables

As mentioned previously in Section 3.4.6, after data screening, a total of 1,982 student responses from the online questionnaire were included. **Table 4.1** shows a breakdown of the questionnaire participants' gender, year of study, university, L1, and PMoI.

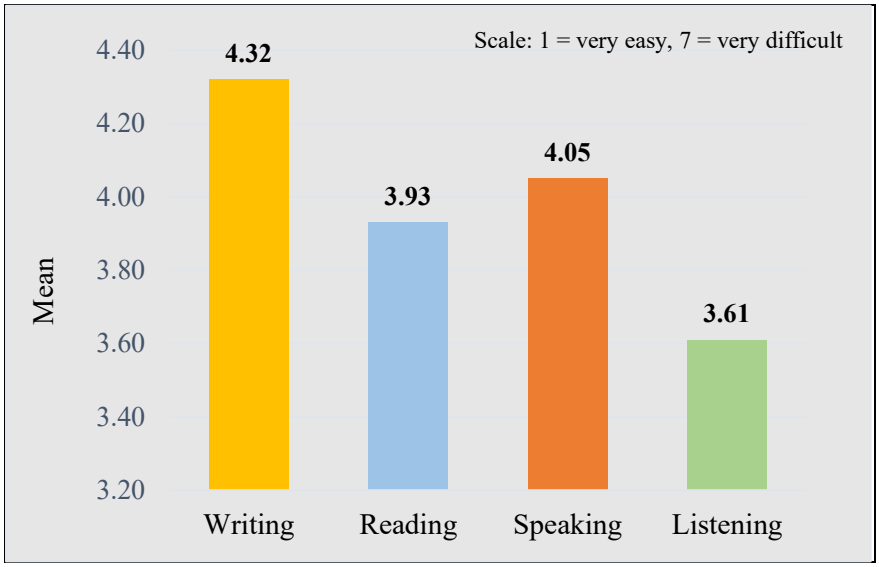
Table 4.1 Demographics of participants (*n* =1,982)

Variable	Category	Frequency	Percentage (%)
Gender	Female	1,123	57%
	Male	820	41%
	Prefer not to say	39	2%
Year of Study	Y1	751	38%
	Y2	430	22%
	Y3	455	23%
	Y4	346	17%
University	PolyU	1,787	90%
	CityU	110	6%
	HKUST	49	2%
	HKU	36	2%
First language (L1)	Cantonese	1,494	75%
	Putonghua	337	17%
	Other	151	8%
Previous MoI (PMoI)	English	1,213	61%
	Cantonese	481	24%
	Putonghua	254	13%
	Other	34	2%

4.3 Students' perceptions: most challenging language skills

This section addresses the first RQ: What language-related challenges do undergraduate students face during their four years at Hong Kong EMI universities? To answer this question, two instruments were used. First, Section B of the questionnaire was designed to work as a simple and concise instrument from which students (n = 1,982) could provide a quick 'one-off' response in terms of their perceptions of the levels of difficulty of each of the four macro-skills: reading, writing, speaking, and listening. As can be seen in **Figure 4.1**, when students chose directly between the four macro-skills, writing (M = 4.32, SD = 1.28) was considered to be the most challenging language skill, followed by speaking (M = 4.05, SD = 1.44), reading (M = 3.93, SD = 1.33), and listening (M = 3.91, SD = 1.40) respectively.

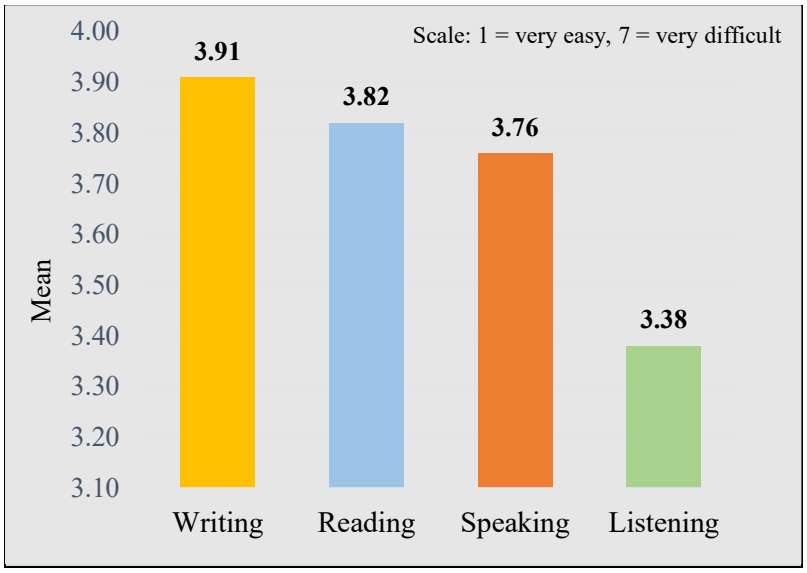
Figure 4.1 Students' perceptions of most challenging language skills



Alternatively, as shown below in **Figure 4.2**, using the average mean scores from the 45-item 'EMI Challenges Scale' (ECS), writing (M = 3.91, SD = 1.06) was considered to be the most challenging language skill, followed by reading (M = 3.82, SD = 1.09), speaking (M = 3.76, SD = 1.19), and listening (M = 3.38, SD = 1.10) respectively. This indicates that students' immediate

and initial perceptions of these four macro-skills do not necessarily correspond to their perceptions of the various micro-skills within the subscale of each macro-skill. The responses from Section B indicate that students consider the productive skills, writing and speaking, to be considerably more challenging than the receptive skills, reading and listening, whereas responses to the ECS indicate that students' challenges in each area may represent the sum of all of its parts.

Figure 4.2 ECS average mean scores over 45 micro-skills



As can be seen from figures 4.1 and 4.2, in terms of which of the four macro language skills (writing, reading, speaking, & listening), the two figures indicate somewhat different overall findings between Sections B and C. As noted in Chapter 3, the two different sections of the questionnaire (Sections B & C) were intended to be used to examine students' overall perceptions of what they consider to be most challenging in terms of overall macro-skills (Section B), and what they consider to be specifically challenging in terms of the micro-skills (Section C), which used the EMI Challenges Scale (ECS). Accordingly, the findings from Section B, the 4-item scale, show that students largely found writing to be most challenging, followed by speaking, both with mean averages over 4.0, while reading and listening were considered to be less challenging with mean

scores below 4.0. In short, data from the 4-skills scale showed that students found the productive skills, writing and speaking, to be more challenging than the receptive skills, reading and listening.

Alternatively, data from Section C using the ECS, which combines the aggregate mean scores of the 45 micro-skill items, suggests that writing was the most challenging followed by reading, speaking, and listening respectively, coinciding with earlier findings from Evans and Morrison (2011a) and Shepard and Morrison (2021), which also used the ECS. In other words, ostensibly, the two different instruments reveal two different sets of findings. As discussed in Chapter 3, however, the purpose of the simplified 4-skills scale (Section B) was to allow respondents to rate the four macro-skills (writing, reading, speaking & listening) individually and holistically, and to compare students' responses between Sections B and C. Accordingly, when students rate the four individual language macro-skills, their perception of each (macro) skill is based on each person's own weighting, and how they measure its overall level of difficulty.

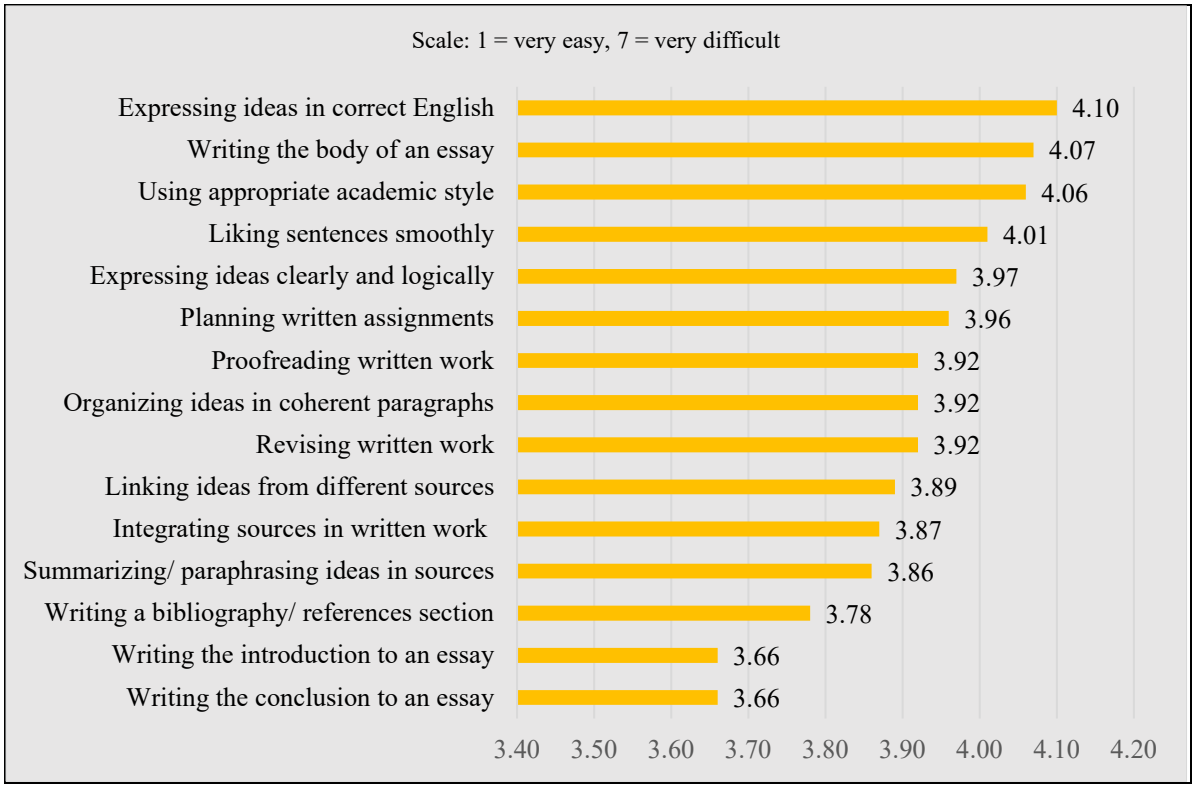
In contrast, when responding to the ECS, each of the micro skills carries equal weighting (6.6% each for writing items; 10% each item in speaking, reading, and listening), no matter how significant or relevant it is to the respondent. In other words, as the two scales measure macro-skills differently, they can yield different findings. In short, from a 'macro-skills' perspective, students responses show that they generally find *speaking* more challenging than *reading.* Alternatively, from a combined 'micro' skills perspective, students average scores in each of the 'micro-skills' indicate that they generally find the combined listed skills of *reading* more challenging than the combined listed skills of *speaking*. Hence, what students find most challenging in general can differ from an overall combination of language 'micro' skills, or language activities.

4.4 Writing

The data from both instruments used from the online questionnaire in Section B (4 items) and Section C (45 items) indicate that writing is considered most challenging by students. As shown in **Figure 4.4**, the mean scores in terms of academic writing are presented with the corresponding activity in order from most to least difficult. Students from the online questionnaire reported that

the most challenging skills were: 'expressing ideas in correct English' (M = 4.10, SD = 1.39), 'writing the body of an essay' (M = 4.07, SD = 1.32), 'using appropriate academic style' (M = 4.06, SD = 1.38), and 'linking sentences smoothly' (M = 4.01, SD = 1.32). All of these micro-skills had a mean of 4.0 or above. Alternatively, students generally found that the least challenging tasks were: 'writing a bibliography or the reference section' (M = 3.78, SD = 1.43), writing the introduction to an essay' (M = 3.66, SD = 1.32), and 'writing the conclusion to an essay' (M = 3.66, SD = 1.30).

Figure 4.3 Academic writing skills

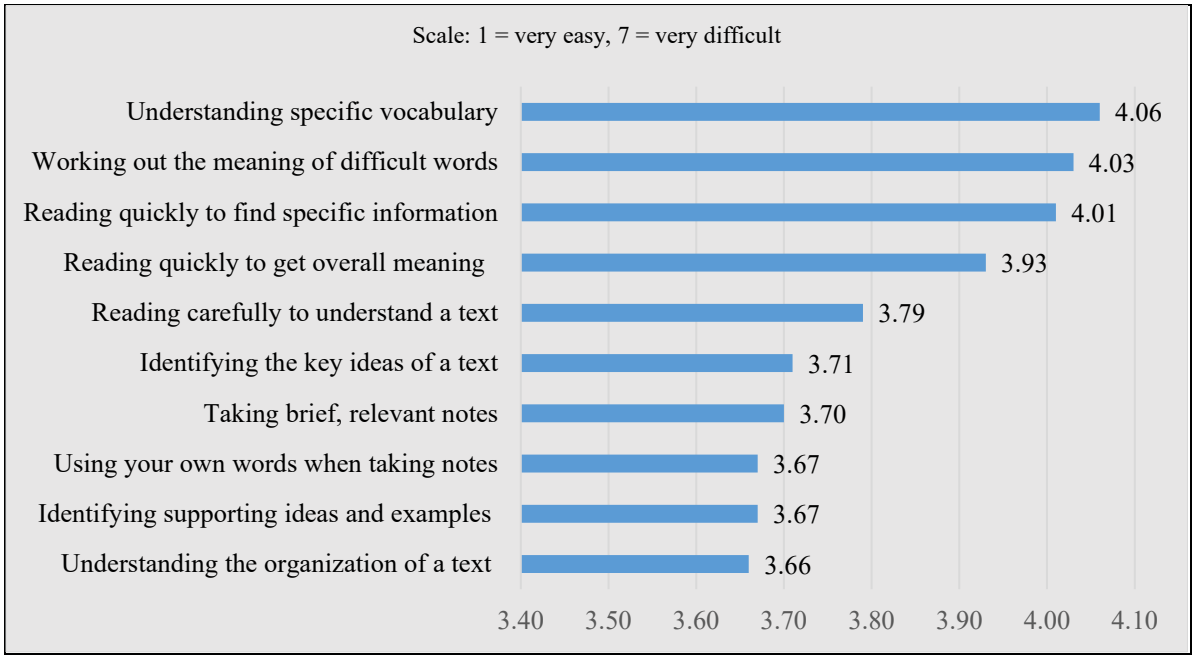


4.5 Reading

As shown in **Figure 4.4**, in terms of specific reading challenges, responses indicate that students found 'understanding specific vocabulary' most challenging (M = 4.06, SD = 1.35). The second most challenging for students was 'working out the meaning of difficult words' (M = 4.03, SD =

1.35). followed by reading quickly to find specific information (*M* = 4.01, *SD* = 1.39). Generally, students found 'using your own words when taking notes' (*M* = 3.67, *SD* = 1.36), identifying supporting ideas and examples' (*M* = 3.67, *SD* = 1.27), and 'understanding the organization of a text' (*M* = 3.66, *SD* = 1.25) to be the easiest of the 10 reading micro-skills.

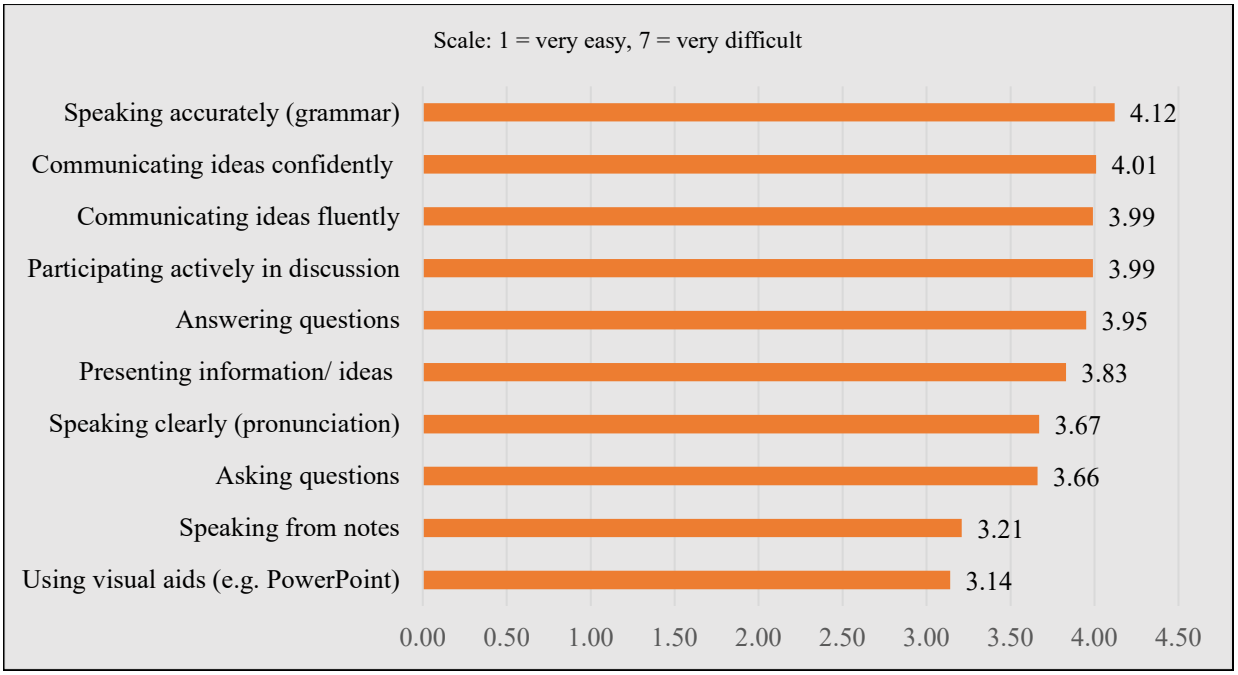
Figure 4.4 Academic reading skills



4.6 Speaking

As can be seen in **Figure 4.5**, the 'speaking' mean scores indicate that students found 'speaking accurately in terms of grammar' most challenging (M = 4.12, *SD* = 1.44). This was followed by 'communicating ideas confidently' (*M* = 4.01, *SD* = 1.50) and 'communicating ideas fluently' (*M* = 3.99, *SD* = 1.45) and 'participating actively in discussions' (M = 3.99, *SD* = 1.51). The least challenging activities indicated by students were 'speaking from notes' (*M* = 3.21, *SD* = 1.38) and 'using visual aids (e.g. PowerPoint)' with a mean score of 3.14 (*SD* = 1.33).

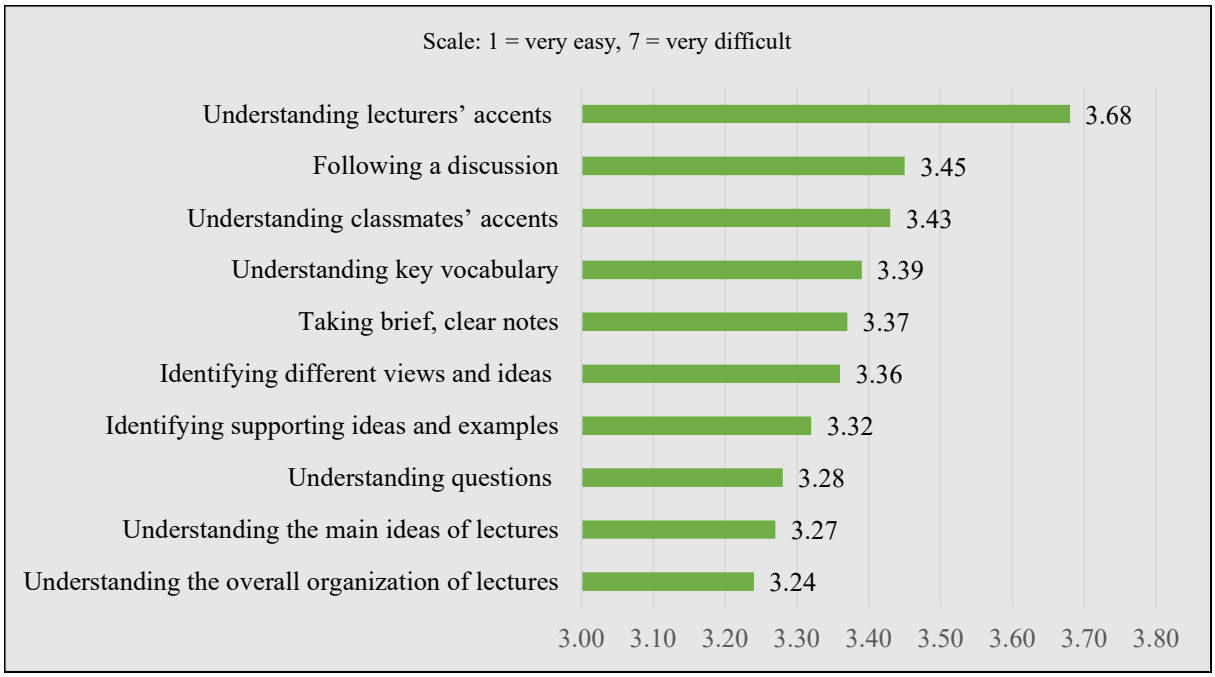
Figure 4.5 Academic speaking skills



4.7 Listening

According to the responses from both Section B and Section C (ECS), listening was considered by students to be the least challenging skill. As shown in **Figure 4.6**, in terms of specific listening challenges, mean scores indicated that the most challenging for students by far was 'understanding lectures accents' (M = 3.68, SD = 1.42). Students indicated that the second and third most challenging, were 'following a discussion' (M = 3.45, SD = 1.28) and 'understanding classmates' accents' (M = 3.43, SD = 1.35). The least challenging for students according to the average mean scores was 'understanding the main idea of lectures' (M = 3.27, SD = 1.30) and 'understanding the overall organization of lectures' (M = 3.24, SD = 1.28).

Figure 4.6 Academic listening skills



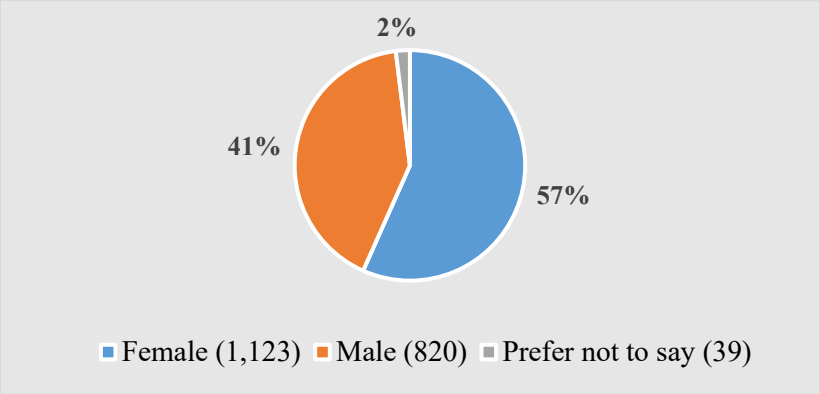
In summary, in terms of students' overall English language-related skills that students found most challenging based on the quantitative data from the online questionnaire, writing was reported to be most challenging followed by reading, speaking, and listening. Within writing, students generally found that writing essays in 'correct' academic English presented the most difficulties. The reading skills found most challenges stemmed from unfamiliar and academic vocabulary, and students struggled to read quickly for specific information. Speaking challenges were communicating accurately, fluently, and confidently. The main listening challenge reported was understanding lecturers' accents. Most other listening skills were not generally considered challenging. In order to determine if these challenges vary based on academic discipline, background, including gender and L1, previous medium of instruction, or year of study, independent samples *t*-test and analysis of variance (ANOVA) were conducted. The data and findings are presented in the following sections.

4.8 Gender & first language (L1)

4.8.1 Gender

The second RQ related to possible significant differences in language challenges between various groups, and this required comparing mean scores from the 45-item ECS. As shown in **Figure 4.7**, the female (n = 1,123) group made up 57% of the sample and male group (n = 820) represented 41%. The respondents who selected 'prefer not to say' constitutes approximately 2% of the sample.

Figure 4.7 Gender of participants



In order to identify any significant differences between female (n = 1,123) and male (n = 820) respondents, an independent samples t-test was conducted. The 39 respondents who selected 'prefer not to say' were excluded from comparison. **Table 4.2** shows each of the four language skills, the two gender groups, the sample size for each group (N), mean scores, and standard deviations. The results indicated that there was no statistically significant difference between the writing skills of the female group (M = 3.90, SD = 1.05) and those of the male group (M = 3.89, SD = 1.08). Similarly, no statistically significant difference was observed between the reading skills of the females (M = 3.82, SD = 1.10) and the males (M = 3.80, SD = 1.09) or between the speaking skills of the females (M = 3.76, SD = 1.18) and the male group (M = 3.73, SD = 1.21). However, the female group (M = 3.29, SD = 1.08) reported significantly lower levels of listening challenges than the male group (M = 3.47, SD = 1.11), $t(1941) = -3.69$, $p < .001$ (See Appendix K), which was still significant even after a Bonferroni correction was applied to the p-value. In other words, while no significant differences were observed between the two groups in writing, reading, and speaking, means scores indicated that listening challenges were significantly less challenging for females them than for male respondents.

Table 4.2 Language challenges according to gender: descriptive statistics

Skills	Gender	*N*	Mean	SD
Writing	Female	1123	3.9078	1.05691
	Male	820	3.8947	1.08045
Reading	Female	1123	3.8291	1.10210
	Male	820	3.8010	1.09481
Speaking	Female	1123	3.7651	1.18500
	Male	820	3.7366	1.21211
Listening	Female	1123	3.2904	1.08905
	Male	820	3.4772	1.11669

4.8.2 First language (L1)

As shown below in **Figure 4.8**, approximately 92% of the respondents identified their L1 as either Cantonese (75%) or Putonghua (17%). The other 8% of L1s consisted of 151 respondents who either identified one or two different L1s.

Figure 4.8 L1 of participants

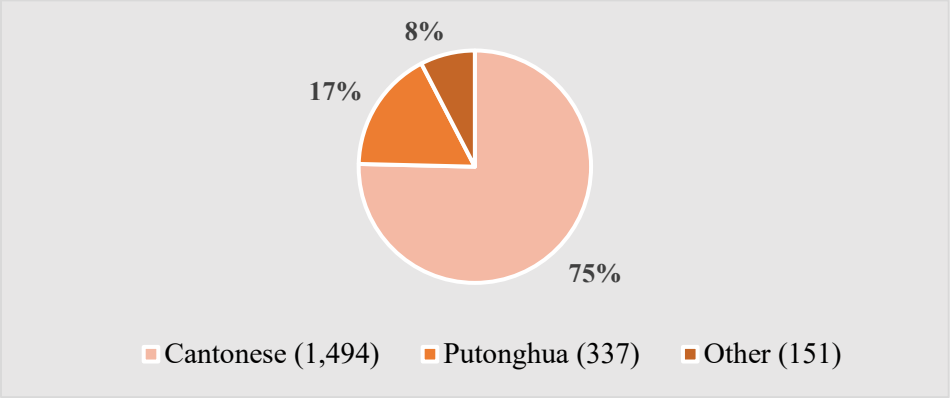


Table 4.3 provides a breakdown of the L1s reported and the corresponding number of respondents. A total of 33 respondents reported having two L1s, and 118 reported only one L1. The largest three language groups within the 'Other' sub-group were English (*n* = 25), Korean (*n* = 18), and Indonesian (*n* = 14).

Table 4.3 First languages (L1) other than Cantonese or Putonghua (n = 151)

'Other' first language(s)			
English	25	Spanish	2
Korean	18	Teochew	2
Indonesian	14	Thai	2
Kazakh & Russian	9	Urdu & Punjabi	2
Russian	7	Vietnamese	2
English & Urdu	5	Azerbaijani	1
Hindi	5	Bulgarian	1
Bahasa Indonesian	4	Cebuano & Tagalog	1
Bengali	4	English & Bisaya	1
English & Filipino	4	English & Dhivehi	1
Urdu	4	English & French	1
Chinese dialect (unspecified)	3	English & Hindi	1
English & Cantonese	3	English & Konkani	1
Kazakh	3	English & Mandarin	1
Nepalese	3	English & Sinhala	1
Sinhala	3	Japanese	1
English & Korean	2	Kinyarwanda	1
Filipino	2	Minnan dialect	1
French	2	Pashto	1
Malayalam	2	Persian	1
Siyi	2	Portuguese	1

While the inclusion of respondents who identified English as their L1 may raise questions regarding the scope and target population of this research, the author opted to include these participants for several reasons: First, the main purpose of this research is to examine students' language-related challenges in EMI HEIs in Hong Kong, and excluding any specific L1s was never considered or part of the proposed methodology. Next, the author contends that it is important to acknowledge the presence of L1 English speakers in EMI HEIs, and, as discussed in Chapter 5 of this dissertation, to understand that this group can also experience a variety of EMI-related language challenges. Additionally, the exclusion from this study of respondents who identify as

L1 English speakers could lead to a 'slippery slope', raising further questions about eliminating additional respondents who reported being bilingual (English and another L1), such as those (n = 21) from this subgroup. Moreover, the respondents who identified English as their L1 represent only 1.2% of the 1,982 participants, signifying that close to 99% of the questionnaire respondents are L2 English users, which more than adequately represents the English L2 student demographics of HK HEIs. Lastly, as the group of 'Other' L1s (OL1) represents only 7.6%, it was not subdivided but rather combined into one group for comparison with the Cantonese L1 (CL1) group and the Putonghua L1 (PL1) group. **Table 4.4** shows each of the four language skills, the three L1 groups (CL1, PL1, and OL1), the sample size for each group (*N*), mean scores and standard deviations. In order to determine if there were significant differences in terms of the language-related challenges between different L1 groups, a one-way ANOVA was performed in SPSS. Results of the ANOVA showed statistically significant differences between the groups in writing, reading, speaking, and listening.

Table 4.4 L1 groups: descriptive statistics

Skill	L1	N		Mean	Std. Deviation
Writing	Cantonese (CL1)	1494		3.9627	1.03818
	Putonghua (PL1)	337		4.1052	.95849
	Other (OL1)	151		2.9581	1.06610
	Total	1982		3.9104	1.06389
Reading	Cantonese (CL1)	1494		3.8788	1.07173
	Putonghua (PL1)	337		4.0338	1.00596
	Other (OL1)	151		2.8159	1.02594
	Total	1982		3.8242	1.09737
Speaking	Cantonese (CL1)	1494		3.7984	1.16081
	Putonghua (PL1)	337		4.0576	1.10729
	Other (OL1)	151		2.6828	1.15180
	Total	1982		3.7575	1.19523
Listening	Cantonese (CL1)	1494		3.3945	1.10787
	Putonghua (PL1)	337		3.6119	1.05245
	Other (OL1)	151		2.7060	.94426
	Total	1982		3.3790	1.10650

As shown in **Table 4.5**, there were statistically significant differences between the groups in writing skills as determined by one-way ANOVA ($F(2,1979) = 72.89$, $p < .001$).

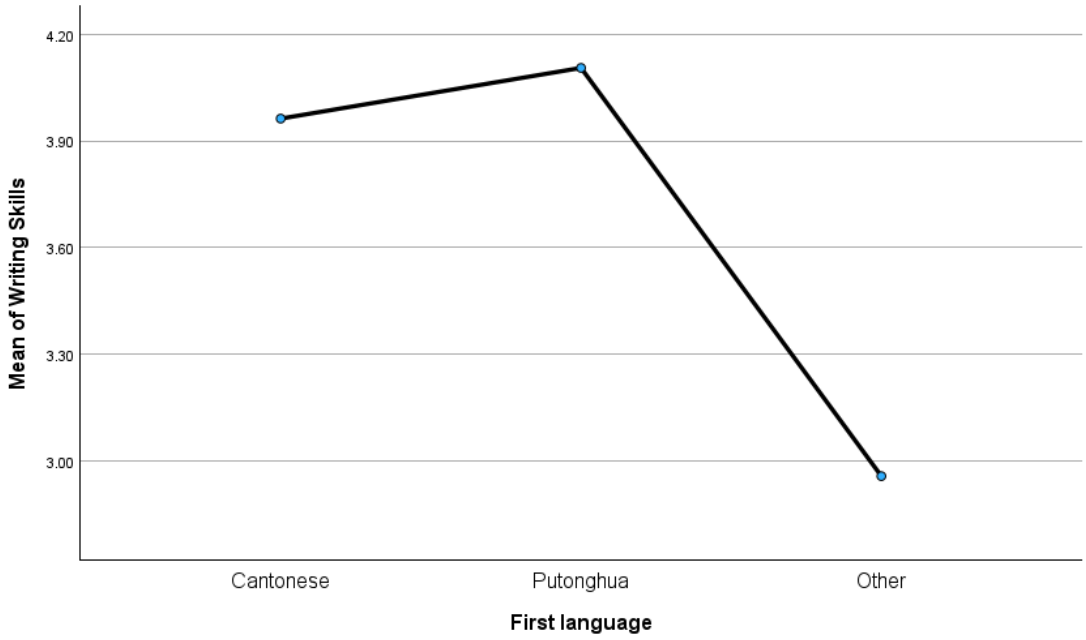
Table 4.5 ANOVA results for writing: L1

Writing Skills

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	153.837	2	76.918	72.890	<.001
Within Groups	2088.363	1979	1.055		
Total	2242.200	1981			

A Tukey post hoc test revealed a statistically significant difference between CL1s and OL1s ($p < .001$), indicating that CL1s found academic writing significantly more challenging than the OL1 mixed group. Additionally, the post hoc test indicated a statistically significant difference between PL1s and OL1s ($p < .001$), showing that PL1s also found academic writing significantly more challenging than the OL1s. There was no statistically significant difference between the CL1 and PL1 groups ($p = .056$). **Figure 4.9** shows the means plots for the three L1 groups and their corresponding writing means.

Figure 4.9 Means plots for writing skills



As shown in **Table 4.6**, there were statistically significant differences between the groups in reading skills as determined by one-way ANOVA ($F(2,1979) = 77.26$, $p < .001$).

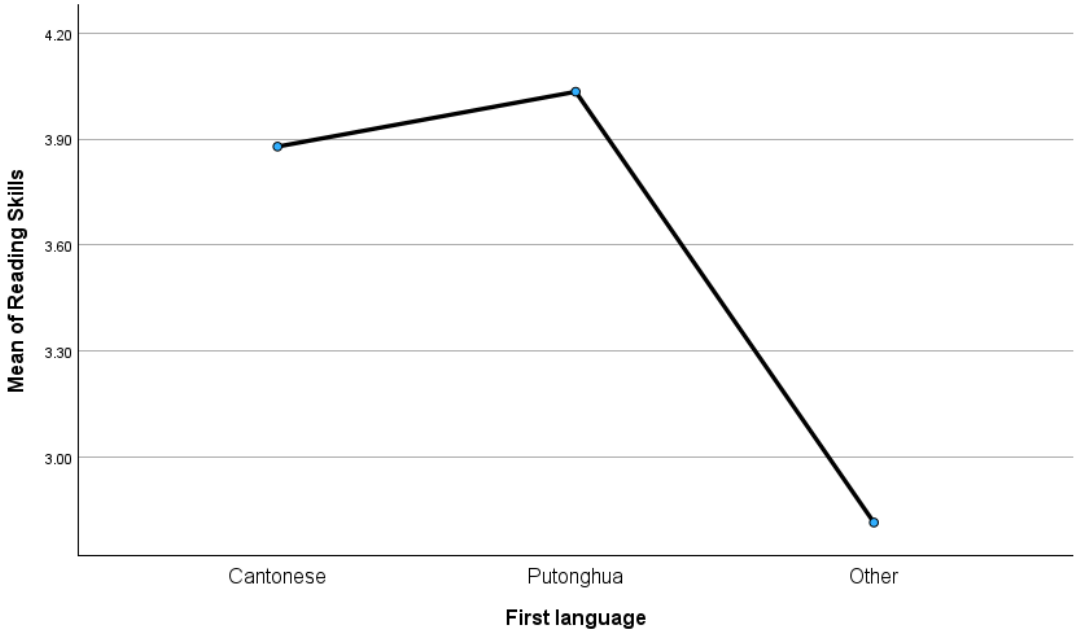
Table 4.6 ANOVA results for reading: L1

Reading Skills

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	172.779	2	86.389	77.263	<.001
Within Groups	2212.774	1979	1.118		
Total	2385.552	1981			

The Tukey post hoc test indicated a statistically significant difference between PL1s and CL1s ($p = .040$), and between the PL1s and the OL1s ($p < .001$), revealing that the PL1 group found academic reading significantly more challenging than both the CL1 and OL1 groups. A statistically significant difference was also revealed between CL1s and OL1s ($p < .001$), denoting that CL1s also found reading significantly more challenging than OL1s. **Figure 4.10** shows the means plots for the three L1 groups.

Figure 4.10 Means plots for reading skills



In terms of speaking, there were also statistically significant differences between the groups as determined by one-way ANOVA ($F(2,1979) = 78.19$, $p < .001$), as shown in **Table 4.7**.

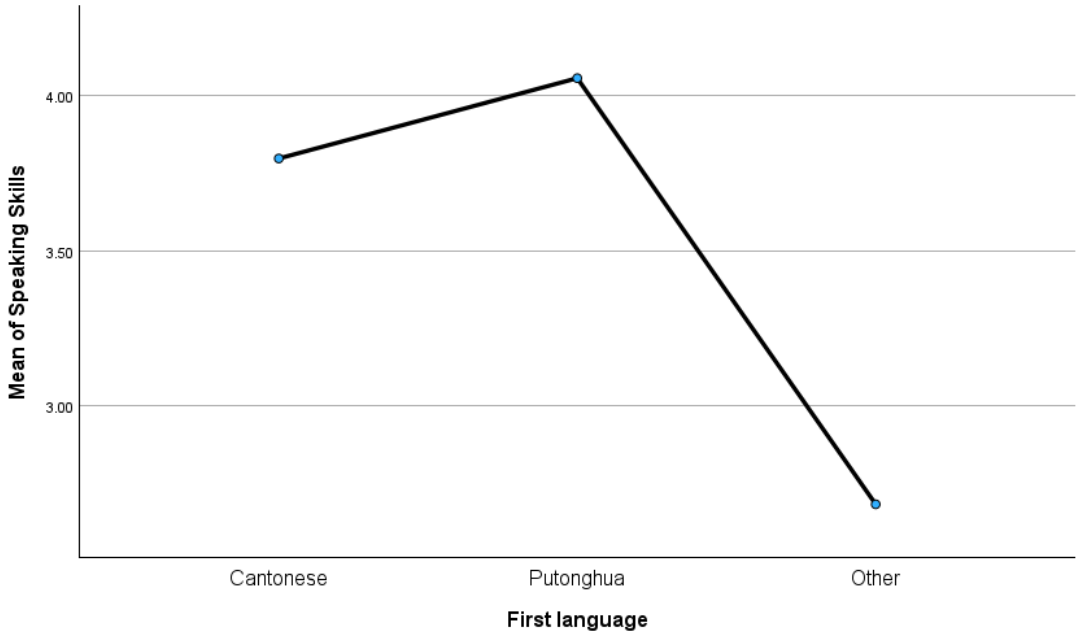
Table 4.7 ANOVA results for speaking: L1

Speaking Skills

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	207.250	2	103.625	78.190	<.001
Within Groups	2622.755	1979	1.325		
Total	2830.004	1981			

The post hoc test showed statistically significant differences between PL1s and CL1s ($p < .001$), the PL1s and the OL1s ($p < .001$), and between the CL1s and the OL1s ($p < .001$), indicating that the OL1s found speaking skills significantly less challenging than both the CL1s and the PL1s. Also, the CL1s found speaking significantly less challenging than the PL1s. **Figure 4.11** shows the means plots for the three L1 groups.

Figure 4.11 Means plots for speaking skills



In terms of listening, there were statistically significant differences between the groups as determined by one-way ANOVA ($F(2,1979) = 36.82$, $p < .001$), as shown in **Table 4.8**.

Table 4.8 ANOVA results for listening: L1

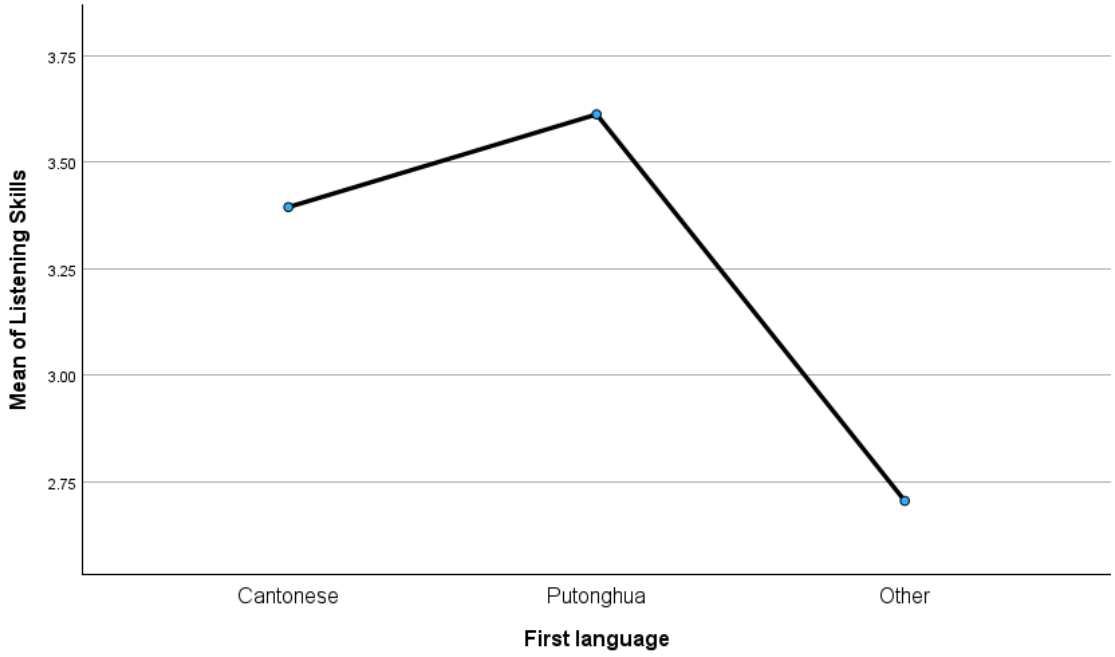
Listening Skills

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	87.035	2	43.517	36.829	<.001
Within Groups	2338.392	1979	1.182		
Total	2425.427	1981			

The Tukey post hoc test showed statistically significant differences between CL1s and PL1s ($p = .003$), the CL1s and the OL1s ($p < .001$), and between the PL1s and the OL1s ($p < .001$). The results indicate that the OL1s found listening skills significantly less challenging than both the CL1s and the PL1s, and that the CL1s found listening significantly less challenging than the PL1s. All findings of significance remained even after a Bonferroni correction was applied to the *p*-value, thus reducing the alpha value to <p = 0.0125, to account for the four separate analyses.

Figure 4.12 shows the means plots for the three L1 groups.

Figure 4.12 Means plots for listening skills (L1)



4.9 Previous medium of instruction (PMoI)

4.9.1 Effect of previous medium of instruction (PMoI)

As shown in **Figure 4.13**, the PMoI groups have been separated into four major categories: English, Cantonese, Putonghua (Mandarin), and 'Other' to denote the small group (2%) of PMoI languages (34) that students reported. As can be seen in **Table 4.9**, a total of 13 'Other' PMoI languages were observed, which included Indonesian (11), Russian (9), French (2), Korean (2), Vietnamese (2), Azerbaijani, Japanese, Kazakh, Malay, Spanish, Tajik, Thai, and an unspecified Chinese dialect (one student each).

Figure 4.13 PMoI of participants

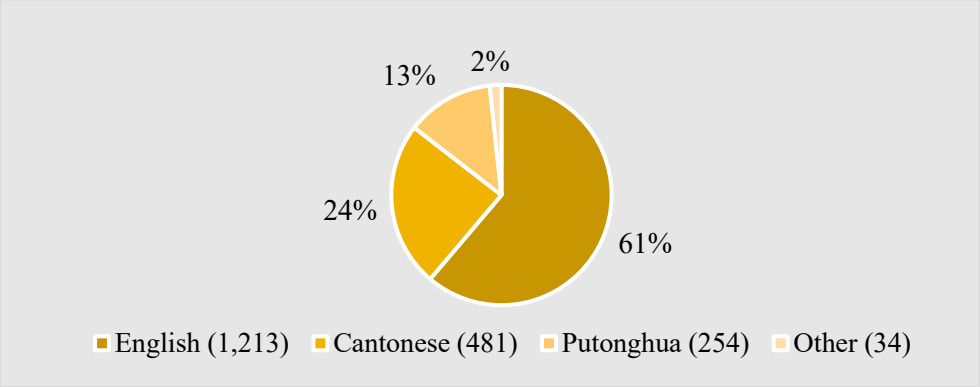


Table 4.9 Other PMoI languages (n = 34)

Other PMoI languages			
Indonesian	11	Japanese	1
Russian	9	Kazakh	1
French	2	Malay	1
Korean	2	Spanish	1
Vietnamese	2	Tajik	1
Azerbaijani	1	Thai	1
Chinese dialect (unspecified)	1		

Table 4.10 shows each of the four language skills, the four PMoI groups (English (EMI), Cantonese (CMI), Putonghua (PMI), and 'Other' (OMI)), the sample size for each group (*N*), mean scores and standard deviations. To establish if there were differences in terms of the mean scores of the language-related challenges between different PMoI groups, a one-way ANOVA was performed in SPSS. As per the previous research question, the Bonferroni correction was applied to the p-value, reducing the alpha value to $< p = 0.0125$, to account for the four separate ANOVA analyses of the four skills. Results of the ANOVA showed statistically significant differences between the groups in writing, reading, speaking, and listening.

Table 4.10 PMoI groups: descriptive statistics

Skill	PMoI	N	Mean	Std. Deviation
Writing	English (EMI)	1213	3.6905	1.05534
	Cantonese (CMI)	481	4.3497	.95849
	Putonghua (PMI)	254	4.1845	.95796
	Other (OMI)	34	3.4941	1.13827
	Total	1982	3.9104	1.06389
Reading	English (EMI)	1213	3.5988	1.07595
	Cantonese (CMI)	481	4.2977	1.00417
	Putonghua (PMI)	254	4.0902	1.02815
	Other (OMI)	34	3.1794	.94413
	Total	1982	3.8242	1.09737
Speaking	English (EMI)	1213	3.4945	1.15121
	Cantonese (CMI)	481	4.2715	1.13275
	Putonghua (PMI)	254	4.1169	1.10274
	Other (OMI)	34	3.1824	1.16969
	Total	1982	3.7575	1.19523
Listening	English (EMI)	1213	3.1431	1.03215
	Cantonese (CMI)	481	3.8607	1.13186
	Putonghua (PMI)	254	3.6496	1.05339
	Other (OMI)	34	2.9588	1.02812
	Total	1982	3.3790	1.10650

As shown in **Table 4.11**, there were statistically significant differences between the groups in writing skills as determined by one-way ANOVA ($F(3,1978) = 56.31$, $p < .001$). A Tukey post hoc test revealed statistically significant differences between the PMoI groups in writing. The CMI group found academic writing significantly more challenging than the EMI group ($p < .001$) and the OMI group ($p < .001$). The PMI group also found academic writing significantly more challenging than both the EMI group ($p < .001$) and the OMI group ($p < .001$).

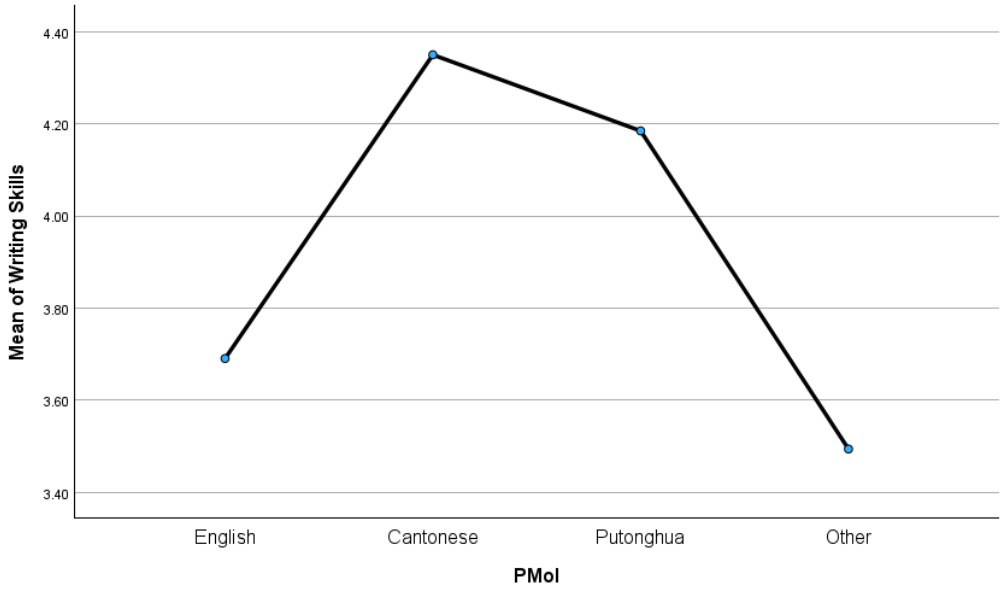
Table 4.11 ANOVA results for writing: PMoI

Writing Skills

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	176.443	3	58.814	56.316	<.001
Within Groups	2065.757	1978	1.044		
Total	2242.200	1981			

There was no statistically significant difference between the CMI group and the PMI group ($p = .159$), but mean scores show that the PMI group found writing slightly less challenging than the CMI group. Additionally, there was no statistically significant difference between the EMI group and the OMI group ($p = .686$), but mean scores indicated that the OMI group found writing less challenging than the EMI group. **Figure 4.14** shows the means plots for the four PMoI groups in writing.

Figure 4.14 Means plots for writing (PMoI)



As shown in **Table 4.12**, there were statistically significant differences between the groups in reading skills as determined by one-way ANOVA ($F(3,1978) = 60.86$, $p < .001$).

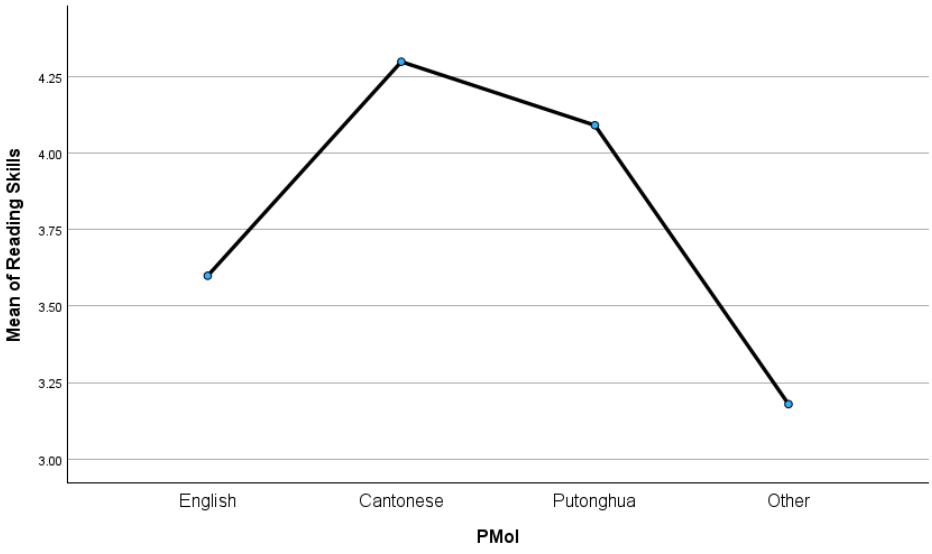
Table 4.12 ANOVA results for reading: PMoI

Reading Skills

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	201.596	3	67.199	60.861	<.001
Within Groups	2183.957	1978	1.104		
Total	2385.552	1981			

The Tukey post hoc test revealed statistically significant differences between the PMoI groups in reading skills. Similar to the results in writing, the EMI group found academic reading significantly less challenging than both the CMI group ($p < .001$) and the PMI group ($p < .001$). While there was no statistically significant difference between the EMI group and the OMI group ($p = .099$), mean scores indicated that the OMI group found reading less challenging than the EMI group. The CMI group found academic reading significantly more challenging than both the OMI group ($p < .001$), and the EMI group ($p < .001$), but there was no statistical significance between the CMI and PMI groups ($p < .053$). The PMI group also found academic reading to be significantly more challenging than the OMI group ($p < .001$). **Figure 4.15** shows the means plots for the four PMoI groups for reading.

Figure 4.15 Means plots for reading (PMoI)



As shown in **Table 4.13**, there were statistically significant differences between the groups in speaking skills as determined by one-way ANOVA ($F(3,1978) = 65.31$, $p < .001$).

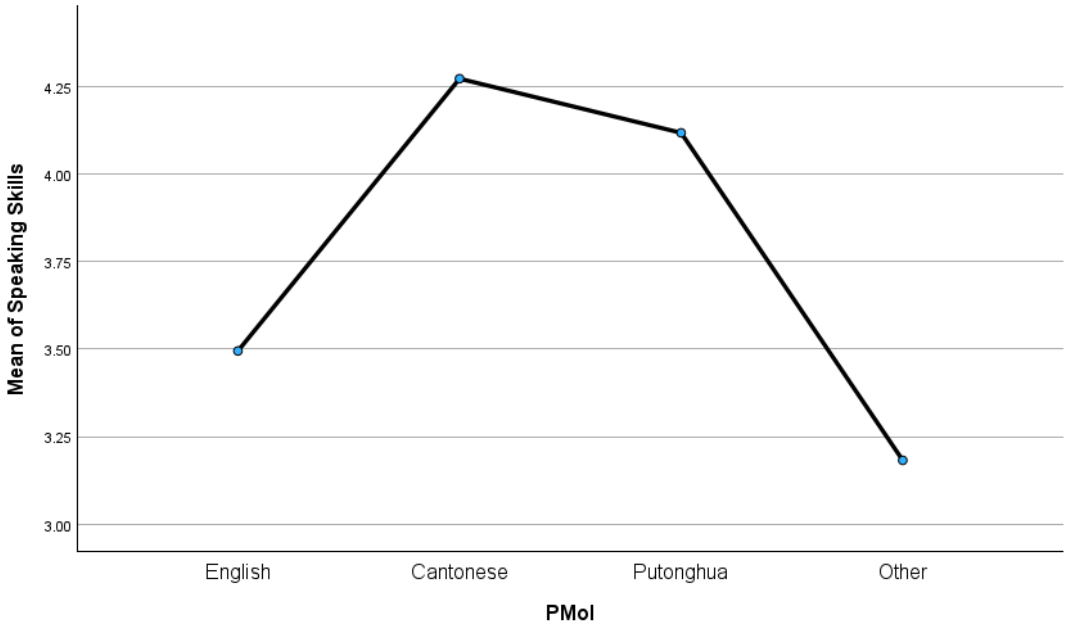
Table 4.13 ANOVA results for speaking: PMoI

Speaking Skills

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	255.065	3	85.022	65.311	<.001
Within Groups	2574.939	1978	1.302		
Total	2830.004	1981			

Resembling the writing and reading results, the Tukey post hoc test revealed similar results between the PMoI groups in speaking. The CMI group found speaking significantly more challenging than the EMI group ($p < .001$) and the OMI group ($p < .001$). Similarly, the PMI group found speaking significantly more challenging than the EMI ($p < .001$) and OMI ($p < .001$) groups. While there was no statistically significant difference between the CMI and PMI groups ($p = .300$), mean scores show that the PMI group found speaking slightly less challenging than the CMI group. Once again, there was no statistically significant difference between the EMI and OMI groups ($p = .394$), but mean scores indicated that the OMI group found speaking less challenging than the EMI group. **Figure 4.16** shows the means plots for the four PMoI groups in speaking.

Figure 4.16 Means plots for speaking (PMoI)



As shown in **Table 4.14**, there were statistically significant differences between the groups in listening skills as determined by one-way ANOVA ($F(3,1978) = 60.45$, $p < .001$).

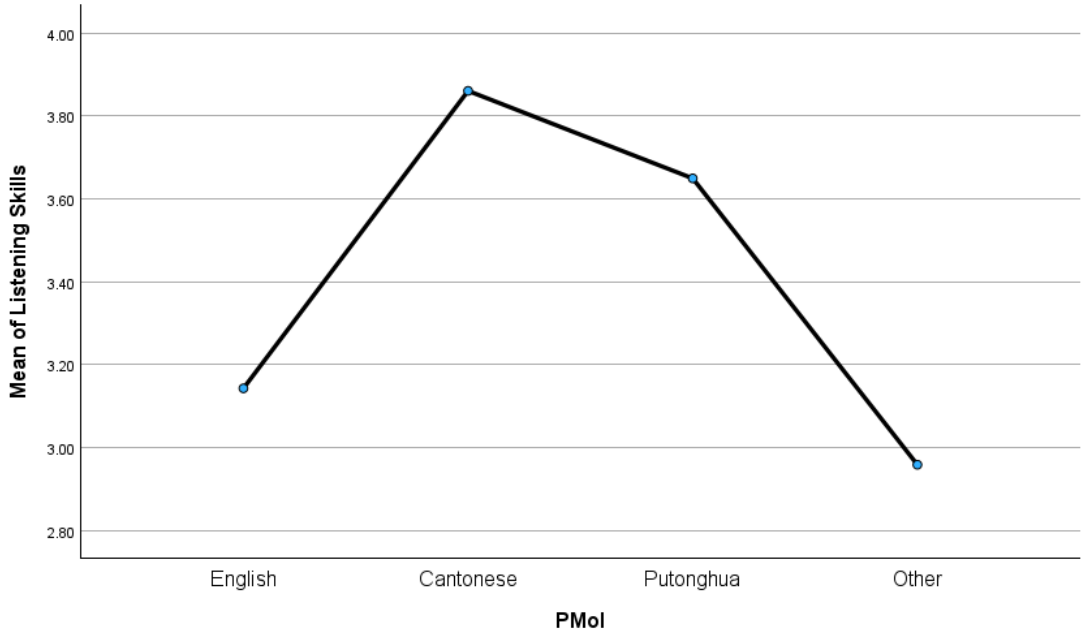
Table 4.14 ANOVA results for listening: PMoI

Listening Skills

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	203.707	3	67.902	60.454	<.001
Within Groups	2221.720	1978	1.123		
Total	2425.427	1981			

Following the trends of the other three skills, the post hoc test revealed similar results between the groups in listening. The EMI group found listening significantly less challenging than the CMI ($p < .001$) and PMI ($p < .001$) groups. Similarly, the OMIs found listening significantly less challenging than the CMI ($p < .001$) and PMI ($p < .001$) groups. Additionally, the PMI group found listening significantly less challenging than the CMI group ($p = .05$). Lastly, there was no statistically significant difference between the EMI and OMI groups ($p = .749$), but mean scores indicated that the OMI group also found listening less challenging than the EMI group. **Figure 4.17** shows the means plots for the four PMoI groups in listening.

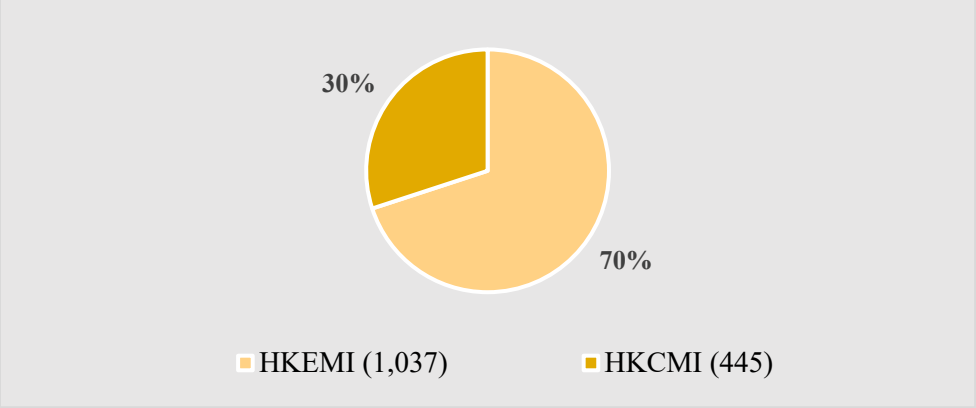
Figure 4.17 Means plots for listening (PMoI)



4.9.2 PMoI in Hong Kong (HK): EMI vs CMI

As discussed previously in Chapter 2, the large majority (approximately 70%) of public secondary schools in Hong Kong are CMI schools which employ 'biliterate/trilingual' policy (Shepard & Rose, 2023), and where Cantonese is typically used in most academic subjects. Around 30 per cent of secondary schools in Hong Kong are EMI schools, and previous studies suggest that students from these schools not only have a higher chance of obtaining places in HK universities, but that they experience fewer language-related challenges during their university studies (See Chapter 2). Accordingly, it was important to also look independently at two subgroups: Hong Kong Cantonese L1 students from both CMI secondary schools and EMI secondary schools. As shown in **Figure 4.18**, when controlling for CL1 and for the two types of MoI at public secondary school in HK (CMI & EMI), the HKEMI group (n = 1,037) made up 70% of the sample and the HKCMI group (n = 445) represented 30%.

Figure 4.18 HK PMoI: EMI and CMI (Cantonese speakers)



An independent samples t-test was conducted to identify any possible differences between the HKEMI and the HKCMI groups. **Table 4.15** shows each of the four language skills, the two HK PMoI groups, English (HKEMI) and Cantonese (HKCMI), the sample size for each group (N), mean scores, and standard deviations. The results of the t-test indicated that there were statistically significant differences between the two groups in all four language skills.

Table 4.15 HK PMoI: EMI and CMI (Cantonese speakers)

Skill	PMoI in HK	N	Mean	Std. Deviation
Writing	English (HKEMI)	1037	3.7895	1.02195
	Cantonese (HKCMI)	445	4.3667	.96121
Reading	English (HKEMI)	1037	3.6972	1.04526
	Cantonese (HKCMI)	445	4.3034	1.01149
Speaking	English (HKEMI)	1037	3.5923	1.11707
	Cantonese (HKCMI)	445	4.2771	1.12707
Listening	English (HKEMI)	1037	3.1913	1.03142
	Cantonese (HKCMI)	445	3.8645	1.14187

The results of the *t*-test indicated that there were statistically significant differences between the two groups in all four language skills. The HKEMI group ($M = 3.78$, $SD = 1.02$) had significantly lower levels of writing challenges than the HKCMI group ($M = 4.36$, $SD = .96$), and the results of the *t*-test showed that this difference was statistically significant, $t(1480) = -10.14$, $p < .001$. Additionally, the HKEMI group ($M = 3.69$, $SD = 1.04$) showed lower levels of reading challenges than the HKCMI group ($M = 4.30$, $SD = 1.01$), which were statistically significant, $t(1480) = -10.32$, $p < .001$. Similarly, the HKEMI group ($M = 3.59$, $SD = 1.11$) had statistically significant lower levels of speaking challenges than the HKCMI group ($M = 4.27$, $SD = 1.12$), $t(1480) = -10.78$, $p < .001$. Lastly, the HKEMI group ($M = 3.19$, $SD = 1.03$) had statistically significantly lower levels of listening challenges than the HKCMI group ($M = 3.86$, $SD = 1.14$). Levene's test for equality of variances showed a positive significance ($p < .001$), and equal variances were not assumed, yet the results of the *t*-test showed that difference was statistically significant $t(768.93) = -10.70$, $p < .001$ (See Appendix K). All findings remained significant even after a corrected *p*-value is considered for the multiple contrasts.

4.10 University

The sample sizes of respondents from the four different universities were substantially unequal. The university with approximately 90% of the respondents was PolyU (n = 1,787). CityU

represented approximately 6% of the respondents (n = 110). The two other universities accounted for approximately 2% each with 49 students from HKUST and 36 students from HKU. Despite the unequal sample sizes, the author considered it prudent to determine if there were any significant differences between the respondents from the four universities in terms of their language-related challenges in the four skills. While any observed statistically significant differences might not be highly reliable given the disparity between the group sizes, the data was available, and testing for differences was important to consider if further analysis into differences between groups (i.e. academic discipline, year of study) should include all four universities or only the PolyU.

Table 4.16 HK Universities: descriptive statistics

Skills	University	N	Mean	Std. Deviation
Writing	CityU	110	4.0630	1.10208
	PolyU	1787	3.9147	1.04851
	HKUST	49	3.5456	1.22290
	HKU	36	3.7278	1.35463
	Total	1982	3.9104	1.06389
Reading	CityU	110	4.0327	1.16486
	PolyU	1787	3.8257	1.08757
	HKUST	49	3.3857	1.12879
	HKU	36	3.7083	1.18692
	Total	1982	3.8242	1.09737
Speaking	CityU	110	3.8873	1.21867
	PolyU	1787	3.7614	1.18874
	HKUST	49	3.4000	1.23238
	HKU	36	3.6500	1.34004
	Total	1982	3.7575	1.19523
Listening	CityU	110	3.5827	1.17277
	PolyU	1787	3.3769	1.09624
	HKUST	49	3.0469	1.15472
	HKU	36	3.3111	1.25420
	Total	1982	3.3790	1.10650

Table 4.16 shows each of the four language skills, the four different universities, the sample size for each group (*N*), mean scores, and standard deviations. To establish if there were differences in terms of the mean scores of the language-related challenges between different university groups,

a one-way ANOVA was performed in SPSS. Results showed statistically significant differences between the groups in writing, reading, and listening. As shown in **Table 4.17**, there was a statistically significant difference between the four university groups in writing as determined by one-way ANOVA ($F(3,1978) = 3.05$, $p = .028$).

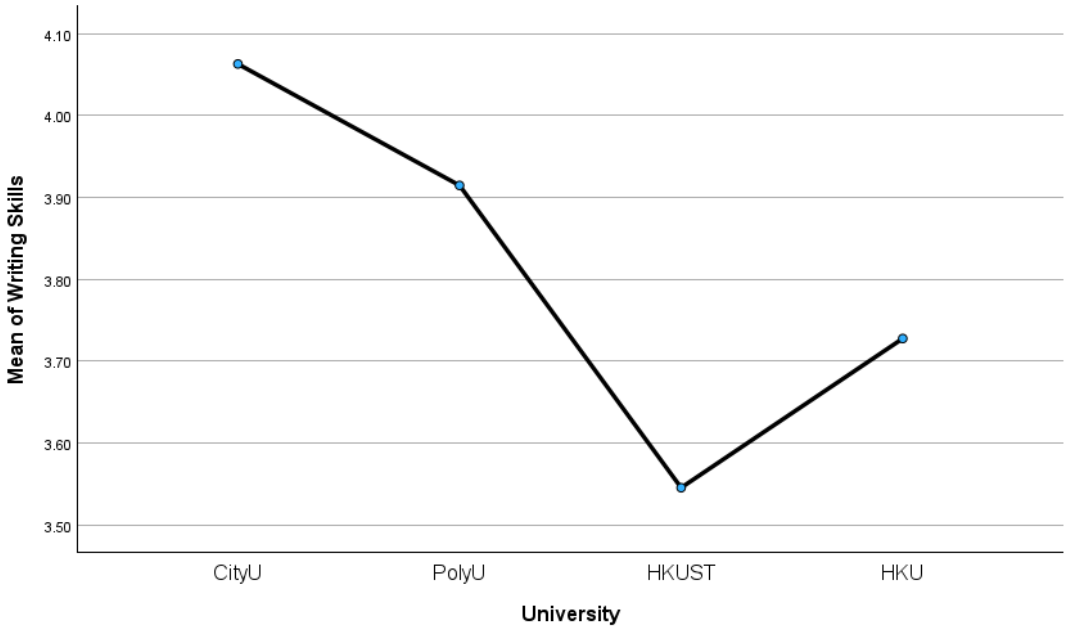
Table 4.17 ANOVA results for writing: University

Writing Skills

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	10.318	3	3.439	3.048	.028
Within Groups	2231.882	1978	1.128		
Total	2242.200	1981			

The Tukey post hoc test revealed the students from CityU found academic writing significantly more challenging than the HKUST students ($p = .024$). No other statistically significant differences were observed. **Figure 4.19** shows the means plots for the four PMoI groups in writing.

Figure 4.19 Means plots for writing (University)



As shown in **Table 4.18**, there was a statistically significant difference between the four university groups in reading as determined by one-way ANOVA ($F(3,1978) = 4.09$, $p = .007$).

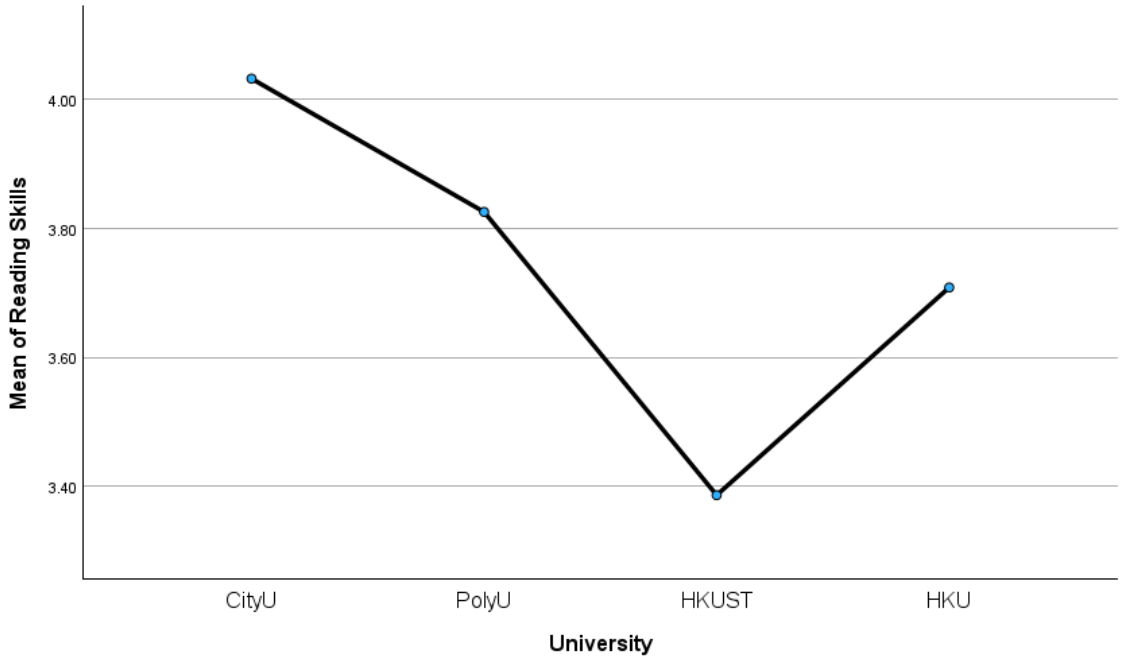
Table 4.18 ANOVA results for reading: University

Reading Skills

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	14.692	3	4.897	4.086	.007
Within Groups	2370.861	1978	1.199		
Total	2385.552	1981			

The Tukey post hoc test revealed that the students from CityU found reading skills significantly more challenging than the HKUST students ($p = .003$). Additionally, the students from PolyU also found reading skills significantly more challenging than those from HKUST ($p = .028$) although this significance disappears once a corrected p-value is applied for the four skills contrasts. No other statistically significant differences were observed in reading. **Figure 4.20** shows the means plots for the four university groups in reading.

Figure 4.20 Means plots for reading (University)



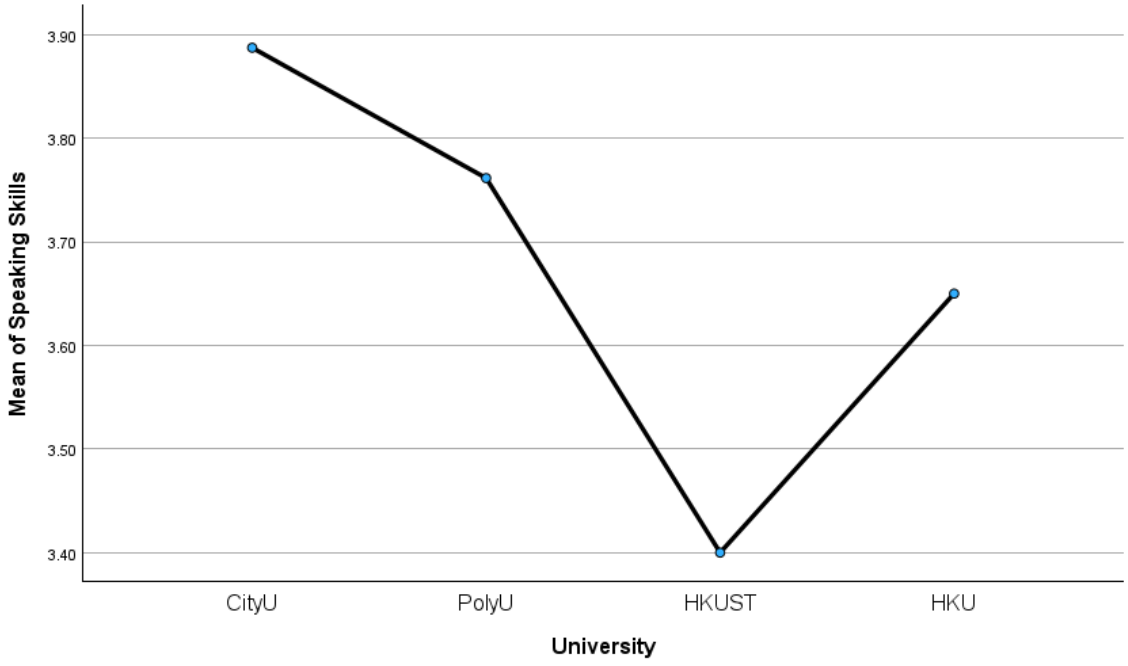
As shown in **Table 4.19**, there were no statistically significant differences observed between the four university groups in speaking as determined by one-way ANOVA ($F(3,1978) = 2.00, p = .112$).

Table 4.19 ANOVA results for speaking: University Speaking Skills

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	8.559	3	2.853	2.000	.112
Within Groups	2821.446	1978	1.426		
Total	2830.004	1981			

Figure 4.21 shows the means plots for the four university groups in speaking.

Figure 4.21 Means plots for speaking (University)



As shown in **Table 4.20**, there was a statistically significant difference between the four university groups in listening as determined by one-way ANOVA ($F(3,1978) = 2.77$, $p = .040$).

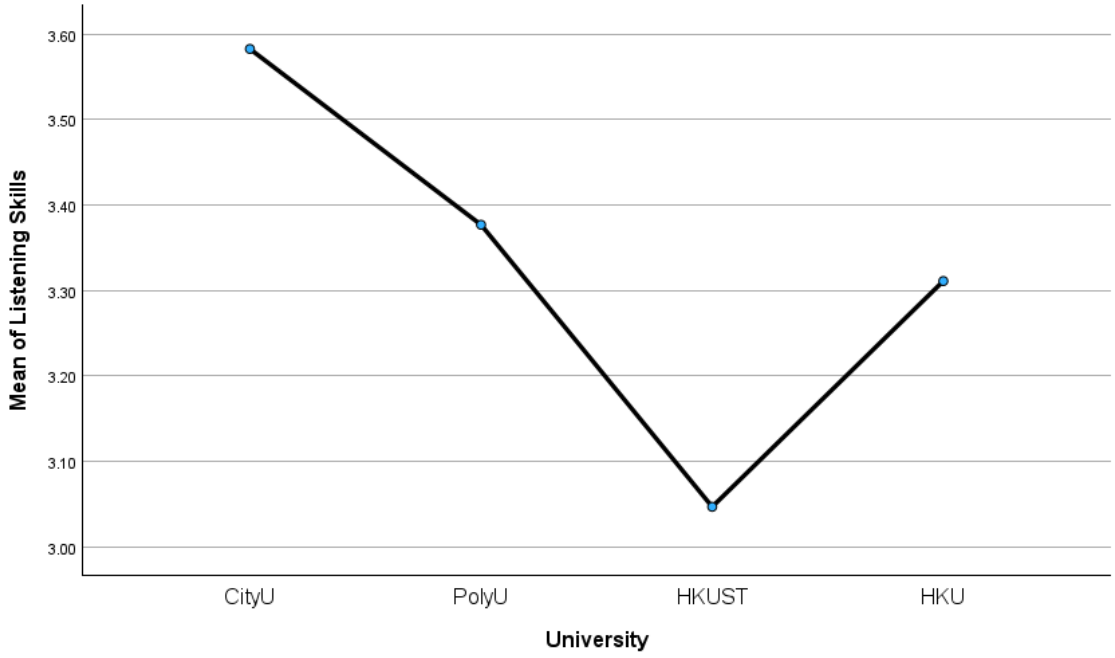
Table 4.20 ANOVA results for listening: University

Listening Skills

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	10.142	3	3.381	2.769	.040
Within Groups	2415.285	1978	1.221		
Total	2425.427	1981			

The Tukey post hoc test revealed that the students from CityU found listening skills significantly more challenging than the students from HKUST ($p = .025$). No other statistically significant differences were observed in listening. **Figure 4.22** shows the means plots for the four university groups in listening.

Figure 4.22 Means plots for listening (University)



4.11 Academic Discipline (AD): Schools & Faculties

As noted above in Section 4.10, the sample sizes of respondents from the four different universities were substantially unequal, with PolyU accounting for approximately 90% of the respondents, and two universities representing approximately 2% each. Moreover, the findings presented in Section 4.10 show that statistically significant differences were observed between the university groups in three (writing, reading, and listening) of the four language skills. Given these two factors, the author decided to limit the sample measuring possible differences between groups based on academic discipline (AD) to PolyU, thus reducing the sample size from 1,982 to 1,787. Hence, the PolyU sample (n = 1,787) is used for this Section 4.11 and the following two sections, 4.12 and 4.13, which examine the effect of year of study and language improvement respectively. This decision also allowed for a cleaner analysis of discipline within a single university, as variable academic structures across universities meant that disciplines were embedded within the varying structures at different universities. **Table 4.21** shows the eight different schools and faculties, the sample size for each group (*N*), mean scores for writing skills, and standard deviations.

Table 4.21 PolyU Faculties & Schools: descriptive statistics for writing skills

Faculty/School	N	Mean	Std. Deviation
Faculty of Applied Science and Technology (FAST)	170	3.9306	1.07285
Faculty of Business	453	3.9563	.96357
Faculty of Construction and Environment (FCE)	197	3.9594	1.05595
Faculty of Engineering	332	3.9349	1.08926
Faculty of Health and social Sciences (FHSS)	381	3.7899	1.10625
Faculty of Humanities	90	4.0333	.92426
Faculty of Design	71	4.1474	.95876
School of Hotel and Tourism Management (SHTM)	93	3.7355	1.12878
Total	1787	3.9147	1.04851

As shown in **Table 4.22**, there were no statistically significant differences observed between the eight AD groups in writing as determined by one-way ANOVA ($F(7,1779) = 2.00$, $p = .051$). **Figure 4.23** shows the means plots for the eight AD groups in terms of writing.

Table 4.22 ANOVA results for writing: Academic discipline (AD)

Writing Skills

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	15.394	7	2.199	2.008	.051
Within Groups	1948.089	1779	1.095		
Total	1963.483	1786			

Figure 4.23 Means plots for writing (AD)

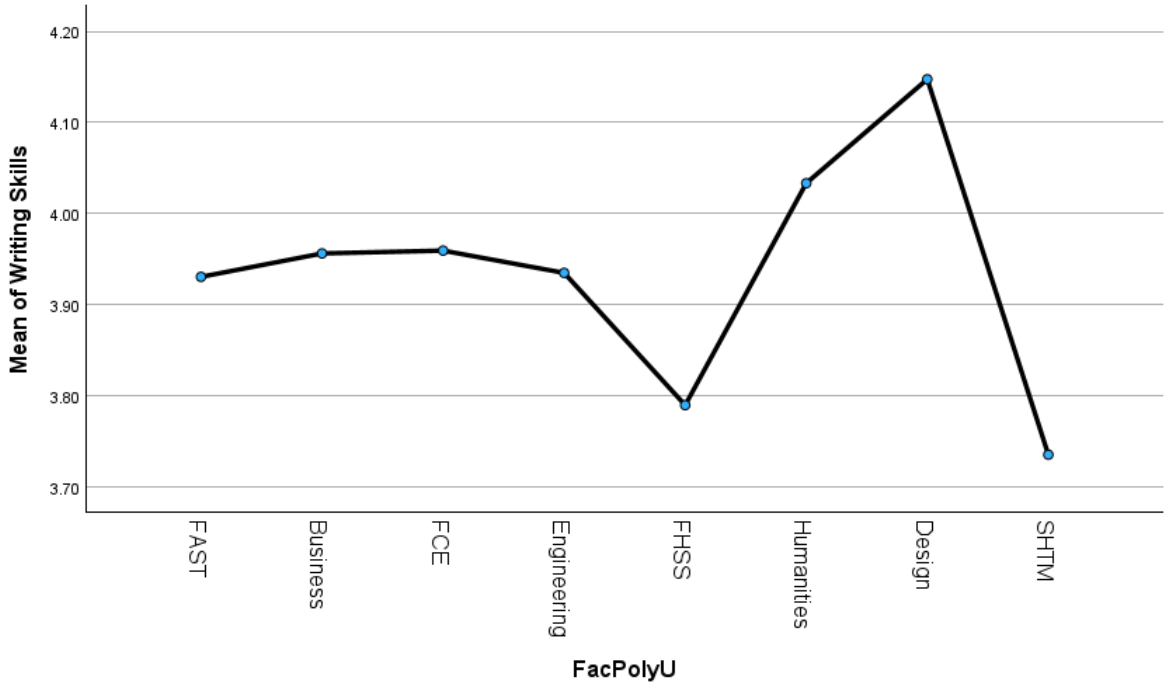


Table 4.23 shows the eight different schools and faculties, the sample size for each group (*N*), mean scores for reading skills, and standard deviations.

Table 4.23 PolyU Faculties & Schools: descriptive statistics for reading skills

Faculty/School	N	Mean	Std. Deviation
Faculty of Applied Science and Technology (FAST)	170	3.8929	1.07964
Faculty of Business	453	3.8951	.98757
Faculty of Construction and Environment (FCE)	197	3.9330	1.12126
Faculty of Engineering	332	3.7988	1.12153
Faculty of Health and social Sciences (FHSS)	381	3.6819	1.11519
Faculty of Humanities	90	3.9489	1.14010
Faculty of Design	71	3.8535	1.15978
School of Hotel and Tourism Management (SHTM)	93	3.6817	1.10728
Total	1787	3.8257	1.08757

As shown in **Table 4.24**, a significant one-way ANOVA was observed ($F(7,1779) = 2.02$, ($p = .049$) close to the normal acceptable threshold (.050) for statistical significance.

Table 4.24 ANOVA results for reading: Academic discipline (AD)

Reading Skills

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	16.690	7	2.384	2.024	.049
Within Groups	2095.801	1779	1.178		
Total	2112.491	1786			

However, this was followed with a non-significant Tukey post hoc test. This generally occurs because the post hoc tests are more accurate and more conservative, and they are adjusted for multiple comparisons, resulting in less susceptibility to identify differences between groups. Therefore, based on the Tukey post hoc test, no statistically significant differences were observed between the different faculties/schools in terms of reading. **Figure 4.24** shows the means plots for the eight AD groups in terms of reading.

Figure 4.24 Means plots for reading (AD)

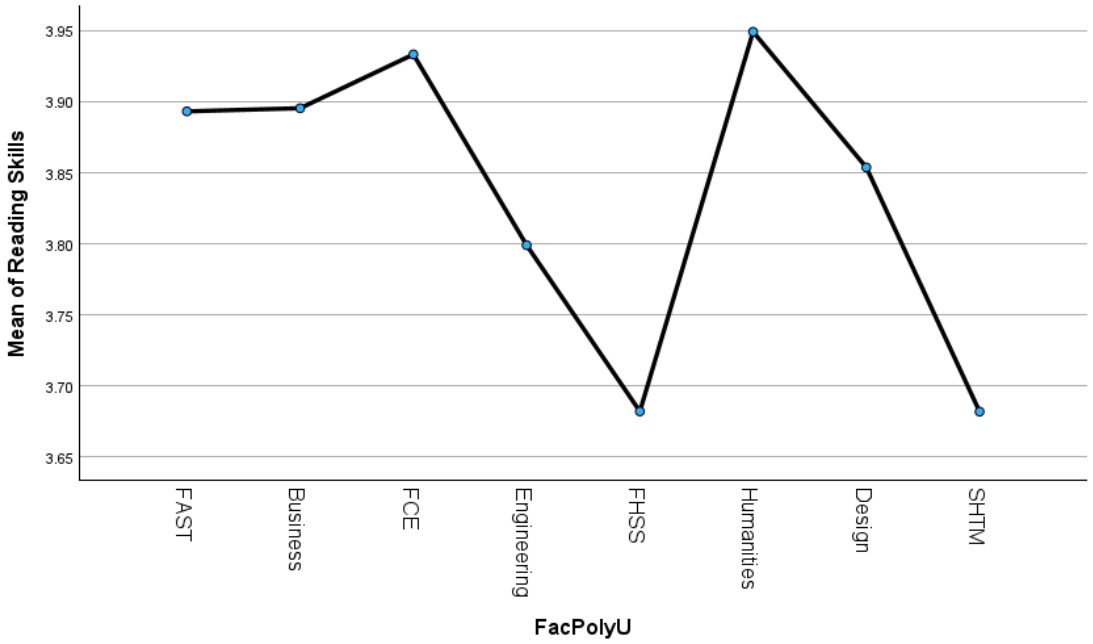


Table 4.25 shows the eight different schools and faculties, the sample size for each group (*N*), mean scores for speaking skills, and standard deviations.

Table 4.25 PolyU Faculties & Schools: descriptive statistics for speaking skills

Faculty/School	N	Mean	Std. Deviation
Faculty of Applied Science and Technology (FAST)	170	3.9135	1.25613
Faculty of Business	453	3.8472	1.08596
Faculty of Construction and Environment (FCE)	197	3.8909	1.24933
Faculty of Engineering	332	3.7437	1.22370
Faculty of Health and social Sciences (FHSS)	381	3.7097	1.21060
Faculty of Humanities	90	3.5689	1.07762
Faculty of Design	71	3.6310	1.22726
School of Hotel and Tourism Management (SHTM)	93	3.3527	1.16587
Total	1787	3.7614	1.18874

As shown in **Table 4.26**, there was a statistically significant difference between the eight different schools and faculties in speaking skills as determined by one-way ANOVA ($F(7,1779) = 3.24$, $p = .002$).

Table 4.26 ANOVA results for writing: Academic speaking (AD)

Speaking Skills

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	31.775	7	4.539	3.240	.002
Within Groups	2492.039	1779	1.401		
Total	2523.813	1786			

The Tukey post hoc test revealed that the FAST students found speaking skills significantly more challenging than the SHTM students ($p = .006$). In addition, the Business students also found speaking significantly more challenging than the SHTM students ($p = .006$). Similarly, the FCE students also found speaking significantly more challenging than the SHTM group ($p = .007$). No other statistically significant differences were observed in terms of speaking. **Figure 4.25** shows the means plots for the eight AD groups for speaking.

Figure 4.25 Means plots for speaking (AD)

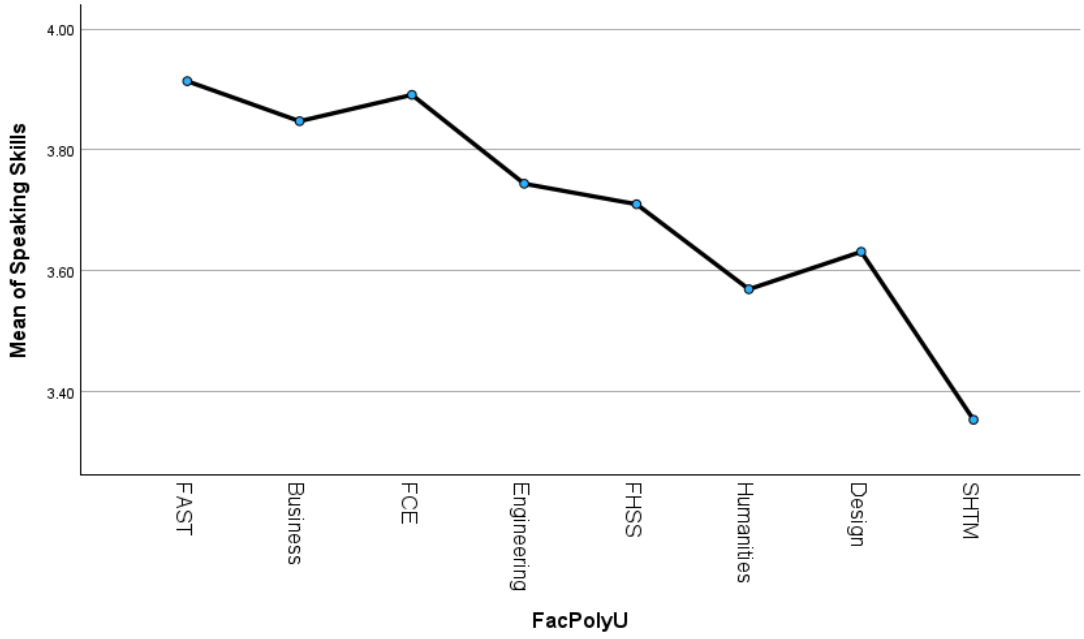


Table 4.27 shows the eight different schools and faculties, the sample size for each group (*N*), mean scores for listening skills, and standard deviations.

Table 4.27 PolyU Faculties & Schools: descriptive statistics for listening skills

Faculty/School	N	Mean	Std. Deviation
Faculty of Applied Science and Technology (FAST)	170	3.4335	1.09490
Faculty of Business	453	3.4283	1.01423
Faculty of Construction and Environment (FCE)	197	3.6279	1.15435
Faculty of Engineering	332	3.5078	1.10839
Faculty of Health and social Sciences (FHSS)	381	3.1583	1.08367
Faculty of Humanities	90	3.1833	1.13675
Faculty of Design	71	3.2761	1.14909
School of Hotel and Tourism Management (SHTM)	93	3.1849	1.10177
Total	1787	3.3769	1.09624

As shown in **Table 4.28**, a statistically significant difference was observed between the eight different schools and faculties in listening as determined by one-way ANOVA ($F(7,1779) = 5.51$, $p < .001$).

Table 4.28 ANOVA results for writing: Academic speaking (AD)

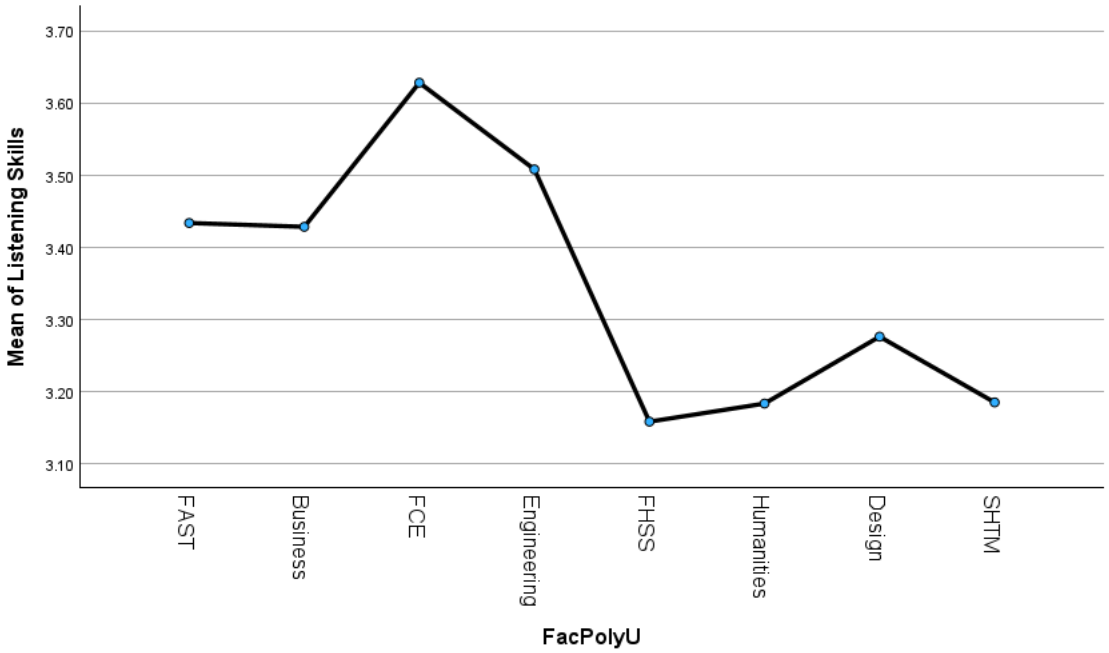
Listening Skills

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	45.577	7	6.511	5.514	<.001
Within Groups	2100.733	1779	1.181		
Total	2146.310	1786			

The Tukey post hoc test revealed that the FHSS students found listening skills significantly less challenging than the Business students ($p = .009$), the FCE students ($p <.001$), and the Engineering students ($p <.001$). The FCE students found listening skills significantly less challenging than the Business students ($p = .009$), the FCE students also found listening significantly more challenging

than the Humanities students (p = .029) and the SHTM students (p = .027). No other statistically significant differences were observed in listening. **Figure 4.26** shows the means plots for the eight AD groups in listening.

Figure 4.26 Means plots for listening (AD)



4.12 Year of study

The questionnaire used in this study was primarily designed to provide 'snapshots' of the student population, their language-related challenges in EMI HEIs in Hong Kong, and examine the numerous variables and factors that may influence and affect these challenges. Unlike the qualitative portion of this study that used multiperspective longitudinal design, this questionnaire was designed to collect cross-sectional data from students at a single point in time. Nevertheless, as the questionnaire was designed to examine a variety of group differences, including potential differences between groups of students in their Y1, Y2, Y3, and Y4.

By means of examining language-related challenges of students in different stages of their university study, it is possible to make some valuable inferences related to the differences between

the groups while acknowledging the limited temporal context. While the cross-sectional data collected does not allow analysis of changes over time or determinations of causality, it does offer insight into the trends and challenges of students in their various stages of university study. Accordingly, it was important to examine the potential differences between the different cohorts (Y1, Y2, Y3, and Y4) in terms of their language-related challenges.

As shown in **Figure 4.27**, the Y1 students (n = 629) comprise the largest group with approximately 35% of the total sample. The Y2 students (n = 379) represent approximately 21%. The Y3 students (n = 437) comprise 25% of the total, and the Y4 students make up around 19% of the total sample.

Figure 4.27 Students by year of study

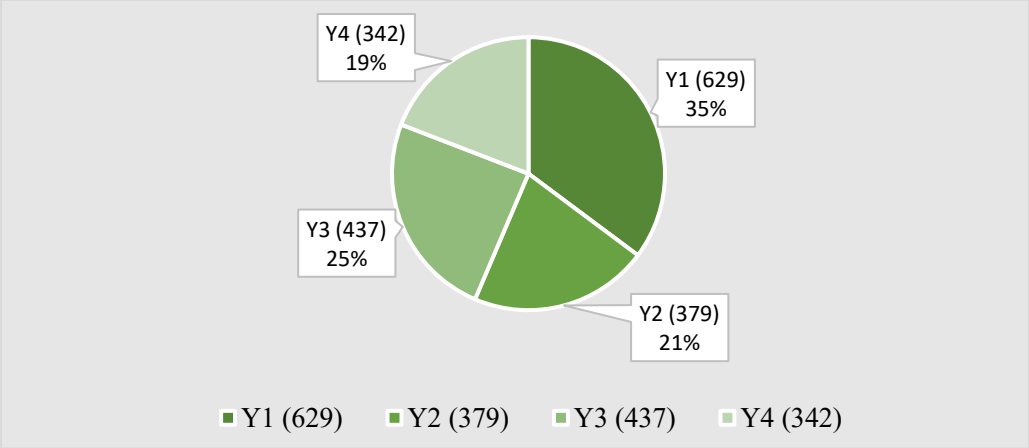


Table 4.29 shows each of the four language skills, the four cohorts (by year), the sample size for each group (N), mean scores, and standard deviations. A one-way ANOVA was performed to examine the effect of the year of study on students' levels of language-related challenges.

Table 4.29 Students by year of study: descriptive statistics

Skill		N	Mean	Std. Deviation
Writing	Year 1 (Y1)	629	3.9423	1.02302
	Year 2 (Y2)	379	3.8274	1.13086
	Year 3 (Y3)	437	3.9632	.98669
	Year 4 (Y4)	342	3.8986	1.07475
	Total	1787	3.9147	1.04851
Reading	Year 1 (Y1)	629	3.8536	1.06341
	Year 2 (Y2)	379	3.7348	1.18445
	Year 3 (Y3)	437	3.8611	.99972
	Year 4 (Y4)	342	3.8298	1.12567
	Total	1787	3.8257	1.08757
Speaking	Year 1 (Y1)	629	3.8250	1.15013
	Year 2 (Y2)	379	3.6752	1.31024
	Year 3 (Y3)	437	3.7700	1.13163
	Year 4 (Y4)	342	3.7292	1.18654
	Total	1787	3.7614	1.18874
Listening	Year 1 (Y1)	629	3.4262	1.08193
	Year 2 (Y2)	379	3.2979	1.18514
	Year 3 (Y3)	437	3.3963	1.02469
	Year 4 (Y4)	342	3.3491	1.10737
	Total	1787	3.3769	1.09624

In each of the four skills, writing, reading, listening, and speaking, the ANOVA was not significant. As shown in **Table 4.30** , there were no statistically significant differences found between the four different cohorts in any of the four language skills. While the mean score did show certain trends, none of these were statistically significant.

Table 4.30 ANOVA results (all skills): year of study

		Sum of Squares	df	Mean Square	F	Sig.
Writing	Between Groups	4.484	3	1.495	1.360	.253
	Within Groups	1958.999	1783	1.099		
	Total	1963.483	1786			
Reading	Between Groups	4.172	3	1.391	1.176	.317
	Within Groups	2108.319	1783	1.182		
	Total	2112.491	1786			
Speaking	Between Groups	5.744	3	1.915	1.356	.255
	Within Groups	2518.070	1783	1.412		
	Total	2523.813	1786			
Listening	Between Groups	4.326	3	1.442	1.200	.308
	Within Groups	2141.984	1783	1.201		
	Total	2146.310	1786			

As can be seen in Tables 4.29, the mean scores in all four language skills followed a similar trend. The mean scores for the Y1 cohort were generally higher than the Y2 group, suggesting that the Y2 students found the four language skills somewhat less challenging in their second year. The mean scores for the Y3 students, however, were higher than the Y2 students' scores in all four skills and represented the highest of all four years in both writing and reading. In other words, the highest mean scores for writing and reading) occurred in Y3, and were the second highest in speaking and listening. The Y4 mean scores were all lower than the Y3 scores suggesting a possible decrease in the level of challenges in Y4, yet none of these score reached the low levels of the Y2 cohort. Implications will be discussed in Chapter 7. **Figures 4.28, 4.29, 4.30** and **4.31** show the means plots for the four cohorts by year in each of the four language skills.

Figure 4.28 Means plots for writing (Year of study)

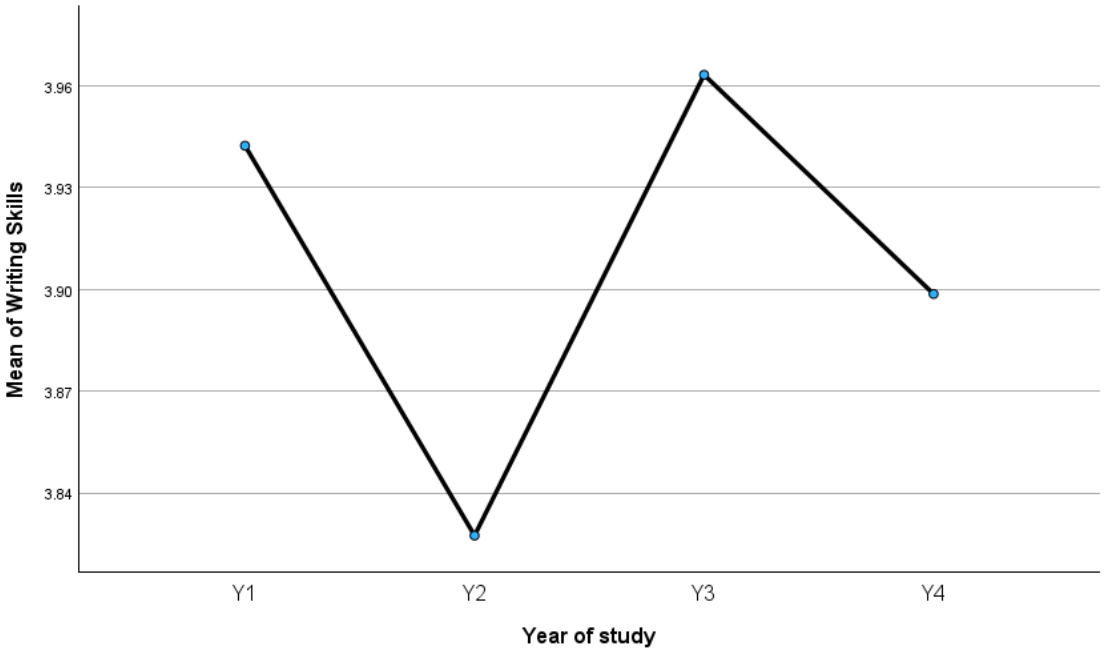


Figure 4.29 Means plots for reading (Year of study)

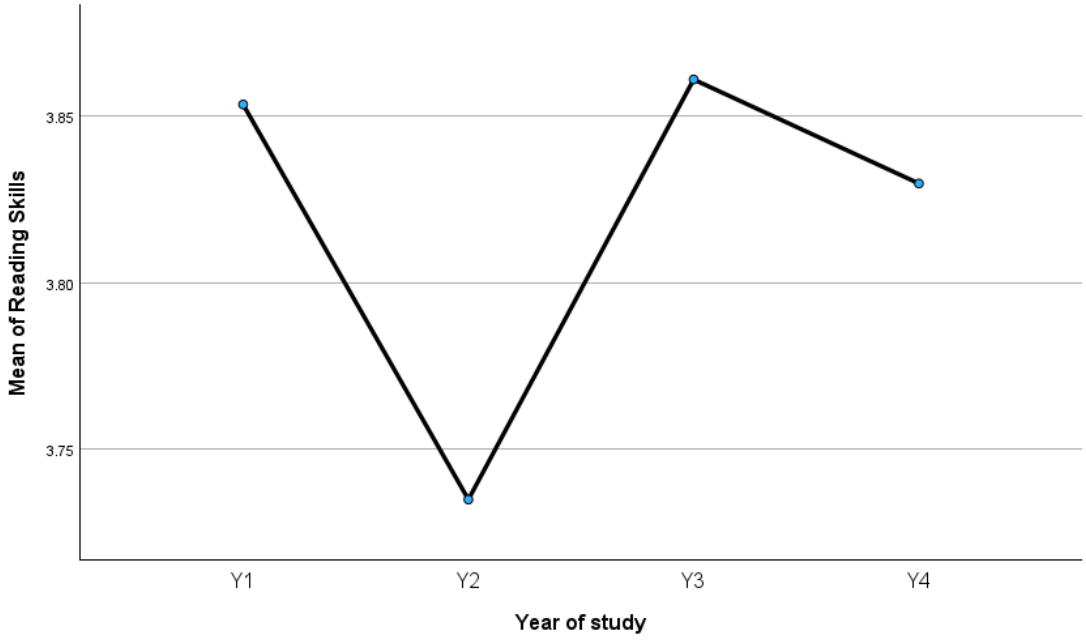


Figure 4.30 Means plots for speaking (Year of study)

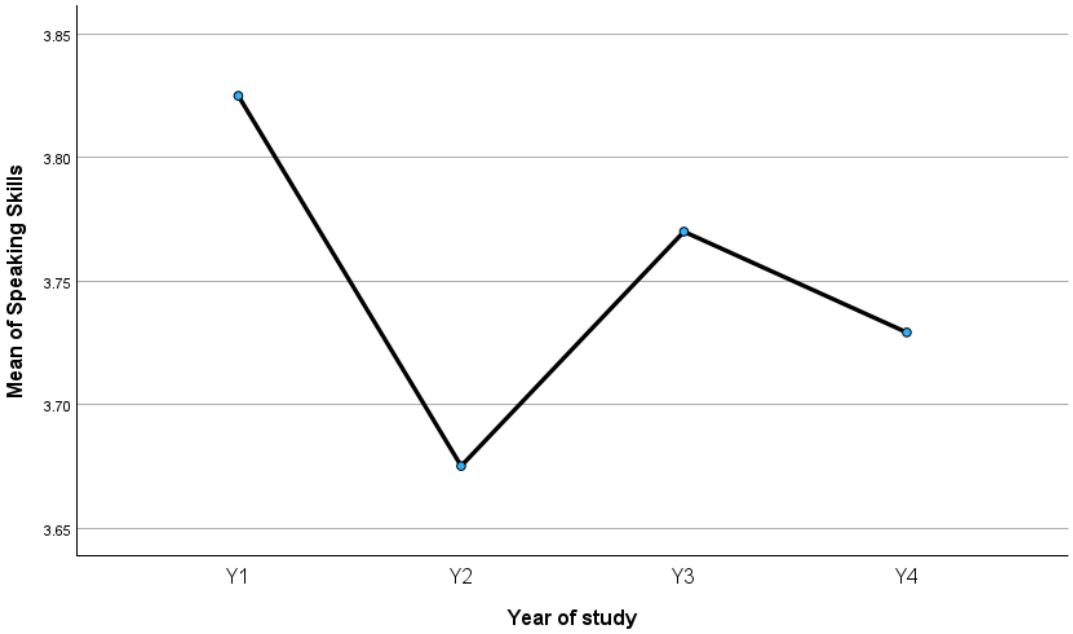
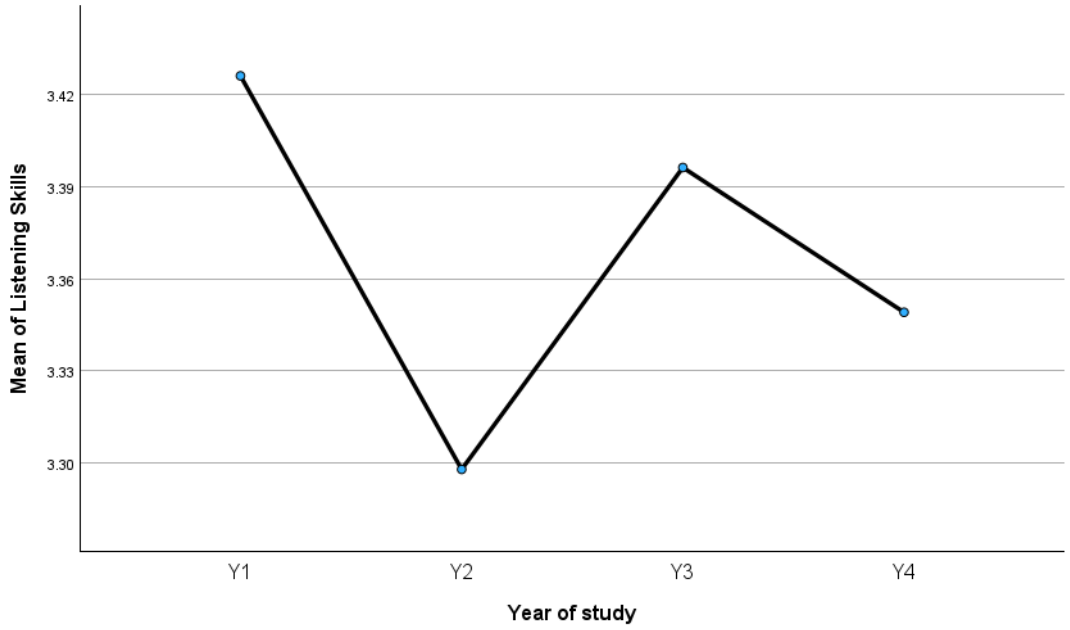


Figure 4.31 Means plots for listening (Year of study)



4.13 Language improvement over time

As noted previously in Chapter 3, most of the findings from Section E (6 items) of the questionnaire are not included in this dissertation. However, one item related to overall language improvement is included as it relates directly to language challenges, how they may change over time, and possible English language improvement though studying in an EMI HEI setting. Students were asked to respond to a Likert-type scale with a 6-point scale ranging from 1 (strongly agree) to 6 (strongly disagree) to the following statement: 'My English has improved from learning subject content through English'.

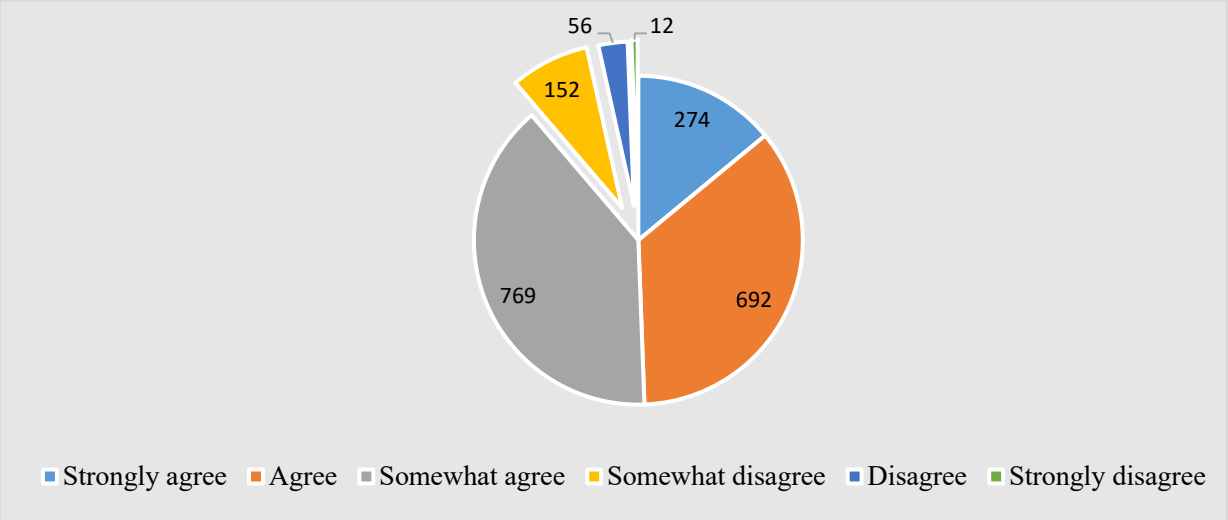
Table 4.31 Language improvement: descriptive statistics

Q: 'My English has improved from learning subject content through English.'		
Response	N	%
Strongly agree	274	14.0%
Agree	692	35.4%
Somewhat agree	769	39.3%
Somewhat disagree	152	7.8%
Disagree	56	2.9%
Strongly disagree	12	0.6%

As presented in **Table 4.31** and shown in **Figure 4.32**, the large majority roughly agreed with the statement to some extent. Those who selected 'Somewhat agree' represented 39.3% while those who chose 'Agree' consisted of 35.4%. 'Strongly agree' was chosen by 14% of the students. This indicates that approximately 89% of the students believe that EMI has a positive effect on their overall English language improvement with only 11.3% disagreeing to some extent (See Figure 4.33). The students who responded 'Somewhat disagree' comprised 7.8% while those who responded 'Disagree' comprised of 2.9%. 'Strongly disagree' was selected by less than 1% of the total sample (0.6%). In other words, approximately 9 out of 10 students reported that their

language had improved from learning subject content through English in an EMI HEI in Hong Kong.

Figure 4.32 Language improvement from learning through English



4.14 Chapter Summary

In summary, the key quantitative findings from the questionnaire related to the RQs are outlined below. The findings from the questionnaire presented in this chapter reveal a number of perspectives and trends in terms of students' views of their overall language-related challenges and specific challenges. In terms of students' most challenging language skills, data from Sections B and C should not be viewed as conflicting but rather as complementary. Students' responses from Section B suggest that overall, they view the productive skills, writing and speaking to be generally more challenging overall than reading and writing. Alternatively, when considering the individual and specific language activities, tasks, and micro-skills, some overall macro-skills (i.e., reading) may be, on average, more challenging than students generally perceive. For clarity and brevity, the remaining key points are presented below in bullet point format.

Writing

- Difficulty expressing ideas correctly, using appropriate academic style, writing the body of an essay, and linking sentences smoothly
    - Writing introductions and conclusions is less challenging

Reading

- Difficulty understanding specific / unfamiliar vocabulary
- Difficulty working out meaning of unfamiliar / difficult vocabulary
- Difficulty reading quickly for overall meaning & for specific information

Speaking

- Difficulty speaking accurately
- Difficulty communicating ideas confidently & fluently
    - Speaking from notes not challenging
    - Using visual aids (e.g. PPT) not challenging

Listening

- Difficulty understanding lecturers' accents most challenging by far
    - Following a discussion somewhat challenging
    - Understanding classmates' accents somewhat challenging

Gender

- Effect of gender not significant in writing, reading, and speaking
- Listening significantly less challenging for females than for males

First language (L1)

- Effect of L1 significant in writing, reading, speaking, and listening
- OL1 (mixed others) significantly less challenged that CL1s in all four skills
- CL1s significantly less challenged than PL1s in reading, speaking, and listening

Previous medium of instruction (PMoI)

- Students from EMI schools generally experience fewer language challenges than those from CMI or PMI backgrounds
- Students from the mixed 'Other' group (OMI) generally reported the fewest language-related challenges (majority of EMI students are local Cantonese L1s while OMI students are non-local international students)
- Statistically significant differences between local HK EMI & CMI students' challenges
    - EMI showed statistically significant differences between the two groups in all four language skills
    - EMI students experienced fewer challenges

University

- Students from the four universities experience different levels of language challenges
- CityU experienced higher levels of challenges in writing, reading, and listening
- HKUST generally experienced lowest levels of challenges
- Unequal sample sizes prevented reliable analysis

Academic discipline (Schools & faculties)

- Students from SHTM and FHSS schools generally experience fewer language challenges than those from other faculties or schools
- Design students generally reported the highest levels of writing-related challenges (not significant)
- Students from FAST, Business, and FCE generally reported the highest levels of speaking-related challenges (statistically significant)
- Students from SHTM reported the lowest levels of speaking-related challenges (statistically significant)
- Students from Business, and FCE reported the highest levels of listening-related challenges (statistically significant)

- Students from Humanities and SHTM reported the lowest levels of listening-related challenges (statistically significant)

Year of study / changes over time

- Language-related challenges may / may not decrease over time
    - Possible reduced challenges from Y1 to Y2, increase in Y3, reduction in Y4

Language improvement

- Students' (roughly 90%) believe that EMI contributes to language improvement

Chapter 5 – Qualitative Findings: Students' language-related challenges

5.1 Introduction

This chapter presents the qualitative findings related to language challenges faced by students at an HK EMI university. The chapter is divided into ten sections and several sub-sections. The ten sections correspond with the findings based on the data collected from the longitudinal multiple-perspective interviews (MPIs) with the undergraduate students who participated in this study, and who were tracked over a period of four years. The findings from both the instructor and lecturer interviews are presented together in Chapter 6. Chapter 5 is divided into ten sections and several subsections. This **Section 5.1** introduces the chapter, presents the RQs it addresses, and provides an overview of its content, outlining the various sections. **Section 5.2** presents findings from the 106 student interviews over four years related to their language-related challenges while studying in a four-year UG programme at an EMI university in Hong Kong[5]. This includes an overview of which of the four language macro skills were considered most challenging for students by instructors and lecturers, a broad ranking of what they considered to be most and least challenging for students, and a discussion of two themes that emerged from the findings. As the participants from the interview group were not selected randomly and were not proportionate to the overall university student population (See Section 3.5.2), the findings related to the four macro skills are presented in order of the productive skills (writing & reading) first, followed by the receptive skills (listening & reading) rather than in order of what was found most to least challenging by all respondents. Accordingly, **Section 5.3** presents the findings related to students' challenges in writing and focuses on several sub-themes that emerged from the interviews, including which writing micro-skills were thought to be particularly challenging for students, as well as reported causes and factors linked with these challenges. **Section 5.4** presents the findings related to students' challenges with speaking and discusses several sub-themes, including reported causes and factors, that emerged from the interviews. **Section 5.5** presents findings related to students' listening challenges and presents various sub-themes themes that emerged from the data. **Section 5.6** presents findings related to students' challenges with reading, and **Section 5.7** presents findings

[5] The findings presented in Chapter 5 are limited to the 26 students who were tracked over their four years of study.

related to students' difficulty with vocabulary, highlighting various sub-themes related to reported causes and contributing factors. **Section 5.8** presents findings related to how the aforementioned challenges may vary based on background, previous medium of instruction (PMOI), or academic discipline (AD). **Section 5.9** presents findings related to how students' challenges may change over time. Specifically, students were asked if they believed that their language-related challenges generally changed, decreased, or increased over their four years of undergraduate study and if they believed that their language skills generally had improved. **Section 5.10** provides a summary of the chapter and highlights key themes and sub-themes from the findings.

5.1.1 Research questions

- What English language-related challenges do undergraduate students face during their four years at Hong Kong EMI universities?
- Do these challenges vary based on background, previous medium of instruction, or academic discipline? If so, how?
- Do students' challenges change over their years of study? If so, how?

5.2 Students' most challenging language skills

In EMI HEIs in Hong Kong, like many other EMI contexts, UG students are expected to be proficient all four language skills (i.e., reading, writing, speaking, listening) in the language of instruction, English. For the duration of the four-year studies, they attend lectures and tutorials in English, read various academic and non-academic texts written in English, write assignments, essays, and assessments in English, and given spoken presentations in English. However, as previous EMI literature has shown, many L2 English students in HK EMI universities struggle with some, if not all of the four language skills, all of which are considered fundamental for their overall learning of subject content. Therefore, it is critical that both educators and students understand how and in which language skills students feel more challenged and less challenged, not only to ensure their ability to comprehend academic content, but also to employ optimal teaching and learning practices so that students are able to maximize their potential for learning in EMI HEIs. Accordingly, similar to the online questionnaire that examined students' difficulties in the four macro language skills using the 'EMI Challenges Scale' (ECS), participants in the 104

(tracked) semi-structured student interviews were asked which language skills they found challenging. Specifically, they were asked which language skills they generally considered to be either more challenging and less challenging and to rank the four language skills from most to least challenging. They were also asked to discuss why some language skills were more challenging than others and what specific aspects were particularly difficult for them. Through this process and with their confirmation, participants' language challenges were broadly ordered from most to least difficult. The year-1 (Y1) interviews that were conducted as part of the author's earlier research were limited to asking students to identify only their most challenging language skills. In subsequent years' interviews (Y2, Y3, and Y4), students provided the rankings of all four skills each year and generally elaborated on causes and factors contributing to the difficulty of their respective challenges.

As can be seen in **Table 5.1**, among the participants purposefully sampled for the student interviews, each one of the four language macro skills was represented by a various number of students each year as most challenging. Writing was reported to be most challenging a total of 39 times over the four-year period. Listening was second among the group of participants and reported to be most challenging 31 times over the four years. Speaking was considered most challenging 19 times, and reading was reported to be most challenging 15 times. This variation among the participants of the student interviews indicates that even among a relatively small sample of students (n=26), the language skills that students consider challenging can vary substantially. Additionally, students' perceptions of which skills were most challenging generally varied over their four years of study. A total of 17 students reported two separate language skills to be most challenging during their four-year studies. These students generally reported that they found one skill most challenging in the beginning of their study with a different skill becoming most challenging later. Thirteen of these students reported one language skill as most challenging for three out of four years and a separate skill as most challenging for only one of their years of study. Three students reported one skill as most challenging, then a different skill in a subsequent year, then reverted to their original most challenging skill (Alex, Olivia, & Victoria). Two of these students (Jackie & Kay) reported that their two most challenging skills alternated back and forth over their four years. Five students reported three different skills as most challenging over their

four years of studies (Andrei, Carol, Edward, Jessica, & Stacy). Lastly, three students (Armand, Derek, & Hyun) reported the same language skill, listening, as most challenging for all four years.

Table 5.1 Students' perceptions of most challenging language skills each year

No.	*Student*	*Gender*	*L1*	*Year 1*	*Year 2*	*Year 3*	*Year 4*
1	Adelle	F	Russian	Writing	Writing	Writing	Listening
2	Alex	M	Kazakh	Listening	Reading	Listening	Listening
3	Andrei	M	Russian	Listening	Writing	Writing	Reading
4	Angel	F	Putonghua	Reading	Writing	Writing	Writing
5	Armand	M	French	Listening	Listening	Listening	Listening
6	Carol	F	Cantonese	Listening	Speaking	Writing	Writing
7	Carrie	F	Cantonese	Speaking	Speaking	Speaking	Speaking
8	Derek	M	English	Listening	Listening	Listening	Listening
9	Edward	M	Cantonese	Reading	Speaking	Reading	Writing
10	Elizabeth	F	Putonghua	Speaking	Speaking	Speaking	Reading
11	Hyun	F	Korean	Listening	Listening	Listening	Listening
12	Jackie	M	Indonesian	Speaking	Writing	Speaking	Writing
13	Janine	F	Indonesian	Writing	Writing	Reading	Writing
14	Jessica	F	Putonghua	Reading	Writing	Listening	Writing
15	Joy	F	Putonghua	Listening	Listening	Writing	Writing
16	Kay	F	Cantonese	Speaking	Listening	Speaking	Listening
17	Kelvin	M	Cantonese	Reading	Speaking	Speaking	Speaking
18	Linda	F	Cantonese	Writing	Reading	Reading	Reading
19	Lucy	F	Putonghua	Writing	Speaking	Speaking	Speaking
20	Marcus	M	Cantonese	Writing	Writing	Writing	Reading
21	Olivia	F	Cantonese	Writing	Listening	Writing	Writing
22	Sherry	F	Cantonese	Reading	Writing	Writing	Writing
23	Stacy	F	Russian	Reading	Listening	Writing	Writing
24	Tatiana	F	Kazakh	Writing	Writing	Writing	Listening
25	Tiffany	F	Cantonese	Writing	Writing	Listening	Listening
26	Victoria	F	Kinyarwanda	Listening	Listening	Writing	Listening

In Y1, writing (n=8) and listening (n=8) were each considered most challenging by the same number of students. Another six students reported reading to be most challenging in Y1, and only four students reported speaking to be most challenging. Interestingly, none of the who considered

reading to be most challenging in Y1 felt the same in Y2, and each of them reported that another skill had become most challenging. Reading was reported to be most challenging by only two students in Y2. Speaking as the most challenging increased to six students in Y2, and listening was again selected by eight students, five of them being the same from Y1. In Y3, the number of students who reported writing as most challenging increased again to 11 students. Listening decreased to six students, with only three of those from Y2. The number of students who selected speaking as most challenging was unchanged at six, with four of them from remaining from Y2. Reading increased to three students, with only one the same from Y2. In the final Y4, a total of 10 students reported writing as most challenging, with half of them remaining from Y3. Seven students reported listening as most challenging, with four continuing from Y3. Four students chose reading as the most challenging in Y4, matching the number from Y1, with only one continuing from Y3. Only three students selected speaking as most challenging in Y4, all three remaining from Y3.

As mentioned previously, beginning in the Y2 interviews and continuing through the Y4 interviews, students were asked to rank the four language skills from most to least difficult. This provided insight into what specific skills the students found more challenging and less challenging each year. As shown in **Tables 5.2**, **5.3**, and **5.4**, the majority of students reported that the skills they considered more challenging at specific times during their 4-year studies would often change over time and throughout their studies. For some students, these changes were fairly substantial. For example, Edward, a local Cantonese-speaking student majoring in computer science reported that reading was most challenging in Y1 and Y3. Similarly, he reported reading to be second most challenging in Y2 and Y4. In Y2, speaking replaced reading as the most challenging skill. However, by Y3 he reported that speaking had become the 3rd most challenging skill after reading and writing. By Y4, speaking had become the easiest of the four skills for Edward (See Section 5.4). Another local Cantonese-speaking student, Carol, from the School of Business, reported that listening was most challenging in Y1. In Y2, she reported speaking as most difficult, followed by writing, listening (3rd), and reading. In Y3 and Y4, writing was most challenging followed by reading (2nd), and speaking. By Y3, Listening had become the least challenging skill, moving from most challenging in Y1 to least challenging in Y3 and Y4.

Other students seemed to report struggling with similar language skills each year. Jackie, a computer science student from Indonesia, reported speaking as most challenging in Y1; writing and speaking respectively in Y2; speaking and writing in Y3; and writing and speaking in Y4. In

Table 5.2 Year 2 students' rankings of language challenges from most to least difficult

Student	*Most difficult*	*2nd most difficult*	*3rd most difficult*	*Least difficult*
Adelle	Writing	Speaking	Reading	Listening
Alex	Reading	Writing	Listening	Speaking
Andrei	Writing	Listening	Reading	Speaking
Angel	Writing	Reading	Listening	Speaking
Armand	Listening	Reading	Speaking	Writing
Carol	Speaking	Writing	Listening	Reading
Carrie	Speaking	Writing	Reading	Listening
Derek	Listening	Speaking	Reading	Writing
Edward	Speaking	Reading	Writing	Listening
Elizabeth	Speaking	Writing	Reading	Listening
Hyun	Listening	Speaking	Writing	Reading
Jackie	Writing	Speaking	Listening	Reading
Janine	Writing	Speaking	Listening	Reading
Jessica	Writing	Listening	Reading	Speaking
Joy	Listening	Reading	Speaking	Writing
Kay	Listening	Speaking	Writing	Reading
Kelvin	Speaking	Reading	Listening	Writing
Linda	Reading	Listening	Writing	Speaking
Lucy	Speaking	Writing	Reading	Listening
Marcus	Writing	Reading	Speaking	Listening
Olivia	Listening	Writing	Reading	Speaking
Sherry	Writing	Listening	Reading	Speaking
Stacy	Listening	Reading	Writing	Speaking
Tatiana	Writing	Reading	Listening	Speaking
Tiffany	Writing	Reading	Speaking	Listening
Victoria	Listening	Writing	Speaking	Reading

his Y2, Y3, and Y4 interviews, listening and reading were constantly ranked 3rd and 4th. In short, Jackie consistently struggled with both speaking and writing each year, but generally reported few challenges with either listening or reading, highlighting that he was one of several students who reported that the productive skills were most challenging.

Table 5.3 Year 3 students' rankings of language challenges: most to least difficult

Student	*Most difficult*	*2nd most difficult*	*3rd most difficult*	*Least difficult*
Adelle	Writing	Listening	Speaking	Reading
Alex	Listening	Writing	Reading	Speaking
Andrei	Writing	Reading	Listening	Speaking
Angel	Writing	Listening	Reading	Speaking
Armand	Listening	Reading	Speaking	Writing
Carol	Writing	Reading	Speaking	Listening
Carrie	Speaking	Writing	Reading	Listening
Derek	Listening	Reading	Writing	Speaking
Edward	Reading	Writing	Speaking	Listening
Elizabeth	Speaking	Writing	Reading	Listening
Hyun	Listening	Writing	Speaking	Reading
Jackie	Speaking	Writing	Listening	Reading
Janine	Reading	Writing	Speaking	Listening
Jessica	Listening	Writing	Speaking	Reading
Joy	Writing	Speaking	Listening	Reading
Kay	Speaking	Listening	Writing	Reading
Kelvin	Speaking	Listening	Writing	Reading
Linda	Reading	Writing	Listening	Speaking
Lucy	Speaking	Writing	Reading	Listening
Marcus	Writing	Listening	Speaking	Reading
Olivia	Writing	Reading	Listening	Speaking
Sherry	Writing	Listening	Reading	Speaking
Stacy	Writing	Reading	Speaking	Listening
Tatiana	Writing	Reading	Listening	Speaking
Tiffany	Listening	Speaking	Writing	Reading
Victoria	Writing	Listening	Speaking	Reading

Table 5.4 Year 4 students' rankings of language challenges: most to least difficult

Student	*Most difficult*	*2nd most difficult*	*3rd most difficult*	*Least difficult*
Adelle	Listening	Writing	Reading	Speaking
Alex	Listening	Speaking	Writing	Reading
Andrei	Reading	Writing	Listening	Speaking
Angel	Writing	Speaking	Listening	Reading
Armand	Listening	Reading	Speaking	Writing
Carol	Writing	Reading	Speaking	Listening
Carrie	Speaking	Writing	Reading	Listening
Derek	Listening	Reading	Writing	Speaking
Edward	Writing	Reading	Listening	Speaking
Elizabeth	Reading	Speaking	Writing	Listening
Hyun	Listening	Writing	Speaking	Reading
Jackie	Writing	Speaking	Listening	Reading
Janine	Writing	Reading	Listening	Speaking
Jessica	Writing	Listening	Speaking	Reading
Joy	Writing	Speaking	Listening	Reading
Kay	Listening	Speaking	Writing	Reading
Kelvin	Speaking	Listening	Reading	Writing
Linda	Reading	Writing	Listening	Speaking
Lucy	Speaking	Writing	Reading	Listening
Marcus	Reading	Listening	Speaking	Writing
Olivia	Writing	Reading	Listening	Speaking
Sherry	Writing	Listening	Reading	Speaking
Stacy	Writing	Listening	Speaking	Reading
Tatiana	Listening	Writing	Speaking	Reading
Tiffany	Listening	Writing	Reading	Speaking
Victoria	Listening	Reading	Writing	Speaking

5.2.1 Synchronous vs asynchronous skills

One main theme that emerged related to synchronous versus asynchronous communication skills. As shown in **Table 5.5**, this was referenced 15 times over the four years, and several of the students felt that the difficulties related to speaking were related to the synchronous aspect and having to produce language in real time and in unplanned interactions (see Section 5.4). Several students

also indicated that most classroom-based planned speaking activities, such as in-class presentations, were less challenging than real-time unplanned speaking activities.

Table 5.5 Theme: Synchronous vs asynchronous skills

	Description	*Files*	*References*
Main Theme	Synchronous vs asynchronous skills	15	15

Carrie, a Cantonese-speaking student from the School of Hotel and Tourism Management (SHTM) explained in her Y3 interview that the synchronous nature of speaking in real-time situations made is very challenging for L2 speakers of English who lacked practice and may have limited vocabulary knowledge.

> **Carrie (Y3):** Because, like, in speaking we need to generate the grammar, or like the vocabularies, straight, like, immediately when you speak, and you can't think beforehand. So, it is the most difficult to me.

In her Y4 interview, Carrie described much of the same challenges with speaking in real-time situations.

> **Carrie (Y4):** Because, um, while speaking we cannot, [pauses] it requires a simultaneous, like, you know, the reaction. So, there isn't much time to think, and sometimes we may struggle a lot on like grammar or like, suddenly we cannot find a word to describe that situation very accurately. So, this would be the biggest challenge in university.

Several other students indicated that unplanned speaking activities and listening in real time, as opposed to planned speaking presentations or listening to videos or recordings, were what generally made these two skills more challenging.

5.2.2 Productive skills

As shown in **Table 5.6**, another theme that emerged from the student interviews in terms of language-related challenges was related to the differences between productive and receptive language skills. While only a few students (*n*=3) used the term 'productive', (or a variation of), it is notable that writing, one of the two productive skills, was ranked most challenging more than

any other skill at 39 times over the four years of interviews, and it was referenced 73 times over four years. The other productive skill, speaking, was considered most challenging 19 times and referenced 36 times. Additionally, many of the sub-themes related to writing and speaking tasks that emerged during the interviews are productive in nature (See Section 5.3). As such, this theme is identified here in the chapter prior to presenting the findings related to writing and speaking challenges.

Table 5.6 Theme: Productive vs receptive skills

	Description	*Files*	*References*
Main Theme	Productive vs receptive skills	3	3

In her Y3 interview, Joy, a student from mainland China studying building engineering and management, explained that she considered writing and speaking to most and second challenging because of the productive nature of both skills.

> **Interviewer (Y3):** Why is writing most difficult?
>
> **Joy (Y3):** You have to like, produce something on your own that is not that casual, and it will be revealed again and again. So, I found it like, kind of most difficult because you are going to need to be very formal, something like that.

Joy was asked what she found second most difficult after writing and she reported it was speaking, and for similar reasons. She noted again that productive skills required 'creating' information rather than receiving it 'passively'.

> **Joy (Y3):** Maybe speaking, because you are producing something and creating something, even though it's just some kinds of words and sentences, you are still like, making it all, rather than receiving information passively.

Two other Cantonese speaking students from Hong Kong, Kelvin and Carrie, reported challenges with speaking and writing due to the productive nature of the skills. Kelvin explained that speaking was 'active' rather than passive, and Carrie noted the challenges associated with writing and the 'need to generate' information.

5.3 Writing

5.3.1 Writing challenges

As reported in Section 5.2, the majority of the participants in the student interviews considered writing to be the most challenging language skill, and the number increased from eight students in Y1 reporting it as most challenging, to ten students in Y4. As shown in **Table 5.7**, writing is identified as the main theme with nine specific 'challenges' sub-themes and four sub-themes linked to causes and factors.

Table 5.7 Theme & subthemes: Writing

	Description	*Files*	*References*
Main Theme	Writing	73	73
Sub-themes (challenges)	Using appropriate academic style	42	42
	Organising ideas in coherent paragraphs	14	14
	Expressing ideas in correct English	13	13
	Expressing ideas clearly & logically	10	10
	Linking sentences smoothly	7	7
	Integrating sources in written work	3	3
	Summarising or paraphrasing ideas in sources	3	3
	Planning written assignments	2	2
	Linking ideas from different sources	1	1
Sub-themes (causes & factors)	Limited vocabulary	12	12
	Lack of formal writing	5	5
	Lack of practice writing	2	2
	Lack of clear instructions	1	1

While the students reported a variety of specific challenges that students face, the large majority centered around four sub-themes: Using appropriate academic style (42), Organising ideas in coherent paragraphs (14), Expressing ideas in correct English (13), and Expressing ideas clearly & logically (10). All nine of these writing sub-themes related to challenges were initial *A priori* type codes, originating from the 15 writing micro-skills in the EMI Challenges Scale (ECS). Six

micro-skills from the ECS were deleted as they did not emerge from the interviews, and no other new 'challenges' codes for writing emerged. However, four new sub-themes (*grounded* codes) related to 'causes and factors' did emerge from the interviews and are expounded below. These sub-themes included: Limited vocabulary, lack of formal writing, lack of practice writing, and lack of clear instructions.

5.3.2 Using appropriate academic style

Overall, more students indicated that they struggled with writing than any of the other three macro skills, and the most commonly cited theme in terms of writing challenges was using appropriate academic style. The student interviews showed that this was due primarily to the style and formality of the language they were required to use in their writing assignments. The students typically explained that they had difficulties using academic style, they were not used to writing in such a formal and objective manner, and that they had not been prepared to use academic style prior to entering university. Numerous students reported that their writing experience before entering university had been quite different from academic writing style, and that they were generally taught to write in a more casual, personal, communicative, or creative style. They noted that since entering university, they were required to write in a more objective, complex, and structured academic style, characteristics that the majority had not previously been exposed to.

In his Y1 interview, Marcus, a local Cantonese L1 speaker studying surveying, noted that writing was the most challenging of the four skills because it required him to write formally using 'difficult' grammar (Shepard & Morrison, 2021, p. 178.).

> **Marcus (Y1):** I think writing is always a problem to me because I don't really know how to write very formally or even like any kind of, like those kinds of really difficult grammar. I'm not really good at it.

Marcus elaborated further that he was not accustomed to writing academic essays in secondary school and that the transition to academic writing at university was quite difficult for him.

> **Marcus (Y1):** Suddenly you've got to do something like, 1000-word essays, which is pretty, it's not real familiar to me. And also, doing academic essays, which is a real challenge to me.

In his Y2 interview, Marcus again noted that after two years of university study, writing continued to be the most challenging, and he continued to cite academic style as the main difficulty. He also noted that he was 'trying to improve it'.

> **Marcus (Y2):** I think like, writing is always my weakness, like, especially writing those, academic English, like, it's always my weakness, and I'm trying to improve it all the time.

In his Y3 interview, Marcus still noted that writing continued to be the most challenging, and when asked why he felt it was so challenging, he replied that he still felt that he was 'not a really good academic writer', and that he lacked a sufficient level of (academic) vocabulary.

> **Marcus (Y3):** Um, because I am not a really good academic writer. And I think I'm always think that I do have a problem on the writing. So, I think that to compare these, reading, speaking, and listening, I will say writing is not my thing. And also writing, for those academic writings, it's more about the vocabulary, and I'm not really enriched in my vocabulary.

In his Y4 interview, however, Marcus gave a considerably different account. He was asked if he still found academic writing challenging, and he responded that it was not, and that he had improved because of being 'trained' to write using academic style over a number of years. He also noted that he was generally more confident writing and about using academic style than he had been previous years.

> **Marcus (Y4):** Well, to me, I think writing academic style is very fine to me, because I have been really trained from, well from my secondary school even 'til now. So, I feel I'm, at least I feel confident in it.

It is noteworthy that Marcus had consistently reported from Y1 through Y3 that writing was the most challenging for him, that he generally felt he was not a good writer, and that academic writing was quite difficult for him. Yet in his fourth and final year, he reported that he was 'fine' and 'confident' with academic writing, and that he felt his 'training' over his four (plus) years had helped him considerably. This appears to indicate that students' challenges can decrease or increase, either slightly or substantially, at almost any point through their learning. In Marcus's case, he struggled with writing for three years, then in Y4 it was easier for him, but reading because challenging.

Similar to Marcus, Tiffany, a Cantonese L1 speaker studying aviation engineering, struggled with academic writing during the first half of her studies, but became more confident in Y3 and Y4. In her Y1 interview, she noted that writing in academic style was considerably challenging as it required a 'high level' of writing that included more accuracy, smooth transitions, and difficult vocabulary.

> **Interviewer (Y1):** Which of the four language skills do you find most challenging??
>
> **Tiffany (Y1):** I would say writing. Because, you know, in PolyU we have the EWR, it's a subject that students have to write the 2500-word essay. And they require like students to have a high level of writing, like, the accuracy or the smoothness of the whole passage. So, for me, I don't have much idea about using different kind of hard vocabulary, so maybe I have challenges in writing those essays.
>
> **Interviewer (Y1):** Do you think you'd be much better if you're writing in your first language?
>
> **Tiffany (Y1):** I think it's a language thing. So, it's more difficult to write in the second language, like, we can write the essay in simple English, but if we require, like, a higher level of English, academic style, we might not have much idea of what is the best way to write that sentence. Like, we have to apply a certain type of vocabulary, and we have no idea about that. So, maybe some international students can do better than us.

In her Y2 interview, Tiffany again reported that writing was most challenging for her and noted the difficulty of producing an academic styled essay, which she noted was substantially different than the style of language she uses in everyday life.

> **Tiffany (Y2):** Because, like writing an essay, like an academic essay, it requires a lot of skills, or maybe some, like adjectives or some wordings that you won't usually use in the daily life. So, writing essays might require more techniques, like the use of English. So, for me writing is, I think it's the most difficult component in the four areas.

In her Y3 interview, Tiffany did not consider writing to be very difficult for her, and that both listening (least challenging in Y2) and speaking were more challenging. She also reported that her language-related challenges overall were decreasing as she was using English more. In her Y4 interview, Tiffany reported again that listening was more challenging than writing. Moreover, she did not mention any difficulties with academic writing style and noted only that writing was

sometimes challenging because in her major, Aviation Engineering, she occasionally had to use some technical or discipline-specific vocabulary in her assignments.

Adelle, a Russian L1 students from Kazakhstan studying Chemical Technology, explained in her Y1 interview that while she had been exposed to a fair amount of English before coming to university, she also had no experience with academic language in secondary school (Shepard & Morrison, 2021, p. 178.)

> **Adelle (Y1):** I would think that writing is more important and most challenging one, because here we have to use academic writing, which I didn't know how to use when I was in high school, so I needed to adopt this and try to learn as fast as I can.

Similarly, in her year-2 interview, Adelle reported that writing was again the most challenging language skill due to the difficulties of using academic style.

> **Adelle (Y2):** With academic writing style, you have to know how to express your point of view through the academic language.

In her Y3 interview, Adelle noted that writing was still the most challenging skill, but that she felt like she was improving. In her Y4 interview, Adelle noted that her writing continued to improve, and that (similar to other students) writing had fallen to the second most challenging behind listening.

Alternatively, Angel, a Taiwanese student in the School of Hotel and Tourism Management (SHTM) did not feel that writing was most challenging in Y1, but it became more challenging in subsequent years. In her Y1 interview, she reported writing to be 2nd most challenging (after reading), while in Y2, Y3, and Y4, she reported writing to be the most challenging skill. In her Y1 interview, she indicated that she felt writing in a casual style was not difficult, but that her previous exposure to English had not prepared her for more formal, academic writing required at university.

> **Angel (Y1):** The second most difficult might be writing, because writing in a casual way is fine, but it's kind of challenging when you have to write like in academic style, like for your paper, they have those certain uses of vocabularies and sentence patterns; that one is pretty hard, and it takes time to get used to and to learn.

In her Y2 interview, Angel reported writing to be the most challenging language (instead of reading), but she reported that even though she thought it was the most challenging, she felt like her writing skills and vocabulary had increased after two years, and she was more comfortable with academic writing.

> **Interviewer (Y2):** Do you find it easier this year than it was last year, or do you find it roughly the same?
>
> **Angel (Y2):** I think it's easier because I learned more, for example, academic writing skills. And I learned a lot more vocabularies, which we often use in our major and in academic writing. So overall, I think it's easier than my first year.

In her Y4 interview, Angel still reported writing to be the most challenging skill but described how her writing challenges had changed from year one to year four. She explained that her initial challenges in writing in Y1 had to do with using academic style, but that in Y4 her writing challenges were more about revising, editing, and synthesizing her writing.

> **Angel (Y4):** So, in year one because I'm not really used to academic writing; I'm only educated about the normal writing for the tests, or for the essays, but like, into the university in year one, I needed to study more about how do I write, like, academically accepted by the university level. And also in year four because they are more limited in word counts in assignments. So, I have to like, really trim down the words I'm using to try to maximize and simplify my use of words. So, I think they're the two times that I found writing challenging.

In her Y4 interview, Angel also reported that she felt her writing had improved significantly (See Section 5.9.5).

Similarly, Carol, a Cantonese-speaking accounting student who reported listening to be most challenging in Y1 and speaking as most challenging in Y2, reported that writing was the most challenging in Y3 and Y4. In her Y3 interview, similar to other students, Carol indicated that writing was most challenging primarily due to having to use a formal tone, academic style, and academic vocabulary.

> **Carol (Y3):** When you're writing different types of essays, for example, if it's an academic one, then you have to follow certain rules, you have to be formal, and it's related to the vocabularies that we use in the essays. So, it's kind of a, like, inter-related thing that when it's a formal one, we have to use a formal tone and formal vocabularies. And this is something that we, we are not native

> speakers, and we find it really difficult to define, like, what tone and what vocabularies are to be used in those essays.

In her Y4 interview, Carol explained that using academic writing had been difficult for her since Y1 (even though it was not *the* most difficult), and that in Y4 (like Y3) she still considered it to be the most challenging skill for her. Nevertheless, like the other students, Carol indicated that she while she still considered academic writing to be challenging, she was becoming more accustomed to it and that her academic writing skills were improving.

> **Carol (Y4):** Well, I think the writing task, the academic writing is completely different from what I learned before, because in secondary school, I don't have to like look at the academic style, but at the university, I have to use like the academic way, academic style, and then the APA style, and then follow, like some guidelines, and some new vocabularies and professional vocabularies. So, I think this is completely different from what I learned before. So, like from the very beginning I found it is very difficult for me to like to change from one style to another, but after four years' time, I think I've got used to that already.

Joy, a Putonghua speaker studying building engineering and management, also reported in her Y1 interview that writing was quite challenging (after listening) due primarily to not having any prior exposure to academic writing style in secondary school. She noted that her previous learning experience in terms of writing in English in school in mainland China was focused more on writing for general communication and 'everyday uses', not formal, professional, or academic writing.

> **Joy (Y1):** I find it difficult writing, because, like in back in China, I seldom write an English essay over 200 words, it's like a problem for me. So, I really face a bit of difficulty in writing, and especially in the formal English writing, like standard writing style, something so because we did not train to be professional, or formal writing style, back in China. We usually train our writing only in writing letters or writing emails or something like in the daily uses, but we did not train to be academic or formal. So, I find it hard to write English essays, but I'm trying to keep up with it.

In both her Y2 and Y3 interviews, Joy explained that writing was most difficult for her because she was required to produce formal, academic writing, which she still found somewhat challenging. However, in her Y4 interview, Joy explained that she did not necessarily find academic writing as challenging as she had previously, but that she still encountered difficulties, and was often not satisfied with her overall writing skills.

> **Joy (Y4):** To be honest, writing, like writing down things, or writing an essay is not that challenging. But, talking about challenges, it's like, I still cannot write as good and as natural as a native speaker. Yeah, so it sometimes caused some problems, especially when doing the academic, for example, writing a journal or something like that. I always need some adjustment after your draft's finished, to find a native speaker. There's always something; there's kind of a gap.

When asked to elaborate about what specifically she meant in terms of writing issues that she still faced, she explained that she often needed to search for the 'correct' phrases or words to edit and revise her writing. She felt that her writing was not as 'natural' in English as it should be.

> **Joy (Y4):** It's like finding the correct phrases, like, I always need to use websites to find out how to find the correct word, and like the other words to be used together with that word; something like that. Natural language, yeah.

Similar to Angel, Joy indicated that over time she became more comfortable with academic writing, but that they still experienced challenges despite the apparent writing improvement. This indicates that although students' writing skills may be improving, they still face writing-related challenges associated with higher levels of academic writing. In other words, as students' academic writing skills improve, their level of writing challenges may not necessarily decrease, but rather change to reflect higher levels in which they are writing.

Several other students also spoke about the challenges of using academic style for writing and noted the need for formality. They explained that while they had used English in secondary schools and had a considerable amount of exposure to it, most had generally used more informal English for basic communication and were unfamiliar with academic style, academic vocabulary, and formal writing structures. There was also wide consensus that their writing, and in particular, their academic writing did improve over time with more exposure and practice.

5.3.3 Organizing ideas in coherent paragraphs

While not being as commonly cited as 'using appropriate academic style', several students noted that organizing ideas in coherent paragraphs was challenging and this theme emerged 14 times over the four years of interviews. In her Y1 interview, Jessica, a student from mainland China

majoring in language studies, noted that writing was especially difficult due to the complexities of planning, grammar, and organizing sentences

> **Jessica (Y1):** I need to do a lot of critical thinking. I need to spend a lot of time to do pre- reading, proofreading, to check my grammar, sentences, and organizations. And I'm not really a good writer.

In her Y2 interview, Jessica reported writing as most challenging and noted that she had difficulty in deciding what to write and then expressing her ideas in a cohesive and coherent manner.

> **Jessica (Y2):** Writing is very difficult, in writing, because I'm having difficulties of writing papers. I know what I want to write, but when I was actually typing or thinking of how to write, I have a difficulty to type out, like to express my opinions.
>
> **Interviewer (Y2):** Can you elaborate a little bit on that? You said it's difficult to think of things to write.
>
> **Jessica (Y2):** Yeah. And also, like, sometime when I express something, I thought I was doing it like, correctly, like, I can read it. But when someone reads my paper, they cannot read it, they don't understand, 'Where it's like coherence, cohesion, the flow?' You know, it's all about those like, writing stuff, I don't really understand. I thought I did, but obviously, I don't (laughs).

In her Y3 interview, Jessica reported that writing was still challenging due to the need to consider structuring and organizing ideas and sentences.

> **Jessica (Y3):** It's more about creativity. Because each time you need to structure different kinds of sentences, since you write a lot of essays already, and you don't want it to like kind of repeat each other at the same time, you want to make some improvements and progress. So, you need to think of different structures of sentences.

Moreover, she noted that she was thinking about ways to improve her writing and 'progress', indicating that while some writing challenges were always present, she was getting more accustomed to writing formal, academic texts, and that her overall writing skills were improving. In her Y4 interview, Jessica still felt that writing was most challenging but noted that her difficulties centered around more complex aspects such as integrating appropriate citations, writing research proposals, and focusing on originality.

> **Jessica (Y4):** I would say the most difficult is still writing because it takes a lot of time to write a lot of things, especially when you need to write a lot of citations, you need to write a lot of research proposals. It kind of messes up your mind, because you need to think about originality, not to, like, plagiarize. But also thinking about your own stuff that's coming from you.

Jessica also noted that as she had more practice writing, her overall writing skills had improved, and that she was completing her writing assignments with more confidence and more efficiently.

> **Interviewer (Y4):** Do you feel like your English is improving?
>
> **Jessica (Y4):** Absolutely, because I feel like everything is getting better. Like, in year one, I would probably spend two weeks doing assignments, but now I only spend one day doing assignments [laughs]. I guess it's because of how we like, train to do a lot of work. And as we train more, like, practice makes it better. So, I get used to like, writing a lot of essays.

It is clear that Jessica, like many of the students interviewed, struggled with writing and, in particular, using academic style. Yet even those students who indicated that they experienced challenges, either during part of through all of their studies, indicated that their academic writing skills had improved from greater exposure to academic style and more practice over time.

5.3.4 Expressing ideas in correct English

Another common sub-theme of writing challenges that students reported was 'expressing ideas in correct English', and it emerged 13 times over the four years of interviews. In her Y1 interview, Tatiana, an environmental engineering student from Kazakhstan noted that writing in English was challenging as she needed to translate her Russian or Kazakh thoughts and produce them into English. She also noted that simply translating her thoughts to English directly was problematic and might affect the correctness and clarity of her writing (from Shepard & Morrison, 2021, p. 179).

> **Tatiana (Y1):** I think the problem is because I first think in Russian or in Kazakh, and then I try to translate it into English which doesn't sound well. And sometimes I might put some direct translations which might not sound the same in English, and it might cause some difficulties for a person reading it.

In her Y2 interview, Tatiana explained that her challenges with writing were related to being used to writing in a casual way rather than writing formally. She noted the difference between formal versus informal writing, formal vocabulary, and being more precise in academic writing.

> **Tatiana (Y2):** When we text each other, we use like the short words, but when you write and you have to use formal vocabulary, you have to be more precise. So, it gets, like harder for you to write in such a way.

In her Y3 and Y4 interviews, Tatiana indicated that she felt writing was not as challenging as it had been previously. She reported that "it was really challenging at first, but then I think it also got better" (Y3), and that "after taking some lessons and like, writing more, I think, yeah, I got used to it as well" (Y4).

Similarly, in her Y1 interview, Linda, a Cantonese L1 speaker from Hong Kong majoring in computer science, rated writing as the most difficult language skill. She stated that she was 'afraid of writing', and that it was especially challenging in terms of using correct grammar.

> **Linda (Y1):** I think I'm weak in writing because my grammar is not really good. And I have difficulties in writing that correctly. So, I'm afraid of writing.

However, by her Y2 interview, writing had dropped to third in terms of most challenging after reading and listening.

> **Linda (Y2):** For writing, I have to mind, like whether I have correctly used the sentence, the vocabularies, or like, is it formal enough, or like those kinds of stuff. So, it's quite confusing sometimes.

In both her Y3 and Y4 interviews, Linda reported that she considered writing to be the second most challenging after reading. In the Y3 interview, she did not refer to 'correct' writing, but rather how she needed to write in a parallel and organized structure using more formal and 'difficult' vocabulary, clearly indicating how her view of writing had changed and progressed since Y1.

> **Linda (Y3):** In university, you have to write it in a better, in a like, very parallel, very organized, or like using a lot of difficult words in your paragraphs to make it good. So, like, I feel like writing is the second most difficult for me.

By her Y4 interview, Linda still ranked writing as second most challenging, but indicated that she did not feel it was that difficult. Moreover, unlike in previous years, she longer referred to 'correct' or 'difficult' vocabulary, grammar, or structure. Instead, she indicated that what she found challenging about academic writing was not attributed to writing in L2 English, but rather what she perceived as a typical effort needed to write in appropriate academic style in any language.

> **Interviewer (Y4):** So, let's talk about writing tasks. Do you find writing challenging?
>
> **Linda (Y4):** Um, not really, not really. So, doing academic writing, like, it has its challenging parts, but then even if it's like, in Chinese, it's also challenging. So, I don't feel like it's because it's in English.

In the case of Linda, it is evident that her approach to, and view of writing changed considerably over the four-year period of her studies. She went from being worried about 'not really good' grammar and being 'afraid of writing' in Y1 to discussing parallel structure and organization in Y3, to indicating that she felt academic writing was no more difficult in English than it would be in her L1 Cantonese. It seems clear that Linda, like many of the other students who reported writing as the most challenging for either part or all of their four-years of studying, experienced substantial improvements in their writing levels even while they viewed it as a constant challenge. Perhaps it is more evident in Linda's case as she progressed from being 'afraid' of writing to not finding it very challenging.

5.3.5 Limited vocabulary

Aside from not being familiar with academic writing style, the most commonly cited cause reported for writing challenges was having limited English vocabulary. Several of the students referred to vocabulary challenges in terms of writing, as well as being related, or, in fact, causing their challenges in the other language skills (i.e., speaking, listening, & reading). Accordingly, it should be noted here that as students highlighted various vocabulary issues while discussing their various language-related challenges, and they did not always clarify whether such vocabulary issues were limited to specific skills or to specific vocabulary types (i.e., general, academic, technical / discipline specific). Consequently, vocabulary issues are presented in the findings as they were reported: in conjunction with specific language skills, as well as in the respondents'

discussions of vocabulary itself in Section 5.7. For example, in his Y3 interview, Edward, a Cantonese speaker studying computer science, noted that he struggled to express ideas clearly and correctly because of his limited vocabulary in English.

> **Edward (Y3):** Sometime in like writing, I always use the same vocabulary, but, indeed, in English, there are some similar meanings but different vocabulary, but I just know one or two of them. So, I found this problem for me.

Similarly, in her Y1 interview, Janine, an Indonesian student majoring in civil engineering, reported that writing was most difficult and attributed it to what she perceived as her limited vocabulary in English.

> **Interviewer (Y1):** Okay, let me ask you about challenges presented from learning in English. Considering the different skills, writing, listening, speaking and reading, do you feel like do you have challenges with any one of those more than others?
>
> **Janine (Y1):** In English it's probably going to be writing, because for speaking, I don't have any problem talking, having normal conversations with teachers, with students, but for writing, that is quite a challenge, because my vocabulary isn't that big.

Over time, however, Janine's vocabulary challenges in writing seemed to dissipate. In her Y2 interview, she explained that her writing challenges were decreasing somewhat although it was still the most challenging. By Y3, writing had dropped to second in terms of 'most challenging', and she indicated that she did not experience having the same level of vocabulary issues that she did in Y1.

> **Janine (Y3):** Sometimes we find words that we don't understand. So, we need to google it to understand the context, which makes it a bit of a chore, but it's not difficult.

Moreover, in her Y4 interview, Janine indicated that the difficulty with writing was related more to using formal language and academic style rather than issues of limited vocabulary.

> **Janine (Y4):** In fact, I think I do find writing quite difficult, especially since I just recently wrote my thesis, and the language was very hard to adopt because it was so formal.
>
> **Interviewer (Y4):** What specifically do you find challenging about it?
>
> **Janine (Y4):** It's more about structures like how you link different ideas from different contexts and make them flow really well.

In Janine's case, it is clear that her writing challenges in Y1 stemmed from a limited vocabulary, but that over time as she was exposed to more vocabulary and more writing practice, the initial vocabulary issues that she had experienced early on had decreased. She reported decreases in vocabulary challenges in Y2 and Y3, and by Y4 explained that her writing challenges were related to cohesion and structure. This would seem to indicate that many students' initial struggles with vocabulary in writing become less prevalent over time as they are exposed to more vocabulary during their studies.

5.4 Speaking

5.4.1 Speaking challenges

As mentioned previously, speaking was considered to be most challenging language skill for several students. Over the four-year period, it was considered to be most challenging 19 times and referenced a total of 36 times. It was considered most challenging by four students in Y1, six students in both Y2 and Y3, and by three students in Y4. While the students reported a variety of specific challenges that they encounter, the majority centered around two common sub-themes: communicating ideas fluently (14), and 'unplanned real-time speaking' (11). Five of the writing sub-themes related to challenges were initial *A priori* type codes, originating from the 10 speaking micro-skills in the EMI Challenges Scale (ECS). Five other codes from the initial micro-skills from the ECS were deleted as they did not emerge from the interviews, and two new 'challenges' codes emerged: 'unplanned real-time speaking' and 'conveying ideas in English to listeners with lower proficiency'. A third sub-theme that was referenced eight times by the more fluent students was 'conveying ideas in English to listeners with lower proficiency'. Additionally, four new sub-themes (*grounded* codes) related to 'causes and factors' did emerge from the interviews and included: 'lack of opportunities / practice' (speaking), 'anxiety / pressure', 'lack of fluency', and 'lack of confidence'. **Table 5.8** identifies speaking as the main theme in terms of students' macro-language challenges, and lists the (11) sub-themes categorized as either 'challenges' or 'causes & factors'.

Table 5.8 Theme & subthemes: Speaking

	Description	*Files*	*References*
Main Theme	Speaking	36	36
Sub-themes (challenges)	Communicating ideas fluently	14	14
	Unplanned real-time speaking	11	11
	Conveying ideas in English to listeners with lower proficiency	8	8
	Speaking accurately	4	4
	Presenting information or ideas	2	2
	Answering questions	1	1
	Communicating ideas confidently	1	1
Sub-themes (causes & factors)	Lack of opportunities / practice	7	7
	Anxiety / pressure	4	4
	Lack of fluency	4	4
	Lack of confidence	3	3

5.4.2 Communicating ideas fluently

The most common sub-theme was 'communicating ideas fluently' and originated from the ECS micro-skills. Several students expressed their difficulty with fluency and not being able to communicate their ideas in English when speaking. In her Y1 interview, Elizabeth, a Putonghua speaker from mainland China majoring in accounting, reported speaking to be the most challenging language skill and noted that she struggled with fluency because she needed to think of the English vocabulary immediately, whereas in other skills (e.g. reading and writing), she generally had time for translation.

> **Elizabeth (Y1):** The most challenging is, I think is speaking, because I need a lot of vocabulary, and I need to speak fluently. So, it's really hard for me. And others [skills] I can go to some, I can find it, like, translated; Don't need to speak the vocabulary immediately.

In her Y2 interview, Elizabeth again reported speaking as the most challenging and reiterated the difficulties of combining the correct grammar and vocabulary 'in a really short time'.

> **Interviewer (Y2):** Why is speaking the most difficult?
>
> **Elizabeth (Y2):** Because when I'm speaking English, I need to use the right grammar, right? The right vocabulary. And it needs to be like combined in a really short time. Like, I can think when I'm writing or reading or listening. I can practice my listening when I'm watching drama or watching movies, but it's hard to practice my speaking like, mostly speaking Chinese.

In her Y3 interview, Elizabeth explained that her struggles with fluency continued to stem from a lack of speaking practice due to her mostly speaking Putonghua as her daily language.

> **Elizabeth (Y3):** Because I learn English and I can read, I can write, and I can listen to teachers really good, but I seldom speak English in my daily life. I only speak English when I do presenting, or I communicate with foreign teachers. But in my daily life, I mostly speak Chinese. So, it's kind of separate, I think.

In her Y4 interview, Elizabeth reported that speaking had dropped to second most challenging (after reading) and elaborated on what aspects of speaking she still found challenging.

> **Elizabeth (Y4):** I think speaking in public, like during the presentation, is quite challenging. Because I really easy to get nervous when I'm in front of a lot of people. And English is not my mother tongue. So sometimes I will forget what I'm going to say, and it will be challenging. But if it comes to speaking with my colleagues, my teachers, my classmates, it's more comfortable for me, and I think there's no challenge, because what I say - even though I don't use the proper grammar, they still know what I'm saying. So, it's not challenging for me.

Another student also reported having difficulties with fluency in English due primarily to using their L1 as their daily language both in and out of university. Kay, a local Cantonese speaker majoring in surveying, identified speaking as the most difficult language skill in both Y1 and Y3. In her Y1 interview, Kay explained that she struggled with English fluency and that to communicate her ideas clearly, she generally preferred to speak in Cantonese:

> **Kay (Y1):** For me, I'm not good at English, and if I use English to express my ideas, people may not understand what I mean. But if I use the Cantonese, it's better for me to express my ideas.

In her second year, Kay explained that she felt that listening was most difficult, but that speaking was second most challenging. In her Y3 interview, Kay explained that she, like other local Hong

Kong students, struggled with fluency in English because it was not used often in class and even less outside of the university.

> **Kay (Y3):** I think speaking would be the most difficult one, because we can hardly speak English in our class, or in the daily life. So, we lack practice. So, when we speak in English we are like, not smooth enough, not fluent enough.

In her Y4 interview, Kay explained that unlike unplanned speaking, in-class planned speaking activities for presentations was not challenging.

> **Kay (Y4):** To speak in class, I think, is not very difficult, because we will prepare the speech before the presentation. So, I don't think it is very difficult.

In her Y1 interview, Lucy a Putonghua L1 speaker from Taiwan majoring in global supply chain management, identified writing as the most challenging skill, but in all subsequent years reported speaking to be most challenging. In her Y2 interview, she noted that speaking was most challenging, and that she struggled to communicate fluently because she often felt nervous when speaking to instructors and lecturers.

> **Lucy (Y2):** I think the most difficult part is maybe speaking. Because when speaking to, not speaking to friends, when speaking to teachers, or professors, I'll be nervous sometimes. So, I can't say what I want really accurately sometimes.

In her Y3 interview, Lucy did not mention being either anxious or nervous but reported that real-time speaking was challenging as she felt that she did not have enough time to process her thoughts into fluent ideas.

> **Lucy (Y3):** I think the most difficult for me is speaking. Because, like the reading or writing part I can think in my head. But speaking, I need to do the reaction instantly. So, I don't have a lot of time to think in my mind.

In her Y4 interview, Lucy explained that she did not think that she had many opportunities to speak in English outside of class. She also clarified that she perceived speaking to be much more challenging if it is unplanned and in real-time versus a typical classroom presentation, which is

planned. She explained that when using a script for speaking presentations, it was not very challenging, whereas presenting without a script would be considerably challenging.

> **Interviewer (Y4):** Do you find speaking challenging in general?
>
> **Lucy (Y4):** In general, if it is in the study process, I don't know, because actually, we don't have many opportunities to speak out loud, like, except for presentations.
>
> **Interviewer (Y4):** How about during presentations? Do you feel like that is challenging or not so much?
>
> **Lucy (Y4):** I think if we cannot read from any script, it would be really challenging for students, or for me to remember a long script. But if we can, like, sometimes read through a bit of the script, I think it should be fine.

Similarly, Carrie, a local Cantonese-speaker studying in the SHTM, who was the only student to list speaking as the most challenging language skill all four years of her study, also reported struggling with fluency. In the Y1 interview, when asked why she felt speaking was the most challenging, she described the situation as follows:

> **Carrie (Y1):** Because I need to think to myself, and I need to generate many vocabularies and grammars, which is different, totally different, or not, but a huge difference with, uh, Cantonese.
>
> **Interviewer (Y1):** So, when you're speaking, do you feel like in your head you're translating and then speaking, or are you just thinking in English and speaking?
>
> **Carrie (Y1):** I just thinking in English and say, but sometimes, if I cannot grab a vocabulary in the brain, I'll need to translate, but a daily conversation is only thinking in English.

In her Y2 interview, Carrie was able to more clearly articulate her speaking challenges and explained that her difficulties with fluency had to do with a lack of confidence, accuracy, grammar, and the synchronous nature of speaking (as opposed to writing).

> **Interviewer (Y2):** You said speaking is the most difficult. Why is that the most difficult?
>
> **Carrie (Y2):** Oh, I guess, I think I'm not confident enough, and I'm afraid that I will speak wrongly, and I'm concerned about grammar because I cannot correct it when I speaking, because it is already the results, right? And when I write, I can still correct it, but I can't do it when I speak.

In her Y3 interview, Carrie again noted that speaking was the most challenging but attributed her difficulties to the synchronous aspect of speaking. She explained that it was difficult because she did not have time to plan her speaking and needed to think spontaneously about what she was saying.

> **Carrie (Y3):** Because, like, when speaking, we need to generate the grammar, or like the vocabularies straight, like, immediately when you speak. And you can't think beforehand, so it is the most difficult to me.

In her Y4 interview, Carrie expanded on her answer from previous years and explained how speaking in real-time was challenging as it required a combination of fluency, accuracy, grammar, and vocabulary.

> **Interviewer (Y4):** What specifically makes speaking challenging?
>
> **Carrie (Y4):** Because while speaking we cannot [pauses] it requires a simultaneous, like, you know, reaction. So, there isn't much time to think, and sometimes we may struggle a lot on, like, grammar or like, suddenly we cannot find a word to describe that situation very accurately. So, this would be the biggest challenge in university.

Perhaps what is most interesting in terms of Carrie's interview responses in terms of speaking challenges is that while she was one of only four students to select a single macro-skill as the most challenging over all four years, as well as being the only student to rate speaking as most challenging each year (the other three all selected listening), the changes she describes over time, as well as the language she used each year in her interviews, seem to indicate clear improvements in her speaking. As noted previously, this indicates that language challenges in specific areas are not mutually exclusive from improvements in those same areas.

5.4.3 Unplanned real-time speaking

As Carrie explained in her Y2, Y3, and Y4 interviews, many of these speaking challenges tend to overlap one another. In her case, she described that her fluency issues were a result of difficulties with accuracy, confidence, grammar, vocabulary, and the synchronous nature of speaking in unplanned real-time situations. Similar to challenges that Carrie had described, Kelvin, a local Cantonese speaker majoring in computer science, reported that speaking in unplanned conversations was considerably challenging compared to planned speaking activities.

> **Kelvin (Y1):** I think daily chatting with somebody in English is very challenging.

> **Interviewer (Y1):** Okay. Which part is challenging, thinking of the words, or maybe the pronunciation?
>
> **Kelvin (Y1):** I think I'm nervous because I have to think before the next sentence of what to say. If I say it in my mother language, it's okay, because I can think faster.

Kelvin also noted that he felt more confident when he was speaking with someone with higher English proficiency because as they had greater vocabulary knowledge, they could usually understand the ideas he wanted to convey.

> **Kelvin (Y1):** When the listener is a better English speaker, I may speak better because I think that they can understand my words more. But when the listener is not very good at English, I may feel a little bit more nervous.

In his Y2 interview, Kelvin again reported that speaking was challenging primarily because it was an 'active approach' (unlike listening or reading) and happened in real time, with little or no time for planning.

> **Kelvin (Y2):** The most difficult part would be speaking, because I have to translate the sentences and the terms I use very quickly, and it is an active approach. Like, if I listen, I am the passive side, but when I'm speaking, it is the active side. So speaking is the most challenging part.

In Kelvin's Y3 interview, he reiterated that he considered speaking to be more challenging than the other skills and attributed it to his predominant use of Cantonese and to a lack of practice speaking English.

> **Kelvin (Y3):** I will say speaking is the most challenging one because we do not usually have chance to speak English.

Kelvin went on to explain that he generally uses Cantonese to speak with friends, family, classmates, and with local Hong Kong teachers after or outside of class. In his Y4 interview, Kelvin again noted that speaking was still the most challenging for him and explained succinctly that it was due to having to speak in real-time with little or no time to plan or think about how to respond in English.

Interviewer (Y4): Why is speaking most challenging?

Kelvin (Y4): Because we have to respond with less thinking time.

Similar to Kelvin, Jackie, an international computer-science student from Indonesia, explained in his Y1 interview that he tended to have difficulty processing his thoughts into English in real time, and that when he was required to explain more complex ideas, he felt like he was not communicating well and even causing other to be confused (Shepard & Morrison, 2021, p.180).

> **Jackie (Y1):** Of course, speaking is most difficult. Making exactly my thought to words, it's quite hard from me, actually, to voice out my thoughts and put it into words. And sometimes, the students will be super confused when I talk about something complicated.

In his Y2 interview, Jackie found that writing was more difficult than speaking and noted that after two years of practice speaking at university, it was "way, way easier in speaking English – of course". In his Y3 interview, Jackie indicated that speaking was again (like Y1) the most challenging. He explained the difficulty that he had when having unplanned speaking in real time.

> **Jackie (Y3):** There is a time between thinking and like, actually speaking, you know, that like, gap in between speaking and thinking that might just like, stand, like, in the conversation between the speaker and the listener.

In his final Y4 interview, Jackie was asked again about speaking challenges.

Interviewer (Y4): How about speaking tasks, do you find those challenging?

Jackie (Y4): I used to, but not anymore.

It should be noted that while any type of actual analysis of students' spoken language (discourse) from the interviews was never proposed or suggested to be included as part of the qualitative findings, it would be remiss of this author not to at least comment on what seems evident, or even obvious in terms of the apparent differences in many of the students' spoken responses between Y1 and Y4. At least in the cases of Elizabeth, Carrie and Jackie, it would seem that their spoken responses to interview questions are relevant examples of how their language appears to have gradually improved over time. In their later year interviews, they seemed to be better able to

articulate their thoughts about speaking challenges while discussing them. Hence, a more holistic view of the qualitative interview data, which at times could take into account such examples of the actual levels of language used in the interviews, would provide additional insight into students' challenges, and how they may change over time.

5.4.4 Conveying ideas in English to speakers with lower proficiency

One of the new *grounded* codes that emerged from the student interviews as a sub-theme was 'conveying ideas in English to speakers with lower proficiency', which was referenced eight times over 4 years by four of the high fluency students. In this case, students reported occasionally having trouble interacting in class and/or communicating ideas to speakers with much lower levels of English proficiency, and most of the examples given were interactions between these students and their lecturers. One example is the case of Hyun, a Korean high fluency student with native-like English proficiency. Hyun, who came from an EMI background in primary and secondary school in China and was basically fluent in English, reported that she often felt that some lecturers did not understand her when she was speaking. Specifically, she attributed their lack of comprehension to what she described as their very low proficiency levels. She explained that on more than one occasion, this had created an awkward situation in terms of the 'student – teacher' relationship. In her Y1 interview she described the situation:

> **Hyun (Y1):** I think my challenges are that sometimes, it's just my thought, obviously, but sometimes I think my English proficiency is sometimes better than some of the professors. And then if I use, like a really complicated word, sometimes they don't understand my question, and then I have to repeat it a lot of times, and that's kind of frustrating.

In her Y2 interview, Hyun noted that she sometimes felt like she spoke too quickly and used words that others did not appear to know, so she needed to explain what she meant. In her Y3 interview, Hyun mainly reported listening challenges, but in Y4 she again reported having to adapt her language to communicate with speakers with lower proficiency.

> **Hyun (Y4):** Yeah, sometimes I joked with my like, friends who are also more fluent in English, that I feel like my English is getting dumber because I stopped using like, bigger words, I guess, quote-unquote. I stopped using some words, I think, subconsciously, that other people don't use.

Derek also reported that he had to adjust his language for other speakers with notable lower proficiency in English:

> **Derek (Y2):** Sometimes you have to use simple language, before other people would understand what you're trying to say.

Another international student, Victoria from Rwanda, described how this type of situation could occasionally lead to further miscommunication, resulting in a breakdown in communication.

> **Victoria (Y1):** Because I know that there is high chance that the teacher may not get exactly what I'm saying, so like, I hesitate to ask, or when I ask, it's like he may respond to me, but not like exactly to what I ask.

While these students do acknowledge that these types of issues generally do not occur the majority of the time, it is important to identify such challenges as they reflect the reality of learning in EMI environments where there is considerable disparity in terms of the English proficiency levels among those delivering subject content. Such disparity can be problematic when it exists between students, but when there are substantial differences in language levels between the students and lecturers, it can have a detrimental effect on students' learning.

5.5 Listening

5.5.1 Listening challenges

As can be seen from **Table 5.9**, data from the student interviews showed that the most prominent listening challenge by far was 'understanding lecturers' accents'. Over the four-year period, listening challenges were referenced a total of 82 times. It was considered most challenging by eight students in Y1, eight students in both Y2, six students in Y3, and by nine students in Y4, which indicates that more students from the interview group found listening to be the most challenging in their final year that did in their first year. Four of the listening sub-themes related to challenges were initial *A priori* type codes, originating from the 10 listening micro-skills in the EMI Challenges Scale (ECS), and two were *grounded* codes that emerged from the interview data. These were 'understanding lecturers with lower English proficiency' and 'understanding lecturers' codeswitching'. Six other codes from the initial (listening) micro-skills from the ECS were deleted

as they did not emerge from the interviews, and two new 'causes & factors' codes emerged. One was 'rate of speaking / delivery', which relates to the speed or rate of speaking, and if someone (lecturer / instructor) is speaking to fast for the listener to comprehend what is said. The other was a 'lack of exposure to varieties of English', which relates to students' limited exposure to global varieties of English and the vast amount of different accents that the accompany the many varieties of L2 and L1 English. Table 5.9 identifies listening as the main theme in terms of students' macro-language challenges, and lists the sub-themes categorized as either 'challenges' (6) or 'causes & factors' (2).

Table 5.9 Theme & subthemes: Listening

	Description	*Files*	*References*
Main Theme	Listening	82	82
Sub-themes (challenges)	Understanding lecturers' accents	79	79
	Understanding classmates' accents	8	8
	Understanding key vocabulary	4	4
	Understanding lecturers with lower English proficiency	4	4
	Understanding lecturers' codeswitching	2	2
	Understanding main ideas of lectures	1	1
Sub-themes (causes & factors)	Rate of speaking / delivery	9	9
	Lack of exposure to varieties of English	6	6

5.5.2 Understanding lecturers' accents

As shown in **Table 5.9**, students referred to the challenges sub-theme 'understanding lecturers' accents a total of 79 times over four years. To put this into perspective, the most common challenge's sub-theme for writing was 'using appropriate academic style', which was referenced 42 times. The most common speaking and reading sub-themes were referenced 14 and 17 times respectively. This indicates that a predominant number of students, regardless of background, find understanding lecturers' accents to be quite challenging. Furthermore, the next most commonly cited listening challenge was 'understanding classmates' accents', with included only 8 references over four years. Accordingly, and because the main sub-theme was so widely referenced, this

section primarily reviews students' response related specifically to 'understanding lecturers' accents'.

One of the interesting initial observations revealed by the interview findings in terms of students' difficulties understanding lecturers' accents was the group's wide diversity. While some challenges could be reasonably attributed to factors such as proficiency, language practice, or language exposure, these findings indicated that some lecturers' accents presented challenges to the majority of students, regardless of background or fluency in English. The findings also revealed that while some students found lecturers' accents challenging for only one or two years, others experienced difficulties throughout their studies. Some students reported difficulties understanding lectures' accents and attributed it to not being exposed to varieties of global Englishes. Edward, a local Cantonese speaker majoring in computer science, indicated that he found various accents difficult to understand.

> **Interviewer (Y1):** Is it because you're not used to it?
>
> **Edward (Y1):** Yeah, because we are usually listening to British English, or American English, or maybe Hong Kong English, but right, yeah, not familiar with those accents.

Janine, an Indonesian student majoring in civil engineering, also reported struggling with lecturers' accents. She indicated that she did not experience challenges listening to 'native' speakers, but that she struggled to understand some Chinese speakers of English.

> **Janine (Y1):** First of all, I have problems with listening to people that have accents. For native speakers, I don't really have problems if they speak. Back in Indonesia, I always take courses that usually have native teachers, so I'm used to how they sound. But then for some lectures in PolyU, especially those who are Chinese, I really have difficulties in listening to them because of how they pronounce the words are really, really hard to distinguish.

Olivia, a local Cantonese speaker studying computer science, reported that although writing was her greatest language challenge in Y1, listening was also quite difficult due to lecturer accents.

> **Olivia (Y1):** Actually, in this last semester, we have this math lessons, and the tutor comes from another country. I don't know, Kazakhstan? Yeah, something like that. And their accent is very, very hard to listen to. So, we even don't know, we are hard to understand what he is talking about. And he speaks very fast, so we cannot handle it sometimes.

In her Y2 interview, Olivia reported that listening had become the most challenging (instead of writing).

> **Olivia (Y2):** I think listening is the most difficult, because as I mentioned, the accent is quite hard to hear.

In her Y1 interview, Tatiana, an environmental engineering student from Kazakhstan, explained that she was not used to English with an African accent, but, unlike several other students, had no problem understanding Indian accents.

> **Tatiana (Y1):** The African accent is a bit difficult for me. And I find Indian accent is very easy to understand, but I would say and some Mandarin speakers' accent is difficult.

In her second-year interview, Tatiana reported that accents were still challenging and reported that she found some L1 English (native) accents more difficult than others.

> **Interviewer (Y2):** Do you find some accents more difficult than others?
>
> **Tatiana (Y2):** Actually, yeah. I'm not sure which one is the most difficult one, but the British accent is a bit hard to like, understand. Because when everything that we listen to, everything, like all the movies, everything is in American accent. And after that British accent seems and like sounds a bit unusual. And like even some words are different from American English. That's why it gets harder, I guess.

Jessica, who came to university from an EMI secondary school in China, noted that although she was used to listening to American and British L1 speakers of English, other native-English accents were more difficult to understand, such as Australian accents.

> **Jessica (Y2):** I find sometime Australian accent a bit hard to understand. Because like the way they speak is really different from British, or like American English, the standard English I've learned. So, it's kind of, I have to like, say, 'Excuse me, can you say again?' to like to catch up what they're saying.

In her Y3 interview, Jessica noted that listening was more challenging than it had been previously, and that she had trouble understanding lectures.

> **Jessica (Y3):** So, this year, I feel like listening is harder than reading, writing and speaking because people have different accents. And if you didn't know the vocabulary before, you wouldn't understand what the person is trying to say.

In her Y2 interview, Elizabeth, an accounting major from mainland China, reported that she particularly found Indian accents particularly difficult to understand, so she decided to get more exposure to the accent and practice listening to it through YouTube videos.

> **Elizabeth (Y2):** Like, last year, I have a lecturer from India, I think maybe from India. And her accent was really difficult to follow. And I have to, like, I even found some videos on YouTube to practice to make me used to that accent. So, it was the most difficult part.
>
> **Interviewer (Y2):** That's a that's a great idea. Did you find that after you had more exposure to it, it was easier to understand?
>
> **Elizabeth (Y2):** Yes.

Victoria, A biomedical engineering student from Rwanda who reported listening to be the most challenging language skill in her Y1 interview, reported that it was again the most challenging language aspect in her second year of study.

> **Victoria (Y2):** I think because we have different accents. And I realized that depending on your first language, it determines how you pronounce different words in English. So yeah, sometimes I find it hard to like, attentively track what the person is saying. Yeah. But it's still because listening by itself is hard, but then it's more because of who is delivering the message in English.

While some students reported struggling with lecturers' accents only intermittently, others seemed to experience difficulties throughout their four years of studies. Moreover, several of the students who reported such listening challenges year after year had very high levels of English proficiency with native-like fluency.

In her Y1 interview, Tiffany, a local Cantonese L1 speaker with high fluency in English, reported that writing was most difficult, but that listening was also challenging due to lecturers' accents. She described her challenges trying to understand one of her lectures (Shepard & Morrison, 2021, p.181).

> **Tiffany (Y1)**: Like for the first semester, I have physics. I have the physics lecture, and the lecturer is from France; A French speaker. So, his accent is kind of… kind of weird, and it's a bit difficult for me to understand. But, like he's teaching according to the PowerPoint, so actually, I just read it instead of listening to what he says.

In her Y2 interview, while she reported that writing was still the most challenging, Tiffany again reported difficulties with listening and understanding lecturer's accents. Interestingly, in Y2 she mentioned that two lecturers that she had already had in her first year were still very difficult to understand.

> **Tiffany (Y2):** Last year when I was doing year one, I met a professor, I think he was from India. I'm not sure about it, he might be from there. So, his accent is a bit like, he has a very strong accent. So, sometimes it's quite difficult to understand. And also there's a professor, I'm not sure about it, but I think he's from France. So, his accent is a bit difficult to understand, too.

Tiffany was then asked if more exposure to those accents had made it easier for her to understand the lectures.

> **Interviewer (Y2):** Do you think after a certain amount of time when you had more exposure to those accents, did it become easier?
>
> **Tiffany (Y2):** Not at all, 'cause I'm used to, like, I used to listen to professors from, like, with a British accent or American accent. So, I don't think it helps.

By her Y3 interview, understanding lecturers' accents had apparently not become any less difficult, and Tiffany now reported listening to be the most challenging of the four skills.

> **Tiffany (Y3):** So, I think listening is the most challenging part because some teachers have different accents. So, you might find it hard to follow what the teacher tried to say.

In her final Y4 interview, Tiffany again reported listening to be the most challenging due to lecturers' accents. In her final interview, she noted that the accents she found difficult to understand were from speakers from mainland China and South Africa.

> **Tiffany (Y4):** I think listening is the most difficult because different professors have their own accents in terms of speaking English. So, sometimes, if you have a professor that from, like, South Africa, or maybe some professors from mainland China, their accents are actually quite hard to listen to.

In the case of Tiffany, over the years she reported a variety of accents that she found quite challenging to understand. She noted lecturers from France, India, mainland China, and South Africa. Interestingly, she indicated that increased exposure to those accents had not made it easier for her to understand them.

In his Y1 interview, Alex, a student from Kazakhstan who was highly proficient in English, reported that he struggled to understand many of the lecturers' and students' accents and pronunciation, but that he felt like the issue stemmed from his own shortcomings in terms of understanding other accents or varieties of English (Shepard & Rose, 2025, p. 9).

> **Alex (Y1):** I faced this challenge and these problems since I've come to Hong Kong, and I know that since it is international university, there are like people from different corners of the world, they have different accents, they have different English proficiency.

In his Y2 interview, Alex again reported the same difficulties and noted that his Cantonese-speaking classmates seemed to have less difficulties with the local accents because "for them it's like they got used to hearing this accent listening to this English every day [in Hong Kong]" (Alex, Y2 Interview). In his Y3 interview, Alex reported similar issues with no mention of becoming used to the variety of accents used by lecturers (Shepard & Rose, 2025, p. 9).

> **Alex (Y3):** So, we have different accents, different pronunciations all around the world, so, sometimes for me, it was hard to understand other people's accents. So, for me, the most difficult part is listening.

In his Y4 interview, Alex reported that he continued to experience the same listening-related challenges throughout his four years at university, but that he was able to adapt and work around them.

> **Interviewer (Y4):** Do you find listening tasks challenging, particularly challenging? Like listening to other students or instructors?
>
> **Alex (Y4):** Well, to be honest, yeah, I did. I mean, I did face some issues while, like communicating with others. And then when I was listening to both students and teachers, I mean, instructors. But yeah, but throughout my four-year journey, I could somehow adapt to it.

In her Y1 interview, Angel, a Taiwanese student in the SHTM, reported difficulties understanding lecturers' accents (Shepard & Morrison, 2021, p.182).

> **Angel (Y1):** When the professor has like, very heavy accent, it's hard to understand. It's sometimes hard to know what they're trying to express. And their grammar, it's sometimes not that familiar for me, because I'm educated in the American English style (Shepard & Morrison, 2021, p.182).

In her Y2 interview, Angel again reported listening challenges due to lecturers' accents and made an interesting comparison between (non-native) lecturers who were 'like us' and those who are native speakers. She seemed to indicate that she felt the range of non-native English speakers' accents varied considerably, and that some L2 English-speaking lecturers were difficult to understand, noting at one point that she did not understand 'how [was she] supposed to learn'.

> **Angel (Y2):** I think when the lecturer, when the professor's not, like, when they're like us and they're not English native speakers, sometimes it's very hard and it requires a lot of effort to actually understand what they're trying to say, because their English is not as good as native speakers. And sometimes it's not good, so when the professors are not good in English, it's hard for students to understand the content and to even listening to what they're saying, because I couldn't even understand how am I supposed to learn.
>
> **Interviewer (Y2):** What kind of strategies do you employ to, to kind of, you know, try to overcome that difficult situation?
>
> **Angel (Y2):** Um, do I have to be honest on this? [laughs]. Well, I tend to just ignore their classes and study on my own. Because teachers who's not good in English, they're not speaking well, so I just ignore what they're speaking and study their PowerPoints. And if there's something that I don't understand in the PowerPoint, or the other resources they provide, I ask them again. But most of the time, I just skip what they're trying to say and focus on what they provide as resources to us.

In her Y2 interview, Angel also noted that when she experienced these types of challenges with lecturers' accents, she would simply rely on the PowerPoint slides in order to follow the lecture. In her Y3 interview, Angel reported that she still experienced problems understanding lecturers' accents. When asked if she found some accents more difficult than others, she explained that she found Indian accents in particular to be quite challenging.

> **Angel (Y3):** Well, to be honest, I have found the Indian speakers quite challenging to understand because we don't have, [pauses] so, in Mandarin, we have every word like really clarified. So, this word speaks like this. But in Indian, they have pretty much a lot of words kind of connected together. So, when they're speaking, it's a little bit hard to identify when are they're starting this word, and

> when it's the end. So, sometimes I get quite mixed-up understanding, like, what kind of word they're using, or what they're trying to convey to me.

In her Y4 interview, Angel indicated that she still found some lecturers' accents challenging but also made an interesting comment indicating that she partially attributed her difficulties to her own language skills and the fact that she is not a native speaker.

> **Angel (Y4):** I usually don't find it challenging because like, when people are speaking English, I am okay with that. But when there are teachers with heavier accents, it will take some more time for me to understand because English is not my native language. So, if they're not pronounced in the way that I'm familiar to, I need to spend extra effort interpreting them.
>
> **Interviewer (Y4):** Do you have any accents in particular that are more difficult than others for you to understand?
>
> **Angel (Y4):** Um, I think throughout my whole year-four education, the accents from the African countries tend to be more hard to understand, and it takes a lot more time for me to try to understand what they're talking about, especially when they are speaking through the online devices.

In Angel's case, it is noteworthy that in both her Y2 and Y4 interviews, she made reference to her status as a non-native speaker rather than acknowledging her high proficiency in English. This seems to indicate that some students, such as Alex and Angel, view their challenges understanding lecturers' accents as their own shortcomings, or attributable to their status as non-native speakers. However, other students who demonstrated near-native or native-like levels of English proficiency did not attribute their difficulties in understanding some lecturers' accents to their own levels of English.

Derek, who identified English and Tagalog as his first languages, explained in his Y1 interview that he often struggled to understand lecturers' accents. He described how he found some native-speaker accents, especially Australian accents, to be more challenging than others and even more difficult for him than most L2 English accents (Shepard & Rose, 2025, p. 9).

> **Derek (Y1):** Listening. I think that's an issue for everyone, because sometimes, not to discriminate other countries, of course, but sometimes I feel like Australians and US [speakers], and maybe Indians, kind of slur their words as well. So, and they do have an accent, which kind of makes us think of another word.

> **Interviewer:** Do you find native speakers more difficult to understand than speakers of English as a second language because of the rate of speed of their speaking, or are there some accents from some second language speakers of English that are more difficult?
>
> **Derek (Y1):** I actually find it easier to talk to second language English speakers because I've been surrounded with a lot of second language English speakers. So, I think I kind of understand and pick it up faster than compared to going back to those first language English speakers, because they are so native and they can speak really fast. Sometimes, because they speak so fast, their accents and their slur of the sentences does make a really big difference. So, sometimes I can't understand what they say.

In his Year 2 interview, Derek once again indicated that listening was still the most challenging for him. When asked if his listening challenges were decreasing with more exposure to different varieties of English, he reported that they were not.

> **Interviewer (Y2):** I think last year you mentioned how some different accents are difficult to understand different, some students are difficult to understand. Has that been easier the second year with more exposure to them?
>
> **Derek (Y2):** No. (laughs) It hasn't.
>
> **Interviewer (Y2):** It doesn't matter that there's been more exposure to certain accents? It's still difficult?
>
> **Derek (Y2):** It's still difficult. Yes.

Derek was then asked to elaborate and discuss some of the difficulties related to lecturers' accents.

> **Derek (Y2):** Sometimes you may hear something else because of their accents, so it's relatively harder for me to listen or understand what other people are saying, especially because I find some of the tutors' and lecturers' accents quite hard to understand.
>
> **Interviewer (Y2):** Which accents do you find more difficult?
>
> **Derek (Y2):** I definitely find mainland Chinese and European countries [accents] harder to understand. That's because sometimes their mother tongue would have to slur certain words and alphabets.

By Derek's Y4 and final interview, he again noted that he found listening to be more challenging than the other language-related skills. When asked if he felt that his listening challenges had decreased with more exposure to the variety of accents after four years of study, he replied: "Uh, no. I still have to inquire with follow up questions, and I still can't understand them".

A bilingual Korean English student with native-like English proficiency, Hyun, reported that understanding lecturers' accents was, by far, her most challenging language skill, and that it was difficult to comprehend several of her lecturers due to their strong accents (Shepard & Rose, 2025, p. 10).

> **Interviewer (Y2):** Is that because of your own proficiency or other people's accents?
>
> **Hyun (Y2):** Yeah, other people's accents.

She also noted that she needed to rely on PowerPoint slides to understand class content due to the unintelligibility of the lecturer accents for her. She also explained that she found that some lecturers' pronunciation of specific or key words was unintelligible, and that missing key words would often prevent her from following the overall lecture:

> **Hyun (Y2):** I find that sometimes people read words differently. I didn't notice in my first year, but like, you know how we say like résumé /ˈrɛz.ə.meɪ/? Like one of my professors said like re-soo-me /rɪˈˈ zjuː.mi/, and I had no idea what she meant.

In her third year, Hyun again reported listening as the most challenging skill, specifically attributing it once again to the relatively strong accents of some lecturers (Shepard & Rose, 2025, p. 10).

> **Hyun (Y3):** There was this one class this semester where one of the teachers had a very strong Chinese accent, like a Mandarin accent, and pretty much no one in the class understood like half of the things she was saying because her accent was very strong, and even like local students were confused.

When asked by the interviewer if she had considered the possibility that her listening challenges could be a result of not have sufficient exposure to different varieties of English, she indicated that she felt it had much more to do with some speakers' lower proficiency and pronunciation.

> **Hyun (Y3):** I think it's individualized because, I think, aside from the accent, sometimes people just pronounce things really differently. Like they just put emphasis, like on the wrong syllables or something, and then it gets confusing, because I don't know what they're reading.

In her Y4 interview, Hyun reported that despite more exposure to different accents, her listening challenges had not decreased over time. Additionally, she reported that she had numerous difficulties understanding the accents of some of the postgraduate tutors in her department.

> **Hyun (Y4):** There are some, especially I think, like, tutors, like not the main professor, but the tutors, who have a very strong accent or are just not very fluent in English. So, their like, grammar is not that. So, that makes it kind of confusing. Yeah, it makes it very confusing.
>
> **Interviewer (Y4):** So, is that what is most difficult for you? Do you think it's listening?
>
> **Hyun (Y4):** Yeah, I think so. But then also, because listening is the bulk of what we do, right? Because we listen to the lectures. So yeah.

Similar to Hyun, another student with very high English fluency also reported listening to be the most challenging aspect of learning through English in Hong Kong due to some lecturers' accents. Armand, a computer-science major who attended a French-medium international secondary school in Morocco, elaborated on the topic of understanding lecturers and stated that he believed some lecturers' level of English proficiency was limiting the quality of their teaching and levels of classroom interaction.

> **Armand (Y1):** I think I'll speak about professors in general. I feel like the professors maybe are not ready enough to teach in English. We always tend to judge professors by the quality of their teaching, but unfortunately, most of the time… I feel like the professors are great. They know what they're teaching, but English is like such a major obstacle for them, especially in like, an engineering field such as computer science, where, like, all of my professors are, like, from China or Hong Kong. So, I really think it's like restricting them to like, fully interact with the students. And this is probably the major challenge to face when teaching in English.

In his Y2 interview, Armand continued to report that he not only found lecturers' accents to be quite challenging, but that he felt it was also due to their low levels of English in general.

> **Armand (Y2):** The main aspect is the teachers' level of English. Especially in engineering, you know, we're not known for our orator capabilities - especially for professors. So, yeah, it tends to get difficult. And I'll even go as far as to say, mainland professors are even more difficult to understand than local professors.
>
> **Interviewer (Y2):** Is it because you're not used to the accents from the mainland, and you're more used to the local professors? Or do you think it's a proficiency issue, or both?
>
> **Armand (Y2):** Ah, great question. I think it has to do with proficiency and accent, but I still think proficiency is probably the main aspect of it. Because accents are understandable, but sometimes it's just that they don't elaborate their ideas as clearly as local professors. So that's why it's difficult to understand them.

Interviewer: So even though you've been exposed for at least two to three semesters to the various accents from the mainland, from Hong Kong, from other places, that's not necessarily getting easier? It's still just as difficult?

Armand (Y2): Yes, I'd say so even though most of them could be, and I don't want to get into the details of whose professor has the hardest accent to understand, but generally speaking, I still think it's relatively difficult. Yeah.

In his Y3 interview, Armand was asked again which language skill he found most challenging, and he again noted that listening was difficult due to the various accents of lecturers and tutors. Additionally, in his Y3 interview, Armand clarified that he did not view this difficulty as stemming from his language skills or lack of exposure to a variety of accents. He indicated that in some cases the lecturers' accents and proficiency levels were preventing comprehension of their lectures.

Armand (Y3): I would probably say listening. Just because of, you know, the fact that I studied in an Asian University, so most of my lectures are Asian. And, you know, the sort of accent barrier can be more prominent than not in some cases. So, yeah, probably listening.

Interviewer (Y3): So, listening is the probably the most difficult, but you feel it's not a proficiency issue for you? It's the accents that you're hearing from other people?

Armand (Y3): Exactly.

In his final Y4 interview, Armand reiterated that his listening challenges based on some lecturers' accents had continued even after a substantial amount of exposure to them. He also indicated that while such listening difficulties were not representative of the lecturers in general, and that generally he could understand his lecturers, there were some, however, whose accents he felt were extremely difficult to understand.

Armand (Y4): It depends on the speaker of course. So, generally speaking, I feel fine listening, but yeah, of course, depending on the speaker, like Chinese speakers whose native language is perhaps not English, maybe a bit tougher to understand.

Interviewer (Y4): Can you kind of elaborate on which accents you might find more difficult than others?

Armand (Y4): I think there's pretty much only like the Chinese accents, because they're the most common ones, Cantonese, as well as Mandarin native speakers. So, I don't know, honestly, between the two of them. I don't think there is necessarily one that's easier or harder than the other. Also, it depends on the person as well. Their accent, obviously, and how strong it is. But yeah, I guess we can categorize like Chinese native speakers' English accents in a category and then the rest.

Interviewer (Y4): So, listening is still the most challenging skills for you?

Armand (Y4): Without question, by far, listening is the hardest part. Um, not only obviously the accents, but yeah, I mean, it's the whole package understanding the meaning they try to convey. Like, I don't know, culturally speaking, there are certain things that that maybe they try to convey English, which do not necessarily mean what they what it means in their native language, speaking Chinese. So, yeah, 100% listening is that the toughest part.

The students' responses in the interview findings reveal several relevant points. Perhaps most noteworthy is that while listening may generally be considered by students to be the least challenging of the four macro-skills, there appears to be wide-spread consensus among the student interview participants that understanding lecturers' accents is not only the most challenging listening skill, but also the most commonly cited challenges (sub)theme over all four skills. Moreover, based on the above findings, it is clear that these challenges are affecting students of a wide range of backgrounds and various levels of English proficiency. In addition, these findings suggest that despite some students' best efforts, exposure to varieties of English, or even mastery of the English language, they might inevitably experience long-term comprehension issues due to lecturers' accents, proficiency, and pronunciation.

5.6 Reading

5.6.1 Reading challenges

Overall, the fewest number of participants in the student interviews indicated that they considered reading to be the most difficult of the language skills. Of the 26 students, reading was selected as the most challenging by six students in Y1, two students in Y2, three in Y3, and four students in Y4. One student, Edward, reported reading to be most challenging in two of the four years, while Linda found it most challenging in Y2, Y3, and Y4. Interestingly, the other 10 students who reported reading as most challenging only found it most challenging for one of their four years. This seems to indicate that most of these students only found reading to be most challenging for a limited period, rather than an ongoing language-related challenge. Furthermore, students' responses generally indicated that with reading, unlike either speaking or writing, they did not have challenges related to producing language. Similarly, they did not feel the same pressures associated with synchronous activities (listening and speaking), and that, generally, they could

look up unfamiliar terms or vocabulary and work out meanings of difficult texts given enough time. Additionally, the students reported that it was common to use online resources such as translation tools and online dictionaries when they needed help in comprehending more difficult academic texts.

Table 5.10 shows the five sub-themes related to reading challenges and two sub-themes in terms of causes and factors, and most commonly cited three are as follows: There were 17 references to 'understanding academic texts' and another 17 references for 'understanding specific vocabulary. There were another seven references to 'understanding translated texts'. The five sub-themes were part of the initial 10 *A priori* type codes linked to reading. None of the students identified or discussed any of the other five *A priori* type codes, so they were not included below or in the final codebook. In terms of 'causes and factors' linked with reading challenges, two new sub-themes emerged from the interviews. These included a 'lack of practice reading', a 'lack of patience to read'.

Table 5.10 Theme & subthemes: Reading

	Description	*Files*	*References*
Main Theme	Reading	41	41
Sub-themes (challenges)	Understanding academic texts	17	17
	Understanding specific vocabulary	17	17
	Understanding translated texts	7	7
	Identifying key ideas of a text	5	5
	Reading carefully to understand a text	3	3
Sub-themes (causes & factors)	Lack of practice reading	2	2
	Lack of patience to read	1	1

5.6.2 Understanding academic texts

As mentioned above, there were 17 references to 'understanding academic texts' from students of various backgrounds, ADs, and L1s. Most students attributed their difficulties with reading academic texts to the formal academic style and the unfamiliar academic vocabulary. Jessica, a

language studies major from mainland China, noted in her Y1 interview that although she had previously studies in English, academic reading was particularly challenging for her, and that growing up she had 'really hated' reading.

> **Jessica (Y1):** The most difficult one is reading. Yeah, even though I was studying in English instruction in school, because the academic reading, like we have to read a lot, so that brings up a lot of homework and subjects and tests, I have to spend my time reading. And I really hated, like, when I was young, I really hated reading. So, I think reading is my biggest challenge.

Another student, Linda, noted in her Y3 interview that reading was most difficult because of the academic style and the abundance of unfamiliar academic words.

> **Linda (Y3):** I think the most difficult one will be reading. Because like, yeah, because there's a lot of academic words that we seldom use in our daily lives. So, like, while reading it, I have to keep track on the dictionary. So, it's the most difficult part for me.

5.6.3 Understanding specific vocabulary

In her Y1 interview, Angel reported that reading was most challenging due primarily to not knowing the meaning of unfamiliar vocabulary. She also noted that she did not feel that this was an issue when she was studying, but under assessment conditions where she did not have access to dictionaries, it was quite challenging (Shepard & Morrison, 2021, p. 179).

> **Angel (Y1):** I think reading is the most challenging one, because when I'm studying, it's fine, if I have an online dictionary or something like that, I can just check the word that I don't know, but in the examinations, it's really often for me to find words or vocabularies that I don't know, but it's in the exam, so it's not like I can check anytime I want, so I think that definitely reading is the most challenging part for me.

Another student, Sherry, reported in her Y1 interview that she had difficulties staying focused on texts in English due to the amount of unfamiliar vocabulary. She indicated that she needs to put a substantial amount of effort into paying attention to what she is reading, but because of the unfamiliar vocabulary, often she cannot understand what she is reading.

> **Sherry (Y1):** I just cannot focus on the passage that is really in English most of the time, because just after I have read that sentence, I would just be, 'Oh, what have I read?' I just don't get it. I have to pay much more attention on the passage so that I can know. But most of the time, there will be vocabulary that I don't know, so I just don't understand what in the passage is going on.

In her Y2 interview, Linda noted that reading subject-specific texts in her major, computer science, required constant searching for the meanings of 'complicated nouns' and discipline-specific terms.

> **Linda (Y2):** Reading I guess, because I'm like learning computing related subjects. So, like, getting many, like complicated nouns, which I have to go google and search it every time. So, it's quite challenging for me.

Similarly, in his Y4 interview, Andrei, a SHTM student from Kazakhstan, noted that his final year saw an increase of reading texts that were rife with unfamiliar vocabulary and subject-specific jargon. He noted that while he could generally use more common vocabulary in the other three macro-skills, his Y4 reading assignments required him to learn and use low-frequency vocabulary and jargon to complete his research paper.

> **Andrei (Y4):** As we are getting, like this year, I mean, to write a research paper and we had to go into very jargon, heavy language. So, it required a lot of vocabulary improvement, compared to listening, writing, and speaking where we can use common vocabulary, in reading texts, most of the vocabulary is very jargon heavy.

5.6.4 Understanding translated texts

In his Y3 interview, Armand (who reported listening as most challenging due to difficulty understanding L2 accents) also noted that he considered reading to be the second most challenging due to what he described as common mistakes and differences in grammar structures in texts and emails he received from his Chinese lecturers and classmates.

> **Armand (Y3):** Well, I guess, in the same sort of, like, train of thought [as listening], reading [is difficult], perhaps because some sort of, I guess, grammatical structures, like, in emails, for instance. There's like some very, I'd call them like 'Asian specifics' for email structures. They're not so difficult. Like, once you get used to them, obviously, but they can be, you know, different. So, I guess probably be the second [most challenging] one.
>
> **Interviewer (Y3):** Can you give me an example of that? Do you think maybe they're just translated from Chinese?
>
> **Armand (Y3):** Yeah. Right. Like, also, I don't know, like, they would forget pronouns or like, mis-conjugate a verb, or for instance, use a singular for like, plural or something. I mean, English is robust, so you can still understand but it's quite prominent, just like everyone, teachers, students included. So, yeah, it's a general trend, I would say.

Interviewer (Y3): So, you feel like the challenges that you face are more about the proficiency levels and the language use of the other instructors and students, rather than your own level of proficiency?

Armand (Y3): Right.

In his Y4 interview, Armand explained that he still found reading difficult because of what he referred to as poorly translated texts in English.

Armand (Y4): Reading [is difficult] as well. Stemming from the fact that, you know, we have to read, I don't know, texts, assignments, or whatever it is, that are written by non-native English speakers, and how it translates. So, assignments are pretty, [pauses] actually this, well, I don't know how to say it, but perhaps reading it has even more impact in terms of, like, academic life? Because, I don't know. Yeah, mainly, I don't know, assignments, exams, even more so because I'm in engineering, so our professors, our lecturers are not necessarily, you know, trained or prepared to like, you know, teach us. It's more so, yeah, they just deliver the material, and the rest is on you. Like, you have to understand it by yourself for the most part. And yeah, I guess in that regard, it [reading] may have more impact on your academic life.

In her Y4 interview, Hyun, who generally reported reading to be easy, also noted that she often struggled to understand texts or parts of texts, which appeared to have been translated or simply written poorly or incorrectly, causing some ambiguity in terms of the meaning.

Hyun (Y4): There are times where like, on tests, I noticed that there used like, the wrong spelling or like the wrong word, especially online. I don't think I really notice it in person, but online when we do like timed tests, like multiple choice, there has been a time I remember where like the sentence made no sense at all. So, like some of the students like complained to the professor, but because it's online, it wasn't like individually, so not everyone got the memo. So, like in the end, they had to take out the question.

Interviewer (Y4): In other words, the reading challenges that you've faced have had to do with other people's language structures, word choices, things like that?

Hyun (Y4): Yeah. I feel like a lot of things are either, I don't know if they're like Google translated, or they're just like whoever's writing, it doesn't have like the best English capability, but there's just words that seem super out of place in that context. Or there are times where like, structurally, grammatically like the sentence is, I don't know, like a double negative, so you don't know which one they want from you, or there has been cases like that. Especially when it gets more technical, like, I think I had like an accounting class where there was like a nuance to the question that I did not understand when I read the question. And then the professor, like interpreted, and then he explained the answer, and it made sense. But like, I didn't get that from the question. So, there were times like that. It's hard to say in those cases, like, is it just me who doesn't understand the test question, or is it like a grammatical thing?

Derek, who also reported often struggling to understand lecturers' accents, also reported having some difficulties in terms of reading texts he believed were written or translated poorly. Derek also suggested that such nuanced differences might be attributed to the differences between English and Chinese in terms of sentence structures.

> **Derek (Y4):** I would say I also have little difficulty in reading. Sometimes the grammar may differ, especially if the lecturer is using English as a second language. Typically, their multiple choices or questions may have a different meaning.
>
> **Interviewer (Y4):** So, is the sentence structure kind of confusing because it doesn't look like English? Does it look more like it's translated?
>
> **Derek (Y4):** Yes. It looks more translated.
>
> **Interviewer (Y4):** That's interesting. So, what's difficult about it? Does it not follow a standard type of English 'subject-verb-object' structure?
>
> **Derek (Y4):** Typically, if I'm not mistaken, the Cantonese structure, the Chinese structure, they will typically use like the vowels first, and the nouns, and then the adjective and the object. So, it's like all the order is a bit different, and then when they do translate it, it actually just translates it word for word.

5.7 Vocabulary

5.7.1 Vocabulary challenges

It is clear that vocabulary knowledge undoubtedly plays an integral role in all four language macro-skills (i.e., reading, writing, speaking & listening), and can be attributed as both a 'challenges' sub-theme as well as a 'cause & factor' for students' language-related challenges. Furthermore, the impact of vocabulary knowledge on all four language skills was continually reported by students. However, in an effort to present the findings from the interview data in a clear or organized manner, and to avoid redundancy and repetition, the 'vocabulary' subsection is presented separately from the four language macro-skills in this chapter and in Chapter 6. Moreover, questions about student language-related challenges associated with vocabulary were addressed separately from the four macro skills in the semi-structured interviews for all three groups of EMI practitioners (instructors, lecturers, and students). As mentioned in Chapter 3, student participants were directly asked if they considered English vocabulary to be particularly challenging and, if so, what aspects of it were

challenging and why. All of the sub-themes shown in **Table 5.11**, which include four 'challenges' and two 'causes & factors', emerged directly from the interviews as *grounded* codes.

Table 5.11 Theme & subthemes: Vocabulary

Themes	*Description*	*Files*	*References*
Main Theme	Vocabulary	47	47
Sub-themes (challenges)	Technical / Discipline-specific vocabulary	22	22
	Academic vocabulary	14	14
	Colloquialisms / idioms	4	4
	Formal vs informal vocabulary	2	2
Sub-themes (causes & factors)	Lack of exposure to unfamiliar vocabulary	20	20
	Lack of exposure to authentic English	1	1

5.7.2 Technical / discipline-specific vocabulary

As seen in **Table 5.11**, 22 of the 47 references to vocabulary challenges relate to 'technical / discipline-specific' vocabulary. During the interviews, students referred to being unfamiliar with 'technical' vocabulary, special 'jargon' and subject-specific vocabulary that was linked to their respective academic disciplines or professions. It was clear that during the interviews the students using the term 'technical' vocabulary referred to specialized words and phrases used within a particular field, profession, or academic discipline. The students indicated that they felt that these types of words were challenging for them as they were generally uncommon and used primarily within limited academic or professional settings to communicate specific ideas or meanings. Alternatively, they understood 'academic' vocabulary to refer to the formality of the vocabulary they needed to use when writing academic essays. Academic vocabulary was referenced 14 times.

In her Y1 interview, Sherry, a local Cantonese speaker studying in the SHTM, explained that while academic vocabulary could be used in a variety of contexts, low frequency technical vocabulary was particularly challenging as she was generally unfamiliar with these types of subject-specific words and terms.

> **Sherry (Y1):** Maybe technical vocabulary is the most difficult, because some academic words, those academic words can be used all the time, so I can remember the words and try to translate by myself. But for the technical words, I just don't know what is the meaning.

In her Y2 interview, Sherry described the difficulty in learning various technical terms and unfamiliar vocabulary. She pointed out that she generally worked out meaning of words partly by understanding that contextual clues and other words but described difficulties in understanding technical words and terms that were completely unfamiliar.

> **Sherry (Y2):** It's quite difficult for me because, for example, like Chinese, I can guess what's the meaning of the word because I know the meanings of different words, and we mix together and then we get the term. However, for English, if I do not know one word, then the whole words is a mystery for me.

Edward, a local computer science major, noted that a lack of unfamiliar vocabulary resulted in speaking challenges, and that not being able to express his ideas using the correct word(s) in English lead to him to overcompensate with words and sentences to try to convey the meaning.

> **Edward (Y1):** Maybe some vocabulary we want to express, but we don't know the English, so it sometimes might cause, we need to think or maybe just try to explain something. In fact, one word can express this whole thing, but we just don't know how to; we don't know that word, so we need to add a bunch of sentences to explain that thing.

Other students, also mainly in their Y1 interviews, reported their difficulties with unfamiliar technical and discipline specific vocabulary.

> **Interviewer (Y1):** How about vocabulary? Is that challenging?
>
> **Tiffany (Y1):** Yeah, because I'm majoring in science, so I have to learn more terminology than I did before learning studying University. I always encounter difficulty in writing essays because of the technical vocabulary.
>
> ———
>
> **Jessica (Y1):** I think it's most, most likely to be technical vocabulary, for example, in chemistry, we need to learn about like, technical terms, like phosphate, stoichiometry, carbon dioxide, carbon monoxide, aluminum, like those. It’s really hard. I never heard of it before, so I have to read about what is it before I can actually understand the passage.

5.7.3 Academic vocabulary

As discussed in Section 5.6.2 related to reading challenges, there were several references to 'understanding academic texts' from students, most of which indicated challenges with academic style and unfamiliar academic vocabulary. As these areas closely overlap, this sub-section should be reviewed in conjunction with Section 5.6.2, and only one student excerpt is presented here. In her Y1 interview, Elizabeth was asked if certain types of vocabulary in English were more challenging for her than others. She reported that academic vocabulary was the most difficult, highlighting the transition from secondary school to university and echoing similar sentiments from other students who had just completed their Y1.

> **Interviewer (Y1):** How about vocabulary? Do you find specific certain types of vocabulary more difficult?
>
> **Elizabeth (Y1):** Yeah, some academic vocabulary is really difficult. They look they are very long, and they are almost the same, and it's really difficult to remember them. And I have a lot of academic classes, and I need to remember a lot, so it's quite difficult, and vocabulary is the most problem, most difficult thing for me in my English Learning.

5.8 First language, academic discipline & previous medium of instruction

Unlike the findings from the online questionnaire which were able to illustrate differences in levels of language-related challenges between different groups, there was no direct method for measuring such differences from the qualitative data from the semi-structured interviews. Student interview participants were not specifically asked if any of the challenges faced by students varied based on factors such as gender, background, L1, previous medium of instruction (PMOI), or academic discipline, and only one of these themes occasionally emerged during the interviews: EMI versus CMI secondary-school backgrounds. In terms of examining possible differences between these two groups from the interview data, it is largely speculative as students generally expressed observations only about their own groups or background. Specifically, the students did not compare levels of challenges between these two groups but rather spoke only about their own PMoI and provided inferences related to possible differences.

5.8.1 Previous medium of instruction (PMOI)

Table 5.12 shows one of the main themes related to EMI vs CMI background, which was referenced 24 times. Several participants mentioned that students' language challenges likely varied depending on if they came from an EMI secondary school background or a CMI background. In general, participants mentioned that they felt that coming from an EMI background in secondary school gave them more preparation to face language-related challenges than those from CMI secondary schools who did not have much previous exposure to English.

Table 5.12 Theme: EMI vs CMI background

	Description	*Files*	*References*
Main Theme	EMI vs CMI secondary schools	24	24

The students interview participants were all asked if they had difficulty learning academic subjects through English, and several of their responses related their levels of difficulties, or lack thereof, to their secondary school background. Specifically, several students indicated that because they came from an EMI secondary school where they had adequate exposure to English prior to transitioning to an EMI university, they felt somewhat confident learning subject content through English. Below are four brief excerpts from students from EMI secondary schools.

> **Interviewer (Y1):** Do you have difficulty using English to learn academic subjects?
>
> **Carol (Y1):** Not really. It has to do with my background, like because I attended an English medium instruction school, secondary school. So, like I already like adapted to this kind of environment, like speaking English, and so I would actually find it like harder to learn certain subjects in Cantonese.
>
> ———
>
> **Joy (Y1):** I think maybe it's because of, like, the way of examination. I mean, in Guangdong, I'm from Guangdong, and this province is a little bit special because they have spoken English test, speaking English test in the University English examination. But for other provinces in mainland China, they do not have any spoken/speaking test. So, for me, I'm more confident, like we are trained to speak English, speak it aloud. But for other like, provinces, they do not. The seldom have the chance to speak in English.
>
> ———

> **Jessica (Y2):** It's because of a learned drama class in my high school, when we practice like to speak [English] in front of people to act in front of people. So that I've learned, like, fake it till you make it. And that's how I've trained mine.
>
> ———
>
> **Tiffany (Y4):** Speaking would be the most easiest because in high school, I also studied in an EMI school, and so from that time to now I used to speak English in front of like, teachers and students. So, I think speaking is what I'm most competent in.

While the findings from the student interviews did not explicitly reveal any differences in terms of language-related challenges between those from EMI backgrounds and those from CMI backgrounds, it is important to note that the students reported that their EMI secondary school backgrounds had given them, at least to some extent, more exposure to English, which they considered to be linked to their language abilities in English, and reported levels of confidence in using and learning through English at the tertiary level.

5.9 Language improvement over time

5.9.1 Language improvement

Students were asked if they felt that their language challenges generally decreased over their four years of studying in an EMI setting, and if their language skills generally improved. Virtually all of the students indicated that their language skills had improved, at least to some extent, with only a few of the native or native-like high-fluency students reporting only limited improvement in specific areas. The large majority of students indicated that their language skills had improved significantly, many reporting improvements in all four skills. The students also generally felt that, aside from a few notable exceptions (See Section 5.5.2, 'understanding lecturers' accents'), their language-related challenges generally decreased over time with more exposure to and practice with English, even as their academic workloads increased year on year.

As can be seen in **Table 5.13**, sub-themes under the main theme of Language improvement / decreased challenges include only 'causes and factors' as these were the sub-themes (*grounded* codes) that emerged during the interviews. In response to the question related to whether or not students' language-related challenges decreased and whether or not their language skills improved, students' responses were generally related to students' overall macro-skill improvements and the

contributing causes and factors. The four most commonly cited causes and factors were 'Increased exposure to varieties of English' (26), 'language support from ELC' (23), increased writing practice (17), and increased speaking practice (17), as shown in Table 5.13.

Table 5.13 Theme & subthemes: Language improvement / decreased challenges over time

	Description	*Participants*	*References*
Main Theme	Language improvement / decreased challenges	78*	78
Sub-themes (causes & factors)	Language support from ELC	23	23
	Increased exposure to varieties of English accents	21	21
	Increased writing practice	17	17
	Increased speaking practice	17	17
	Increased exposure to English (general)	15	15
	Increased vocabulary knowledge	10	10
	Increased listening practice	9	9
	Increased reading practice	9	9
	Increased exposure to academic style	6	6
	Increased confidence	5	5
	Increased language practice (general)	5	5
	Development of coping strategies	2	2
	Language support from (subject) lecturers	2	2
	Increased fluency	1	1

5.9.2 Language support from ELC

As part of the Y4 student interviews, students were asked what, if anything, they had found helpful in terms of any type of English language support from the university. The majority reported that the courses offered by the ELC had generally made a positive impact on their various language skills. A total of 23 of the 26 participants indicated that the various ELC courses they took contributed to their overall English language improvement. As all students were essentially asked the same question, the excerpts below are largely individual student responses only.

> **Interviewer (Y4):** In terms of English language support from the university, what, if anything, has been helpful to you?

> **Tiffany (Y4):** The only thing I've encountered is the ELC courses, so I think ELC courses really helped me throughout my studies. Like in my last year, like, last semester, I also had a course about ELC. So, it's more like a communication course as well. So, I think ELC courses, like, increase peoples' confidence in speaking English.

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> **Adelle (Y4):** The ELC subjects that were introduced to our program just to make sure that we know how to write in the, for example, scientific subjects. So, the subjects, ELC subjects, were really effective and helpful for me.

Adelle elaborated on the ELC support and noted that one course in particular helped her to improve her writing in the science discipline and that her writing challenges had decreased.

> **Adelle (Y4):** I think the writing got less challenging since we had some supportive subjects. They were like, intended to help us write some scientific reports, as I said, write some laboratory reports to get us used to the format and also to the vocabulary that we should use. So, I guess the writing is also, nowadays, less challenging than it was before.

Stacy also indicated that the ELC course that focused on English in the sciences was particularly helpful in improving her writing skills as well. She particularly found the course structure and incremental feedback on her writing feedback quite helpful.

> **Stacy (Y4):** My ELC course about English in the sciences, I think that was the name, was very helpful. Because I could actually see how it was helpful, even for students who don't really struggle with English, because it gives a lot of insight into how to read scientific articles, how to maybe search for credible information, how to use search tools, stuff like that. But also, I could see that many students liked it. Because they had the chance to improve their writing skills. And the way that our assignments were structured, you could show some piece of writing that you did, and then you could actually improve on it. So, I really liked that as well. And I think it was really helpful for many students.

Elizabeth, an accounting student from mainland China, indicated that the ELC course she took focused on English in the workplace, which she found particularly helpful coming from a predominantly Chinese language setting.

> **Elizabeth (Y4):** Like some of the ELC courses, like we're business students, and they teach how to use proper English during workplaces. And I think that's quite helpful because I come from mainland China and, like, everyone around me doesn't know the proper English to be used in workplaces, and they can't tell me what to do. And those ELC courses are really helpful.

———

Angel (Y4): I think the ELC courses are helpful. So, I had two ELC, compulsory courses. One is English writing at university level English writing. And the other one is English communication. So, the English communication, that one, I think that one is really helpful, because no one really trained, or talked about how to communicate efficiently in English, especially in interviews. So, that course really helped a lot. Not only academically, but I think in a lot of my future developments it was helpful. And the university level writing, I think it's helpful in the way for me to know how to write correctly.

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Edward (Y4): Yes, like when I have the ELC classes that are mainly about how to write the references, how to write an academic paper. That is quite useful because I need to learn how to write, like it's easier for me to write.

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Tatiana (Y4): I think that the ELC classes were quite helpful. And what I really liked about the English class and PolyU, was that there was like, the first one was more general. But the second course the second compulsory English course, you could choose the one that you liked. For example, I remember taking the persuasive communication in English, for example, yeah, and they have like two or three other options. And the thing is, that you can find the most suitable one for you. And for example, you are not, you are not obliged to take all of those courses that maybe you may not be interested in, but the thing that you really want to do, and which you think might be helpful for you in the future.

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Joy (Y4): I really much appreciate the ELC courses, because I learned about the referencing styles and like how reference, how to, basically writing academic papers, or essays for ELC courses, especially, it's not the one starting with 2, but was 1012, or something like that. But the very first ELC course I had in the university is very helpful for me. And also, I have also attended some WAP, which is also like, kind of helpful, because like, one of the teachers suggested me some websites, and it's helpful.

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Lucy (Y4): Honestly, I think ELC courses were quite helpful. Like, they taught us how to write in, like business letters, how to speak in persuasive communication. Yeah, that kind of skill.

_____

Carol (Y4): I think, like, in year one, we have to take the general course, the ELC course that everyone has to take. And then in this course we have learned how to write in APA style and how to write an academic paper, which we haven't learned before. So, this is the very first thing that we have to learn, because in other core courses, for example, like strategic management, we have to write in like, academic style. So, it's probably like the foundation of other courses. But in year two, then I take the course persuasive communication, and it’s up to you to decide what courses that we are taking. So, I'm taking this and then I still remember the skills, like, how to how to present in a better way.

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Sherry (Y4): Yes, I believe that the ELC helped me the most because actually, I'm not that participative in other subjects or in other activities. After I have received the lessons when I'm in

year one and year two, like I've learned what words should I use when I'm writing an essay, like how should I cite the references, because actually, the secondary school did not require us to do such background research when I was like, doing the project. Therefore, I believe that all these basic skills that I have to learn before I'm completing my project is really important for me because I was just like a beginner in school. Therefore, the like, the English education in year one and year two was really important for me.

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Olivia (Y4): I think ELC lessons are the most helpful one for me, because it is a lesson that we must attend and at the university, and it I think, since I have the choice to choose in year two which ELC lessons that I would like to attend, and the one I choose is really what I'm interested in. So, I think that helps me to learn English better.

Interviewer (Y4): If you don't mind me asking, can you tell me what course that is?

Olivia (Y4): Persuasive Communication

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Jackie (Y4): Like, I took like three courses. I think the first one is the mandatory one. I took the introduction level, something 113, not the professional ones. And then a second one is the persuasive communication. The last one is a professional English, for like computing students. So, I have to pitch and write emails for professional purposes. The one I found the most, like, important is probably the persuasive communication one, because I took it when my speaking wasn't really good, and I kind of feel that it improved a lot.

5.9.3 Increased exposure to varieties of English accents

As reported in Section 5.5.2, 'understanding lecturers' accents' was by far the most commonly cited listening challenge by participants of the student interviews. As shown in **Table 5.13**, the second most commonly cited sub-theme under the main theme of Language improvement / decreased challenges 'Increased exposure to varieties of English', which was referenced by students 21 times over four years. This indicates that with the exception of a few students, increased exposure to various accents and different varieties of English was a positive contributing factor to students' improved listening comprehension skills.

In her Y2 interview, Elizabeth reported that she particularly found Indian accents difficult to understand, so she decided to get more exposure to the accent and practice listening to it through Youtube videos.

Elizabeth (Y2): Like, last year, I have a lecturer, lecturer from India, I think maybe from India. And her accent was really difficult to follow. And I have to, like, I even found some videos on YouTube to practice to make me used to that accent. So, it was the most difficult part.

> **Interviewer (Y2):** That's a that's a great idea. Did you find that after you had more exposure to it, it was easier to understand?
>
> **Elizabeth (Y2):** Yes.

Although Alex reported that he still had difficulty understanding various lecturers' accents in his second year of study, he did note that he felt more confident and comfortable communicating in English with both local L2 English speakers and L1 speakers of English.

> **Alex (Y2):** Yeah, definitely. Cause, when I was a freshman, it was very difficult to adapt, to adjust my language, you know, to understand, like local people, and then like, native speakers as well. But as I went to second year, it was much easier to understand them, you know, to feel comfortable to not feel shy and so on.

In her Y3 interview, Tatiana reported that increased exposure to different accents helped her to get more accustomed to the different varieties and that she felt her listening had become 'much better than it used to be' in Y1.

> **Tatiana (Y3):** So now I'm in my, like, I finished my third year of studies. So, I think that I think that things have changed a lot from the first time I entered, like, in the first year. For example, I think it was a bit hard to like to understand, when professors were talking, it was hard to get their accent in English. Their accent was a bit, how to say? I wasn't used to it in the beginning. But then listening, I think my listening is much better than it used to be in the beginning.

In her Y3 interview, Adelle also reported that she felt like she was improving due to increased exposure of different varieties of English.

> **Adelle (Y3):** Yeah, I guess that, to adapt to listening to the different accents and dialects was easy because like, it just takes some time to get used to it. So, I guess now, it's not a problem for me at all. So, I understand everybody in the university, the lecturers, my classmates.

In Janine's Y4 interview, she explained that her initial listening challenges in Y1 and Y2 had decreased to the point of not being an issue at all in her final two years.

> **Janine (Y4):** Now, I don't really have that problem anymore. It [listening] was originally a problem, since it was hard to make out what the other person is saying. But it gradually got better.
>
> **Interviewer (Y4):** So, in year one, maybe it was more difficult.

Janine (Y4): Year one, year two.

Also, in her Y4 interview, Janine elaborated on her perceived improvements in all four skills.

> **Janine (Y4):** So, if we were to list them out, starting from listening, so listening definitely improved because of the accent problem, and now I'm very much used to it. And for writing as well, it was quite the challenge in the beginning, because I didn't know how to how to link ideas properly. But now, I'm starting to have like that sense where you ask, 'Oh, does this makes sense within next paragraph?' 'Oh, this doesn't make sense'. And like, now I can reflect on my writing more. So, for speaking, I guess after the ELC classes, I am more comfortable with public speaking because I know what vocabulary to choose. And for reading, I suppose it's still the same.

In his Y3 interview, Armand also stated that while he still found some lecturers' accents quite challenging, his general understanding of different lecturers' accents had improved with more exposure to them.

> **Interviewer (Y3):** Since your first and second years, have the challenges decreased at all? Has it become easier for you to listen to various accents now and understand them better?
>
> **Armand (Y3):** Yeah, totally.
>
> **Interviewer (Y3):** How?
>
> **Armand (Y3):** Probably it's the case for all four aspects: reading, writing, speaking or listening. I mean, it's just the sheer amount of experience and, you know, practice is the reason why anyone would improve. So, yeah, I would definitely say I improved in all four skills.

5.9.4 Increased exposure to English and practice (in general)

As shown in Table 5.13, several students attributed their apparent language improvements to increased exposure to English and the numerous opportunities to practice English in the four skills. Students noted the opportunities to practice their English skills in all four areas, and in most cases concluded that their language skills generally improved over time, and that their overall language-related challenges declined. Some students described improvements from Y1 to Y2, while others, including several Cantonese-speaking local students, felt that there was not much of a difference from Y1 to Y2. However, by the time the students had completed their third year, many of them reported a decrease in language challenges and improved language skills. In the final interviews

in Y4, the overwhelming majority reported numerous language improvements after four years of study, often in all four macro-skills. Adelle, an L1 Russian speaker studying chemical technology, described Y1 as being a sort of 'trial' period for students to get used to studying in an EMI setting. She noted that through increased exposure to and use of English, she felt that her language-related challenges decreased from Y1 to Y2.

> **Interviewer (Y2):** Has it been easier the second year than it was the first year to adjust to the academic setting in English?
>
> **Adelle (Y2):** Yes, I guess. Yes. Because the first year was like a trial, we were getting used to the system and to the lecturers. And as well, in order to adjust me and my friends were using Russian to explain each other something about the subject, even during the discussions. But nowadays, we tend, as I said, we tend to use English more because we get used to it. So now, it is pretty easy, I guess. So, for the first year, it was like hard, but now it's okay.

In her Y4 interview, Adelle was asked if her language-related challenges had decreased over time during her four-year study. She reported that despite the increased academic workload in Y3 and Y4, she still found it less challenging to learn through English than she had at the beginning of her university studies.

> **Interviewer (Y4):** Do you feel like your language related challenges have decreased over time since your first year?
>
> **Adelle (Y4):** Yeah, I would say they definitely gradually decreased through the four years I was studying in university. But, yes, even though like the third and the fourth year, we had very hard, very complex subjects that were, of course, in English, but still, I found it less challenging at the end of my studies to like, use English and understand everything in English.

In his Y4 interview, Alex reported that he felt his language skills had improved after studying in an EMI university for four years.

> **Interviewer (Y4):** Have things gotten easier over time?
>
> **Alex (Y4):** Yes, Chris. Definitely.
>
> **Interviewer (Y4):** Do you feel like studying in an EMI program has helped you improve your language skills?

> **Alex (Y4):** Yes, I think so. Because, let's say in throughout my academic, academic life, I studied not only, like subjects that are related to my major, but I also took subjects such as English and then like effective communication. Also, service learning. So, I guess, I mean, not only those subjects, but then also my own, like, major subjects also benefited me. Because it's not only about studying its own, it's also about explaining, it's all like, you have to explain to your peers you have to explain in your words, how you, like understood the material. So, in general, yes, like EMI has improved my English skills.

Another student from Kazakhstan, Tatiana, explained in her Y4 interview that her speaking skills improved through increased practice interacting with classmates and lecturers. She also reported that she felt that language skills overall had generally improved through exposure and practice in all four areas.

> **Tatiana (Y4):** So, I think that speaking got much easier now, because I got more confidence in myself, I can speak English, and I've talked to the native speakers of English. So, as I am more confident, I can speak easily and more confidently. And in terms of writing, I also got more, [pauses] of course, if everything is in English, you will do all the academic learning or texting your friends or everything in English. So, definitely my English writing skills have also gone up. And as for the reading, I also think that it became better because during the classes or any like, research projects, everything, we had to read a lot of information in the internet or in the books. So, it has also become much better now. And as for listening, I think this is where I got big progress as well, because in high school, it was hard to watch some movies in English, for example. Now, even though I use the subtitles, it's still sometimes, I can get the whole idea without even looking at them, even if I turn them on, but I also can do it without. So, I think it also got better now.

In her Y4 interview, Angel, from Taiwan, described how she perceived that her writing improved substantially from year one to year four.

> **Angel (Y4):** I think it's definitely improved a lot because in year one I really struggled to write things, right? So, like I might be in the situation where I don't know what to write, or I don't know how to say the things I want to say. But like in year four it's more of the time that there's too much I want to say. So, the only thing I need to do is to write them down and then try to simplify things. I think that it's a way that I see myself as being improved, because I'm no longer worrying over how do I express myself and more of how do I make my things more precise and accurate?

In her Y4 interview, Victoria explained that her listening and speaking in English improved over time during her four years studying in an HK EMI university due to her constant use of and exposure to English.

Victoria (Y4): I think with listening, it got easier over time, because now, there are some professors who I might see like multiple times, or who have taught me like, let's say, one to two or three lessons, so I think I got to know how to listen to them. So, it gets easier with time, I would say. And also speaking, I think, because when I was back in Rwanda, even though I studied in English, my mode of communication with professors sometimes when I got to ask them questions will be in my local language. But then here, I have to ask them in English, so I think with speaking also, it got better with time.

5.10 Chapter Summary

In summary, the key qualitative findings from the four years of semi-structured student interviews related to the RQs are outlined below. The findings presented in this chapter reveal a number of common perspectives and themes in terms of their perceptions of students' overall language related challenges, specific challenges, possible causes and factors, and changes over time. In terms of students' most challenging language skills, many of them generally considered writing to be more generally more challenging than the receptive skills, listening and reading. A number of the students found listening to be challenging, particularly due to lecturers' accents. Generally, speaking was considered to be more difficult than reading due to the fact that the synchronous aspect of speaking often presented students with difficulties in unplanned real-time speaking activities. In contrast, students generally found planned and scripted speaking less challenging. Reading was generally considered less challenging than the other skills by the interview participants, with the exception of reading academic texts. For clarity and brevity, the remaining key points are presented below in bullet point format.

Writing

- Difficulty using appropriate academic style
- Difficulty organizing ideas in coherent paragraphs
- Difficulty using correct English (Y1 & Y2)
    - Limited vocabulary
    - Lack of exposure to formal written English
    - Lack of practice writing

Speaking

- Difficulty with fluency, unplanned real-time speaking, and discussions.
    - Lack of opportunities and practice to speak, lack of confidence and fluency
    - Reluctance to speak, shyness, anxiety
    - Speaking generally improves over time with practice and exposure

Listening

- Difficulty understanding lecturers' accents
    - Lack of exposure to varieties of spoken English
    - Increased exposure to varieties of spoken English generally decreases challenges

Reading

- Difficulty understanding academic texts
- Difficulty understanding specific vocabulary
- Difficulty understanding translated texts
    - Lack of patience to read
    - Lack of practice reading

Vocabulary

- Difficulty with technical, discipline-specific, academic vocabulary
    - Lack of exposure to unfamiliar vocabulary
    - Lack of exposure to authentic vocabulary

Background & previous medium of instruction

- Students from EMI schools generally indicated that they felt that they entered university with higher English language skills

Language improvement over time / Decreased challenges

- Language skills improve over time in most, if not all skills.
- Language-related challenges decrease.
    - Increased exposure to English, academic style & increased practice
    - Increased fluency, confidence, motivation
    - ELC Language support

Chapter 6 – Qualitative Findings: Instructors' and lecturers' perceptions of students' English language-related challenges

6.1 Introduction

This chapter presents the qualitative findings pertaining to the first research question related to English language challenges faced by students at HK EMI universities. The chapter is divided into ten sections and several sub-sections. The ten sections correspond with the findings based on the data collected from the multiple-perspective interviews (MPIs) with two of the three groups of EMI stakeholders who participated in this study, the language instructors and the subject content lecturers. The findings from both the instructor interviews and the lecturer interviews have been brought together in this chapter to provide a more comprehensive and comparable view of these two groups of EMI stakeholders. The findings from the longitudinal semi-structured student interviews will be presented separately. Chapter 6 is divided into ten sections. This **Section 6.1** introduces the chapter, presents the RQ it addresses, and provides an overview of its content, outlining the various sections. **Section 6.2** presents findings from the 20 instructor interviews and the 20 lecturer interviews of their perceptions of students' most challenging language skills. This includes an overview of which of the four language macro skills were considered most challenging for students by instructors and lecturers, a broad ranking of what they considered to be most and least challenging for students, and a discussion of two themes that emerged from the findings. **Section 6.3** presents the instructor and lecturer perceptions of students' challenges related to speaking and focuses on several sub-themes that emerged from the interviews, including which micro-skills were thought to be particularly challenging for students, as well as instructors' and lecturers' views on the likely causes and factors linked with these challenges. **Section 6.4** presents the instructor and lecturer's perceptions of students' challenges with writing and discusses several sub-themes that emerged from the interviews. **Section 6.5** presents findings related to instructor and lecturer perceptions of students' challenges with listening and presents various sub-themes themes that emerged from the data, and **Section 6.6** similarly presents findings related to instructor and lecturer perceptions of students' challenges with reading. **Section 6.7** presents the findings related to perceptions of students' difficulty with vocabulary in EMI settings and highlights various sub-themes related to challenges and contributing factors. **Section 6.8** presents instructors' and

lecturers' views related to how the aforementioned challenges may vary based on background, academic discipline (AD), or previous medium of instruction (PMOI). **Section 6.9** presents findings related to instructors' and lecturers' perceptions of how the aforementioned challenges faced by students may change over time. Specifically, the two groups were asked if they believed that students' language-related challenges generally decreased over their four years of undergraduate study and/or if they believed that students' language skills generally improved. **Section 6.10** provides a summary of the chapter which highlights key themes and sub-themes from the findings.

6.1.1 Research questions

The RQs:

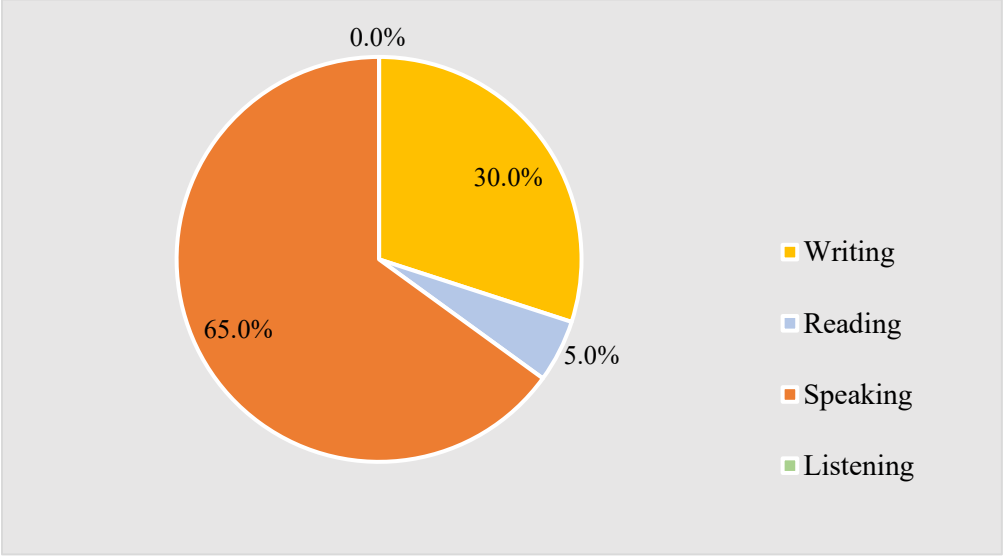
- What English language-related challenges do undergraduate students face during their four years at Hong Kong EMI universities?
- Do these challenges vary based on background, previous medium of instruction, or academic discipline? If so, how?
- Do students' challenges change over their years of study? If so, how?

6.2 Perceptions of students' most challenging language skills

In various EAP curricula, a focus on different academic language skills often can be in competition with each other, resulting in certain language skills being given priority while others tend to be deemed either less important or simply less problematic. As such, it is important to examine what instructors and lecturers see as a priority in terms of students' language challenges and language needs at the macro level prior to each of the four skills (i.e., reading, writing, speaking, listening) are examined in greater depth and detail. Hence, participants in the 40 semi-structured language instructor and lecturer interviews were asked which language skills they generally considered to be either more or most challenging for students. They were also asked to explain why they felt some language skills were more challenging than others and what specific aspects of these language skills were especially challenging for students. The instructors and lecturers were also asked which language skills they considered to be less challenging for students and why. Through

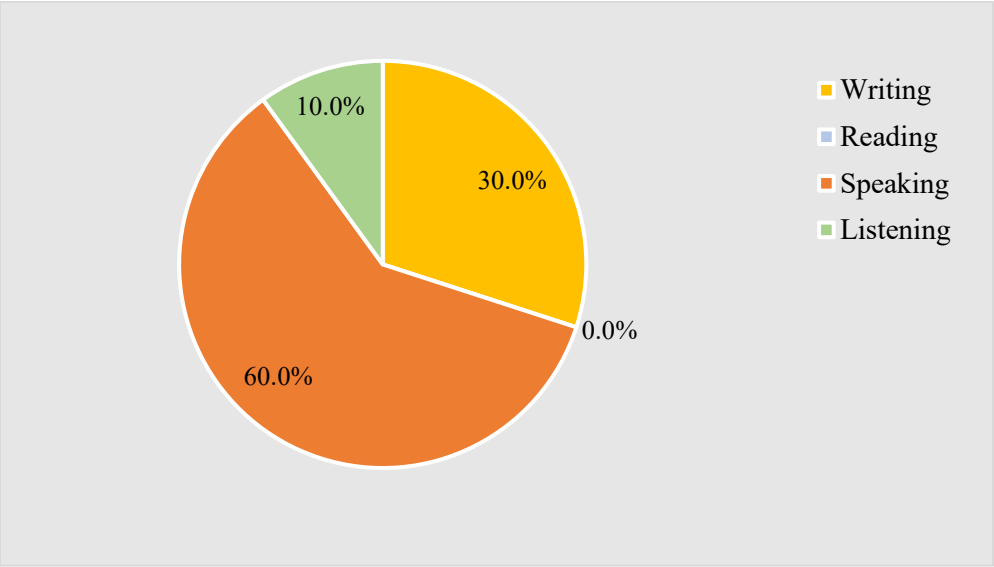
this process, participants' perceptions of students' language challenges were broadly ordered from most difficult to least difficult. All 20 language instructors and 19 of the 20 lecturers were able to offer their general perceptions of the four language macro skills in order from most to least challenging for students. As can be seen in **Figure 6.1**, speaking was considered to be the most challenging language skill for students by 13 of the instructors (65%) while writing was thought to be most challenging by 6 instructors (30%). One instructor considered reading to be the most difficult for students, while none of the instructors considered listening to be the most challenging language-related skill for students.

Figure 6.1 Instructors' perceptions of students' most challenging language skills



Responses from the lecturer interviews in terms of what they perceived as most challenging were similar and provided further evidence of the perceived challenges that students experience with the productive skills, namely, speaking and writing. As shown in **Figure 6.2**, speaking was considered to be the most challenging language skill for students by 12 of the lecturers (60%) while writing was thought to be most challenging by 6 lecturers (30%). Two lecturers considered listening to be the most difficult for students, while none of the lecturers considered reading to be the most challenging language-related skill for students.

Figure 6.2 Lecturers' perceptions of students' most challenging language skills



In order to provide a more comprehensive view of the instructors' perceptions of students' difficulties with the four language macro skills, **Table 6.1** shows the four skills from most to least difficult as reported by each of the instructors. As can be seen below, the majority of the language instructors reported that they considered the productive skills, namely, speaking and writing, to be either the most or second most challenging for students. Of the 20 instructors, 19 of them (95%) considered either speaking or writing to be most challenging for students. In terms of 'second most difficult', 12 of the instructors (60%) also considered it to be either speaking or writing. A total of 11 instructors (55%) considered speaking and writing together to be the two most difficult skills for students, and all 20 instructors ranked at least one of the 'productive' skills as either 'most' or 'second most' in terms of most difficult for students. As mentioned previously, listening was generally considered more difficult than reading with 13 instructors placing it third out of four, while reading was considered to be the least difficult language-related skill for students by 14 of the instructors (70%).

Table 6.1 Instructors' perceptions of students' language challenges

Instructor	*Most difficult*	*2nd most difficult*	*3rd most difficult*	*Least difficult*
Instructor 01	Reading	Writing	Listening	Speaking
Instructor 02	Speaking	Writing	Listening	Reading
Instructor 03	Speaking	Writing	Listening	Reading
Instructor 04	Speaking	Writing	Listening	Reading
Instructor 05	Writing	Reading	Listening	Speaking
Instructor 06	Writing	Reading	Listening	Speaking
Instructor 07	Writing	Speaking	Listening	Reading
Instructor 08	Speaking	Writing	Listening	Reading
Instructor 09	Speaking	Writing	Listening	Reading
Instructor 10	Writing	Speaking	Reading	Listening
Instructor 11	Speaking	Writing	Reading	Listening
Instructor 12	Speaking	Listening	Writing	Reading
Instructor 13	Writing	Reading	Listening	Speaking
Instructor 14	Writing	Listening	Speaking	Reading
Instructor 15	Speaking	Listening	Writing	Reading
Instructor 16	Speaking	Writing	Listening	Reading
Instructor 17	Speaking	Writing	Listening	Reading
Instructor 18	Speaking	Listening	Writing	Reading
Instructor 19	Speaking	Listening	Writing	Reading
Instructor 20	Speaking	Writing	Listening	Reading

There were also some notable variations between the perceptions of students' language-related challenges of the L1 English-speaking instructors and the perceptions of the local Cantonese-speaking instructors. For example, 10 of the 11 instructors from Anglophone countries who reported English as their L1 considered speaking to be the most difficult skill for students. Both instructors who reported Putonghua as their L1 also believed speaking was most challenging for students. Alternatively, only one of the seven Cantonese-speaking instructors considered speaking to be the most challenging for students. Five of the Cantonese-speaking instructors considered writing to be the most challenging for students, and only one believed reading to be the most challenging. Moreover, four of the seven Cantonese-speaking instructors considered speaking to be the least challenging for students. While this shows that there were some varying perspectives between instructors in terms of which language-related skills were more challenging than others, overall, a number of common and recurring themes emerged from the interview data in terms of the difficulties and challenges faced by students in each of the four language skills. As can be seen

below in **Table 6.2**, 90% of the 20 lecturers (18) reported that they considered either speaking or writing to be the most challenging for students. In terms of what was considered to be the second most difficult skill for students, 13 of the lecturers (65%) also believed it to be either speaking or writing.

Table 6.2 Lecturers' perceptions of students' language challenges

Lecturer	*Most difficult*	*2nd most difficult*	*3rd most difficult*	*Least difficult*
Lecturer 1	Speaking	Listening	Writing	Reading
Lecturer 2	Speaking	Listening	Writing	Reading
Lecturer 3	Writing	Speaking	Listening	Reading
Lecturer 4	Speaking	Writing	Reading	Listening
Lecturer 5	Speaking	Listening	Writing	Reading
Lecturer 6	Writing	Speaking	Reading	Listening
Lecturer 7	Speaking	Writing	Reading	Listening
Lecturer 8	Writing	Listening	Speaking	Reading
Lecturer 9	Speaking	Writing	Listening	Reading
Lecturer 10	Writing	Speaking	Reading	Listening
Lecturer 11	Speaking	Reading	Listening	Writing
Lecturer 12	Speaking	Writing	Listening	Reading
Lecturer 13	Writing	Speaking	Listening	Reading
Lecturer 14	Writing	Speaking	Listening	Reading
Lecturer 15	Listening	Writing	Speaking	Reading
Lecturer 16	Speaking	Writing	Listening	Reading
Lecturer 17	Speaking	Listening	unknown*	unknown*
Lecturer 18	Speaking	Writing	Reading	Reading
Lecturer 19	Listening	Writing	Speaking	Reading
Lecturer 20	Speaking	Listening	Writing	Reading

Eight lecturers chose writing as the second most difficult for students, and five lecturers considered speaking to be the second most difficult skill. Unlike the findings from the instructor interviews, the lecturers generally found listening to be more challenging for students than the instructors did. Eight lecturers considered listening to be either the most difficult (2) or second most difficult (6) language skill, whereas none of the instructors felt it was the most difficult, and only four of them believed it was the second most difficult. Another seven lecturers ranked listening as the third most difficult, and four believed it to be the least difficult language skill for students. In terms of reading, the lecturer interview findings were very similar to those from the instructor interviews with a few

exceptions. Matching the instructor findings, 14 of the lecturers (70%) considered reading to be the least challenging language skill for students. Another five lecturers believed it was the third most challenging skill, and only one considered it to be the second most challenging skill for students, whereas four instructors considered it to be either most challenging (1) or second most challenging (3).

6.2.1 Productive skills

One of the first themes that emerged from the instructor and lecturer interviews in terms of language-related challenges was related to the differences between productive and receptive language skills. Several of the instructors considered the productive aspect of speaking and writing the main factor in terms of students' great difficulties with these two skills.

Table 6.3 Theme: Productive vs receptive skills

	Description	*Participants*	*References*
Main Theme	Productive vs receptive skills	16	17

Several instructors attributed students' difficulty in speaking and writing to the productive nature of the tasks and indicated that students often struggle to speak clearly or to produce clear written texts.

> **Interviewer 3:** Which of the four language skills do you think is most challenging for students?
>
> **Instructor 3:** I think you're always looking at productive skills. So, we're looking at writing and speaking. I mean, students struggle with both.
>
> _____
>
> **Instructor 6:** I do feel that writing seems to be most difficult among the four language aspects because, you know, regarding reading and listening, there is a kind of language input, but for writing and speaking, there tends to be a kind of large output needed. And so, I think, comparatively, writing seems to be much more difficult than the other skills.
>
> _____
>
> **Instructor 2:** In general, I'd follow what I think somebody said to me once or a long time ago when I was being trained that, generally speaking, it's easier for students to absorb than to produce. So, I think our students understand more about, say, reading and listening than they do about writing and speaking.

Another instructor attributed local students' general difficulty in terms of the productive aspect of speaking and writing to the type of language instruction they commonly receive in local Hong Kong public secondary schools. The instructor implied that the type of instruction at most local secondary schools tends to be more teacher centered, where students are generally expected to listen to teachers and to read materials, but not often required to write or speak. Hence, the instructor noted that they generally receive 'input' through listening and reading at the secondary school level, but that they may not be given sufficient opportunities to practice in terms of producing the 'output' (speaking and writing).

> **Instructor 9:** I find it's, you know, typically the output skills. I've mainly had experience with local schools with students going through the public, secondary school education, and I feel like they have a tendency of, they have a lot of input when they're reading and listening, but they never have a chance, or are never encouraged to perform these output skills.

Several other instructors pointed out that while their students generally were required to perform some tasks in all four of the macro skills, only the 'productive' skills of speaking and writing were the tasks that were regularly assessed through written assignments and spoken presentations. Moreover, a few of the instructors pointed out that they had reservations about estimating their students' levels of listening and reading skills due to the perception that neither of these two skills are generally, either formally or informally, evaluated or assessed in any of the courses they taught. However, these instructors did consider listening to be more challenging for students than reading, mostly due to the fact that the former generally occurs in real-time while the latter generally occurs at the students' own pace. In terms of reading, several of the instructors indicated that they believed students generally find reading to be less challenging, and that students typically have ample time to read and comprehend written texts. They also indicated that many students regularly employ the use of online translation tools and online dictionaries for assistance. Alternatively, in terms of students' listening skills, some instructors reported that they were rarely able to ascertain students' levels of listening comprehension skills as they simply did not have adequate opportunities or sufficient evidence to determine how much of what was being spoken in their classes was being understood by their students. Instructor 11 highlighted the differences between understanding students' productive skills and their receptive skills.

Interviewer: What do you think is most challenging for students?

Instructor 11: Well, when I think about it, initially, I would say that the productive skills, you know, writing and speaking are the most difficult, but maybe because that's what I notice. You know, I notice when my students have difficulties with this, but I don't really know how hard it is for them to read or listen. And I think for some of them, it could be that they may not understand as much of what I'm saying as I think, or as much of what they're reading as I hope. So, it's actually a little hard for me to answer that accurately.

While only 16 participants from both groups specifically used the term 'productive' or a variation of it, it is clear from tables 3.1 and 3.2 above that the majority of both instructors and lecturers consider the productive skills to be particularly challenging for students, and the receptive skills to be somewhat less challenging.

6.2.2 Synchronous v asynchronous skills

In terms of why instructors and lecturers considered speaking and writing to be the most difficult language skills for students, a second main theme emerged related to synchronous and asynchronous communication skills. Several of the instructors (4) and lecturers (5) felt that the language-related skills that students struggled with the most generally had less to do with the productive aspect of speaking and writing, but rather to do with the differences between synchronous and asynchronous activities. These instructors considered speaking and listening, respectively, to be most challenging for students because these activities generally require unplanned synchronous communication in real time.

Table 6.4 Theme: Synchronous vs asynchronous skills

	Description	*Participants*	*References*
Main Theme	Synchronous vs asynchronous skills	9	9

Instructors 3 and 12 explained that unlike reading and writing, students often face stress and anxiety when required to speak and/or listen spontaneously in real time.

Instructor 12: Obviously, when you're writing or when you're reading, it's not happening with so much time pressure. So, yeah, if it's any kind of speaking or listening, I think that you have this anxiety, which is raised, you know, during the process, and that contributes to the difficulty.

> **Instructor 3:** Speaking [is most difficult] because it's instantaneous, it's on the spot, and it requires a lot of other things, and a lot of other factors as well as just vocabulary and grammar. I think that is more of an area where they might struggle, but definitely also in both of the productive skills, speaking and writing.

Instructor 18 also considered synchronous communication more difficult for students but, similar to Instructor 9, attributed this to less importance placed on speaking and listening in local Hong Kong secondary schools' curriculums, where instead there is a much greater focus on reading and writing skills.

> **Instructor 18:** I'd say for most of the students, it's speaking and listening. I think this is because there's a heavy emphasis on reading and writing in the school system. So, I'm not saying they're strong in those areas, but I'd say they can get on with them, most students. But speaking and listening is invariably where they struggle.

While only nine participants specifically highlighted the synchronous nature of speaking and listening, it is likely that this inherent characteristic was a factor in many of their perceptions related to the difficulties students face in these two skills. It is also likely that many of the participants, especially the lecturers, were basing their overall evaluations on what they would generally observe in the classroom, which would typically be planned spoken presentations rather than unplanned spontaneous speaking activities.

In the following sections, various themes and subthemes related to students' challenges from the instructor and lecturer interviews are presented, with some expanded focus on selected sub-themes. Excerpts from the instructors and lecturers provide further insight in terms of their perceptions of the challenges and difficulties experienced by students with each of the four macro-skills and with vocabulary when learning through the medium of English. These excerpts reveal the participants' familiarity, knowledge, and understanding of various challenges faced by students and reflect considerable experience in teaching, observing, and assessing their students in an EMI university setting. Moreover, they reveal and highlight many of the instructors' and lecturers' specific concerns, issues, and understanding of students' language-related challenges, within the context of each of the four language macro skills and vocabulary.

Selected sub-themes and excerpts were included based predominantly on three criteria: First, excerpts were generally included if they reflect or highlight 'cause & factor' sub-themes that were frequently noted (as indicated in the corresponding tables) or appear notably significant. Secondly, they were included if they provide unique insight by participants in terms of the causes and factors related to students' challenges. Thirdly, they were included if they were thought to illuminate or enhance understanding of sub-themes that emerged directly from the data. Alternatively, as many of the 'challenges' sub-themes (e.g., 'asking/answering questions', 'planning written assignments') are quite straight-forward and originated from *A priori* coding based on the aforementioned 45 micro-skills, it was decided that there was less need to further explain or elaborate on many of these. Nonetheless, all of the themes and sub-themes that emerged from the instructor and lecturer interviews are included in this chapter in tables 6.3 to 6.11.

6.3 Speaking

As mentioned previously, speaking was considered to be the most challenging language skill for students by 13 of the instructors (65%) and 12 of the lecturers (60%). In terms of specific challenges in terms of activities or micro-skills, a number of these that were revealed from the data were coded as subthemes. Additionally, instructors and lecturers identified various causes or factors that they linked with students' speaking challenges, which were also coded and are presented as sub-themes. Table 6.5 identifies speaking as the main theme in terms of students' macro-language challenges, and lists the sub-themes categorized as either 'challenges' or 'causes & factors'.

Table 6.5 Theme & subthemes: Speaking

	Description	*Participants*	*References*
Main Theme	Speaking	32	32
Sub-themes (challenges)	Speaking clearly	4	4
	Answering questions	4	4
	Communicating ideas fluently	3	3
	Presenting information or ideas	3	3
	Asking questions	2	2
	Communicating ideas confidently	2	2
	Participating actively in discussions	2	2
	Unplanned real-time speaking	1	1
Sub-themes (causes & factors)	Lack of opportunities / practice	14	15
	Lack of confidence	9	9
	Reluctance to speak	8	8
	Shyness	6	6
	Lack of fluency	4	4
	Anxiety / pressure	1	1

6.3.1 Lack of opportunities and practice

As can be seen in Table 6.5, instructors and lecturers highlighted a number of specific challenges ranging from answering questions and speaking clearly to difficulties with unplanned real-time speaking situations. Several instructors reported that students very often had difficulty with these because they lack opportunities to speak English and generally need more practice interacting and communicating in English in order to become more proficient. Instructors 3 and 16 reported that speaking is generally difficult for local HK students because being raised in Hong Kong, where the large majority speak Cantonese as their daily language, they generally do not get much exposure to English or practice speaking it.

> **Instructor 3:** I think they definitely find speaking the most difficult one. Because with speaking, you have to produce the language. And, you know, they don't get much practice producing [English]

> growing up here in Hong Kong. So, they have a bit more difficulty formulating sentences and coming up with the right language to use in conversations. It's just purely because they don't have enough, they don't get enough practice, and they don't get enough exposure [to English] growing up to really utilize speaking at a high level.
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> **Instructor 16:** I feel their speaking, especially in recent times, is more of a struggle for them just because of the lack of practice.

Thus, one common and recurring sub-theme that emerged from the interviews related to speaking challenges was the general lack of opportunities to speak or to practice speaking.

6.3.2 Lack of confidence, shyness & reluctance to speak

Instructors and lecturers also noted the link between the lack of practice speaking English and an overall lack of confidence. They reported that the students' lack of exposure to spoken English combined with their lack of practice speaking English often results in a lack of confidence, shyness, and a reluctance to speak.

> **Instructor 20:** Speaking [is most difficult] because of the lack of confidence for one thing, and also, they severely lack practice, so they struggle with fluency and pronunciation.
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> **Lecturer 3 (Humanities):** I think that that tends to be a different kind of issue that takes place, there can be less confidence. They can struggle with things like fluency, and even presenting an argument, which is a skill that people increasingly need. It's something that I do find students struggle with.

In terms of differentiating between *shyness* and *reluctance to speak*, the findings are reported here based on what was reported verbatim by instructors and lecturers. Ostensibly, instructors and lecturers used the different terms purposefully and were referring to separate issues: *shyness* referring to the emotional state of being shy around other people, whereas *reluctance to speak* in an L2 can invariably be linked to a wide number of factors unrelated to shyness. For example, some students may be very comfortable speaking in their L1 in class but reluctant to speak in an L2. Instructors and lecturers also indicated that many of these issues were often linked with lower levels of English proficiency. Two lecturers, one from the Faculty of Business and one from the School of Hotel and Tourism, and one Instructor from the ELC noted that students from both Hong

Kong and mainland China often lacked confidence, were shy, and were reluctant to speak out in class.

> **Lecturer 2 (Business):** In terms of speaking, I believe it's kind of common for Hong Kong students, or even for mainlanders, they seldom speak out during the lectures; they are afraid of answering questions, but all these years I have been trying very hard to encourage the students to answer. Luckily, in my lectures, even though we have a big class, we still have some students willing to answer my questions.
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> **Instructor 11:** I would probably say that based on their in-class performance, and also what they say in private consultations, that what they most often ask for help with is speaking. I think because it's one of those things that are not very confident, and they're not often very fluent.
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> **Lecturer 12 (SHTM):** I think what hinders them from speaking is not just about language, but also their personality. They're very shy. So, I challenge them to talk. I tell them that no matter what they say, there's no right or wrong answer. I even toast the microphone, microphone in front of their face, you know, but they're, they're very shy. So, I think it's a combination of their personality and the language barriers.

Instructor 19 elaborated and highlighted the cause-and-effect relationship between students' perceived reluctance to speak English and their overall lack of practice. They noted that students' perceived reluctance to speak English in class invariably results in even fewer opportunities for them to practice speaking, creating a type of vicious circle preventing many students from improving their speaking skills.

> **Instructor 19:** It's something that I find that many of my students here are reluctant to do. So, the type of class that I like to teach, which would be much more communicative in style, where I ask them to work in groups, whether it's something about working groups together on something, or even if it's just something where I'm asking them to answer questions in the class, it's something that they are very much reluctant to do. And because of that, I feel like they're not getting as much practice as they are with reading and writing. So yeah, I think perhaps the reluctance has caused some sort of negative effects on the amount of practice that they're getting through speaking, which means that they tend to be quite a bit weaker than in the other skills.

Instructor 18 emphasized the lack of exposure to English prior to university but also highlighted a common perception by instructors and lecturers of many students' reluctance to speak.

> **Instructor 18:** I think it's because they don't have the exposure before they get to university. You know, I don't think they're in like, English-rich environments at school. Speaking also requires a lot of confidence. And I mean, I don't know if you agree, but I've never worked anywhere where so many people claim to be almost pathologically shy or introverted. But basically, I think that they're just not required to speak much in English.

Hence, in terms of speaking challenges, the excerpts above highlight that from the perspectives of both the instructors and lecturers, a common theme of a general lack of confidence, often resulting in shyness and/or reluctance to speak, was intertwined though much of the data.

6.3.3 Lack of fluency

Another sub-theme that emerged was related to students' difficulties with communicating their ideas fluently in English. Lecturers and instructors highlighted students' lack of fluency when speaking and difficulty expressing ideas in English.

> **Lecturer 7 (C&E):** So, when they join, when they start their learning in the university, I think the most difficult one will be the speaking, because they understand what we are teaching, but sometimes when they want to ask questions, I found it's pretty difficult for them to express what's their actual question.

Several other instructors and lecturers also alluded to some students' general lack of fluency as a factor associated with their speaking challenges, noting the links between this and their lack of practice and opportunities to speak English.

6.3.4 Unplanned real-time speaking

Related to the issue of synchronous skills discussed in Section 3.2.2, one instructor noted that the level of difficulty and challenges for students in terms of speaking largely depends on the type of speaking they are doing. Specifically, the instructor distinguished between planned and unplanned speaking activities and explained that students tend to have less difficulty with planned and prepared spoken presentations than they do with real-time spoken interactions, such as spontaneous conversations with fellow classmates, instructors, or lecturers.

> **Instructor 12:** I suppose you'd have to start differentiating between a planned speech event such as a presentation, and, you know, synchronous, unplanned events such as, you know, an off-the-cuff conversation. So, they're two different things. I mean, if the student has enough time [to plan]. But yeah, so you'd have to really start talking about the speech event. But for sure, any kind of real-time communication would be more challenging.

This observation by Instructor 12 highlights an important distinction between what might be perceived as students' abilities in terms of speaking based on planned and rehearsed oral presentations (often with the assistance of notes and cue cards) versus their abilities to communicate and interact in spoken English in more spontaneous activities. Many might argue that the latter would be much more representative of students' actual abilities and challenges related to speaking.

6.4 Writing

As indicated previously in Figures 3.2 and 3.3, 30% of instructors and lecturers considered writing to be the most challenging language skill for students. **Table 6.6** includes writing as the main theme and identifies six 'challenges' sub-themes and three sub-themes linked to causes and factors. While both the instructors and lecturers reported a variety of specific challenges that students face, the large majority centered around three sub-themes: Expressing ideas clearly and logically; expressing ideas in correct English; and using appropriate academic style.

All of these writing sub-themes related to challenges were initial *A priori* type codes, and no other new codes emerged from the data. Three new sub-themes came (*grounded* codes) related to causes and factors, however, did emerge from the interviews and two are expounded below. These sub-themes included: Lack of exposure to written English; lack of practice writing; and reluctance to write, and reasons for why they perceived writing to be especially challenging for students.

Table 6.6 Theme & subthemes: Writing

	Description	*Participants*	*References*
Main Theme	Writing	31	31
Sub-themes (challenges)	Expressing ideas clearly and logically	8	8
	Using appropriate academic style	7	7
	Expressing ideas in correct English	4	4
	Planning written assignments	2	2
	Organising ideas in coherent paragraphs	2	2
Sub-themes (causes & factors)	Lack of exposure to written English	4	4
	Lack of practice writing	3	3
	Reluctance to write	1	1

6.4.1 Expressing ideas clearly and logically

Eight participants made references to students' difficulties in expressing ideas clearly and logically. Several noted that students seem to struggle with this as many do not appear to have the requisite vocabulary or grammatical knowledge to be able to write clearly, while others focused on students' difficulties with producing cohesive or coherent texts. One lecturer explained that writing is difficult for many students even when writing in their L1, but significantly more difficult when writing in an L2. The lecturer also echoed what other instructors and lecturers reported in terms of students' challenges using appropriate academic style when writing.

> **Lecturer 3 (Humanities):** Well, I think writing is hard. Even in a first language, written language is hard, right? And argumentation or prose is hard to put together. But I think that becomes all the more so when you're writing in a second language, and one in which the, you know, some of the rhetorical traditions, even the academic rhetorical traditions can be very different. So, I think that can be a problem. So, I would say, you know, writing substantial long pieces can be quite hard work for students.

Lecturer 3 offers an important point here by noting that writing, and specifically academic writing, is generally difficult for many students in either an L1 or an L2. In terms of the other three macro skills, speaking, listening and reading are much more natural in an L1, with the first the first two requiring very little effort. On the other hand, writing in English, the instructor explains requires

the effort of producing not only the language, but also following rhetorical traditions and appropriate stylistic features, many of which may be much more difficult depending on the distance between the English language and the L1 of the writer. Thus, while writing can be difficult for L1 writers, L2 writers often face greater obstacles.

6.4.2 Using appropriate academic style

Similar to Lecturer 3, Instructor 10 explained that the style of academic writing that students are required to do at university is generally why they find it especially challenging. Rather than simply being able to generate words and phrases, and formulate grammatically correct sentences, when writing academic essays, students need to be able to structure their writing and organize sections logically.

> **Instructor 10:** Because our writing is unique to, well, I mean, it's not particularly about the grammar, or the vocabulary they use. This is, of course, part of it, but it's more about how to present ideas in a logical flow. So, you need to do a lot of planning, and you need to think a lot of think a lot about how you're going to structure the things that you're going to write.

Instructor 10 pointed out that academic writing comes with inherent burdens that other types of writing do not. In writing academic essays, not only do students need to focus on grammar and academic vocabulary, but they also need to develop strategies and practices associated with planning and preparation of their writing before they begin. Many students may not have had much practice in planning and preparation of their writing prior to coming to university. Thus, when they must write academic texts that are more coherent and cohesive, they face additional difficulties.

6.4.3 Lack of exposure to written English

Four participants pointed to a general lack of exposure to written English as a principal reason for Hong Kong students' difficulties with writing in English. Instructors 7 and 14 were among the six instructors who considered writing to be the most challenging language skill for students. Instructor 7 pointed to a general lack of exposure to English for local HK students, which results in them not having sufficient vocabulary to express or articulate their thoughts in English.

> **Instructor 7:** Students have told me that they cannot think of words to express their thoughts, to put in their writings. It's about you know, a word bank. Especially, I guess, for local students, they don't have that exposure or chances to communicate with others or foreigners, you know, to really practice English in their daily lives. So, that's why when it comes to writing in the university, they don't have words to express themselves.

Instructor 14 questioned the amount of exposure to English that students were receiving in local Hong Kong secondary schools prior to coming to an English-medium university and highlighted the difficulties that many students have with 'the basics of essay writing'.

> **Instructor 14:** I think they have the most difficulties in the beginning with our writing, I think it's very challenging for them. I don't know what kind of background they get from high schools. But even with the basics of essay writing, they seem to have trouble with it.

Similarly, another instructor attributed students' general lack of exposure to English as the primary reason they struggle with producing written texts but also highlighted the relationship between students' low levels of writing skills with their perceived lower levels of reading in English. The instructor believed that most local students were not reading enough in English or obtaining enough language input to be able to produce the language (output) when writing. Moreover, the instructor indicated that not only do many students struggle with writing, but also that many students' writing skills in English are not at the level needed to achieve academic success at an English-medium university.

> **Instructor 4:** Writing is another production skill, right, they've got to produce the language. And again, while they might have a bit more practice with writing than they do say, speaking, again, though, it's not at the level that it needs to be to succeed at to succeed at an English-medium instruction university. And again, maybe this is because of a lack of exposure or lack of practice growing up. To write well, you have to, of course, be able to read well, and have a lot of exposure to reading in English. And they just don't have that exposure to be able write at the level that's demanded of them. So probably it's the two skills that are related to producing the language that they have much more difficulty with than the than the receptive skills.

Thus, as Instructor 4 notes, many students' lack of exposure to written English is likely related to a lack of reading and a general lack of English. This is not surprising given that the majority of students use Cantonese as their daily language and that, even at the university level, may not be receiving exposure to English other than what they have in their classrooms.

6.4.4 Lack of practice writing

In a similar vein, Instructor 5 spoke of the changes in the way many students normally write these days. The instructor noted that students' general writing practices have changed considerably in recent years in comparison with how, what, and the amount that students were writing in the past.

> **Instructor 5:** I mean, compared with the past, I think they don't have many chances to write. And the way that they write is rather informal. Okay, that's because of the technology, like WhatsApp, the texting. So, at university, when they are required to write academically for their assignments or assessments, I've seen that they encounter difficulties.

This instructor highlighted a more recent issue in terms of students' writing challenges noting that given the advances in technology in recent years, students are most likely writing less overall. As students' writing nowadays generally consists of 'chat' texting involving writing very short informal messages using instant messaging technology such as WeChat or WhatsApp, their writing may be much shorter, less formal, and less frequent than it was only a decade ago. Consequently, at university when students are required to write extended formal academic texts, often they invariably struggle to do so. As such texting practices become increasingly common, writing practice among students may decrease dramatically, which could result in increased challenges in terms of students producing cohesive and coherent written texts at university.

6.5 Listening

Data from the instructor and lecturer interviews showed that their perceptions of students' general ability in terms of listening skills was somewhat varied. On the one hand, the majority of instructors considered listening, as a receptive skill rather than a productive one, generally to be less challenging for students than either speaking or writing. On the other hand, being a synchronous activity occurring in real time, listening was thought to be more challenging than writing by some of the instructors. They reported that students often have considerable difficulty with listening comprehension, not only in terms of understanding lectures, but also in other common academic and non-academic situations, such as understanding questions, concepts, and understanding spoken language during spontaneous informal conversations.

Table 6.7 Theme & subthemes: Listening

	Description	*Participants*	*References*
Main Theme	Listening	14	14
Sub-themes (challenges)	Understanding main ideas of lectures	6	8
	Understanding lecturers' accents	4	4
	Following a discussion	3	3
	Understanding key vocabulary	3	3
	Listening to everyday conversations	2	2
	Taking brief clear notes	1	1
Sub-themes (causes & factors)	Lack of exposure to spoken English	8	8
	Rate of speaking / delivery	2	2

6.5.1 Lack of exposure to spoken English

Differing somewhat from the findings of the instructor interviews, the lecturers generally found listening to be more challenging for students. Eight participants noted that they believed that listening difficulties for students could generally be attributed to a lack of exposure to spoken English prior to entering university as described by Instructor 19:

> **Instructor 19:** Listening for some reason is quite difficult for them. I think that maybe it might be due to a lack of hearing native speakers, or proficient speakers of English throughout their schooling.

Similar to writing and speaking, students' general lack of exposure to English, either to reading or writing English or to practicing speaking English, was believed to be the main reason for students' listening challenges. As noted previously and again by Instructor 19, many students simply lack much exposure to spoken (and written) English, and when they enter university and are required to listen to lectures in English, often for more than one or two hours, they simply do not have the required practice or skills for it.

6.5.2 Understanding lecturers' accents

Instructors and lecturers also mentioned that students often face considerable difficulties understanding various accents in English due to the many varieties of English they now encounter at university. Lecturer 15 emphasized that L2 listening in EMI settings is challenging for both students and lecturers and made the point that lecturers teaching through English might struggle with English pronunciation, making lecture comprehension more difficult for students.

> **Lecturer 15 (HSS):** I think that [listening] can be difficult for the students and the instructors as well, because many lecturers, they are not native speakers, and also for students, especially for some adult learners who join in after working for several years, it's really not their favorite part to learn using a second language. And also for teachers, teaching in a second language is also challenging as well. So, because the pronunciation is not a 100% standard, and also students, they are also struggling for the English listening parts, right? It is tricky, absolutely a tricky part.

Lecturer 2 explained that some students seemed to comprehend very little of his lectures and described noticing their confused facial expressions during classes. Moreover, Lecturer 2 questioned whether the lack of comprehension by students was due primarily to their listening levels or instead to how his lectures were being delivered.

> **Lecturer 2 (Business):** In the lectures, I find that some students do not really catch what I'm saying. I'm not sure whether it's my problem or their problem, but at least I can abide by their facial expressions. I can see they're struggling and not very clear about what I'm saying. But in lectures, normally I try to make, I try to use very simple English to teach. Hopefully, I hope they can really get it.

Other instructors elaborated on the issue of accents and noted that many students, especially those from mainland China, reported difficulties understanding L1 English-speaking lecturers as well as local Hong Kong lecturers because they generally have had little exposure to such accents. In contrast, instructors and lecturers indicated that local and international students reported difficulties understanding lecturers from mainland China as their accents in English were different from what they were used to.

> **Instructor 16:** Listening is difficult, it's challenging, it's new. So, to have things explained by someone who is also not a native English speaker, they're finding that a problem. And because now a lot of the professors here are from the mainland, and a lot of, the majority of our students are from here in Hong Kong, so, they find the accents very difficult. And yeah, and I've had students who have told me they actually cannot understand some of their prompts, and that they really struggle.

> They said that if it wasn't for the clear, like, PowerPoint notes, or the course book, they just wouldn't understand the lecture at all.

One instructor pointed out that given the varied English proficiency levels between students in most classes, some students might have difficulty interacting and understanding other students, especially if they are from a background where they had very little exposure to spoken English during their secondary school years.

> **Instructor 14:** If there are a range of levels, they might have difficulty dealing with students that have a higher level of speaking, or indeed understanding the lecture if especially if they come from a background that they're not familiar with and have an accent that they're not familiar with.

Alternatively, some instructors and lecturers felt that listening was generally easier for students than the other skills, primarily because it had to with reception rather than production, but also because students, especially those from EMI secondary schools, typically had quite a bit of exposure to listening in English during their formal schooling. Instructor 10 pointed out that at the tertiary level, students generally are required to listen to English in their courses on a daily basis. Consequently, students are generally more motivated to listen during lectures in order to be able to acquire the subject content knowledge they need to achieve academic success.

> **Instructor 10:** I think listening will be easier. It's related to motivation. Because they have to listen every day, you know, because all of our lessons are in English, so, they really have to listen to English no matter what.

Nevertheless, as mentioned previously, some instructors indicated that they simply didn't have enough information to be able to evaluate their students' listening skills because they reported that listening comprehension was never evaluated or assessed in any of the courses that they taught.

6.6 Reading

Overall, the instructors and lecturers generally indicated that they considered reading to be the least difficult of the language skills. As mentioned previously, 14 of the 20 instructors and 14 of the 20 lecturers considered reading to be the least challenging language skill for students. Instructors commented that, unlike either speaking or writing, students are not required to produce

any language. Additionally, they reasoned that unlike listening, which is generally occurring synchronously and in real-time in their classes and interactions with others, reading is typically done at their own pace, and that students typically have ample time to go through written texts to work out meanings of unknown vocabulary. Moreover, instructors mentioned that it is very common for students to use translation tools and online dictionaries for assistance with their text comprehension.

Table 6.8 shows the five sub-themes related to reading. Two respondents identified 'understanding academic texts' as challenging for students, and another indicated that students have difficulties 'reading quickly to get overall meaning'. Both of these sub-themes were part of the initial 10 *A priori* type codes linked to reading. None of the instructors or lecturers identified or discussed any of the other eight initial codes, so they were not included below or in the final codebook for instructors and lecturers. In terms of causes and factors linked with reading challenges, three sub-themes emerged from the interviews. These included a 'lack of practice reading', a 'lack of patience to read', and a 'lack of reading culture'.

Table 6.8 Theme & subthemes: Reading

	Description	*Participants*	*References*
Main Theme	Reading	6	6
Sub-themes (challenges)	Understanding academic texts	2	3
	Reading quickly to get overall meaning	1	1
Sub-themes (causes & factors)	Lack of patience to read	3	3
	Lack of practice reading	2	2
	Lack of reading culture	1	1

6.6.1 Lack of patience, practice, and of a reading culture

As reading was generally considered easier than all of the other language skills, very few instructors or lecturers elaborated on reading challenges or the causes and factors linked to these challenges. Three participants indicated that they believed students generally lacked patience to read, especially when it came to reading lengthy or academic texts. Two more participants noted

that students often lack practice reading texts, and that they often use translation tools for large chunks of texts. One instructor argued that there seemed to be less of a reading culture nowadays among students in Hong Kong. As a result, students generally read less, and this results in lower levels of vocabulary learning.

> **Interviewer:** Why do you think reading is challenging for students?
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> **Instructor 3:** I don't think there's very much of a local reading culture. So, the idea of just kind of, we were all brought up with the idea that you read to your children, and you read, and actually, through some form of osmosis, you kind of develop a broader vocabulary.

Despite these seemingly valid points related to students' apparent challenges in terms of reading, the overall sentiment by participants was that reading was generally easier than other skills. Consequently, only a limited number of them discussed related challenges.

6.6.2 Varying perspectives on reading

While the majority of instructors and lecturers indicated that they believed that students generally found reading easier than the other three language skills, there was a range of perspectives offered. Many explained that students likely found reading easier than both the productive skills and the synchronous skills because they did not have to produce the language nor did they need to comprehend it in the moment like listening.

> **Instructor 16:** Reading is easiest. They can use a dictionary; they can read something over again; they can translate it if they have to.
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> **Instructor 17:** Reading is easiest, because you have control. That's not saying it's easy, but certainly easier. And that's borne out with, for example, that IELTS tests.
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> **Instructor 14:** I think reading is probably easier for them. They seem to be able to comprehend quite high-level texts, probably at a more advanced level than their other skills.

Another instructor pointed out that reading is likely the easiest for students given that they have had the most practice with it from an early age and noted that most L2 English students in Hong

Kong were most likely exposed to written English before learning how to listen, speak, or write the language.

> **Instructor 4:** I'd say reading is probably their strongest skill, because they get that from a very young age, you know, in their first English classes they usually are shown and learn the alphabet, and they learn how to read first. Which is, of course, opposite to how we learned it right? As native speakers we learned we learned to listen to it first, and then then speak it, then read it, then write it. But I think their process was that they learned to read it first.

Moreover, one instructor indicted that reading was generally easiest, not only because students typically had more experience with reading from an early age than they had with the other language skills, but also because students seemed to enjoy reading and prefer it to other language activities/skills.

> **Instructor 19:** I've found that when it comes to reading, students really enjoy it. It might be something that they've done a lot when they were at school, so, they enjoy it. It's also something where they don't have to produce the language, so they're quite happy to do it.

However, other lecturers and instructors noted that, similar to their understanding of students' listening, they simply did not have enough evidence to adequately evaluate or assess students' reading abilities. They pointed out that reading, like listening, is seldom taught and not directly assessed at the tertiary level. Hence, they reported have much less knowledge about undergraduate students' reading levels in English.

> **Lecturer 14 (Design):** I don't have much experience on asking them to read something. So, I don't really know about their reading level.
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> **Instructor 18:** To be honest, I've always felt I have a very poor sense of what my students' reading skills are like, because very few of our courses incorporate teaching reading. And we don't have any reading tests or anything like this. Yeah, so I've always actually felt quite limited in my understanding of what their reading skills are.
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> ———
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> **Lecturer 12 (SHTM):** I think well, I can't really say much about reading and listening because they [students] are nodding their heads. I don't know whether they're really understanding or not, but their default mode is nodding.

Alternatively, one instructor, dissenting considerably from the rest of the group on reading, viewed it as *the* most challenging language skill for incoming first-year students.

> **Instructor 1:** Reading is probably the most challenging for incoming students, year-one students. And the reason is that academic texts are so difficult to understand. You know, with skills like writing, speaking, and listening, they can produce some sort of language and they could understand, even though they might not be able to follow a lecture and understand 100%, they will still be able to get something out of it. But with a text, you know, like a journal article let's say, you know, from my experience, from my observation, students really don't have a clue. First of all, what they're reading, especially if the article contains a lot of technical, disciplinary language, for example, in EUS[6], even though the theme may be water shortages, the stuff that we ask students to read tends to be quite technical. So, there are many words they don't understand, and that affects their comprehension of the meaning and the text itself.

This instructor, while clearly in the minority, does make several valid points relating to students' difficulties with academic texts. The instructor highlighted the difficulties and obstacles that students encounter when reading academic texts that contain large amounts of technical vocabulary and discipline-specific terminology and noted that when students are faced with this type of written material, they have a very difficult time in terms of overall comprehension. Moreover, Instructor 1 claimed to have witnessed first-hand how many students struggle with reading comprehension, while some of the other instructors and lecturers noted that they were unsure of their students' reading levels. In particular, they noted that their views on reading seemed more speculative given that, similar to listening, reading comprehension is rarely, if ever, assessed.

6.7 Vocabulary

As mentioned in Section 2.5.5, participants were directly asked if they considered English vocabulary to be particularly challenging for students and, if so, what aspects of it were challenging and why. All 20 of the instructors and 19 lecturers answered the question (39*) and vocabulary

[6] English for University Studies (EUS) is a 3-credit course for year-1 undergraduate students at the PolyU which aims to prepare students for effective study in the University's English-medium learning environment.

was coded (*A* priori) as a separate main theme. All of the sub-themes, which include four 'challenges' and six 'causes & factors' emerged directly from the interviews as *grounded* codes.

Table 6.9 Theme & subthemes: Vocabulary

Themes	*Description*	*Participants*	*References*
Main Theme	Vocabulary	39*	39
Sub-themes (challenges)	Technical / Discipline-specific vocabulary	20	20
	Academic vocabulary	6	6
	Colloquialisms / idioms	4	4
	Formal vs informal vocabulary	1	1
Sub-themes (causes & factors)	Limited vocabulary knowledge	20	20
	Use of online dictionaries / translation tools	12	12
	Lack of vocabulary-development skills	4	4
	Lack of exposure to unfamiliar vocabulary	3	3
	Lack of exposure to authentic English	1	1
	Lack of incidental vocabulary learning	1	1

As seen in **Table 6.9**, 26 of the 31 references to vocabulary challenges related to 'technical / discipline-specific' (20), and 'academic' vocabulary. Four participants noted 'colloquialisms / idioms', and one mentioned student difficulties distinguishing between formal and informal vocabulary. Several instructors and lecturers attributed these challenges mainly to 'limited vocabulary knowledge'. However, 12 participants noted the 'use of online dictionaries / translation tools' as a cause and/or factor impacting students' vocabulary challenges.

6.7.1 Limited vocabulary knowledge

A total of 20 participants referred to limited vocabulary knowledge as the main cause / factor in terms of students' vocabulary-related challenges. Instructor 4 attributed students' challenges with 'limited vocabulary knowledge' and noted that students' retention of learned vocabulary is often an issue, especially when there is also a lack of vocabulary use or practice. Similarly, Lecturer 2

and Instructor 11 both noted that students will rely on a limited number of words, including inappropriate or incorrect vocabulary.

> **Instructor 4:** It's absolutely, definitely one of the more challenging areas. Yeah, they're very limited in terms of vocabulary. Because even if they've, you know, learned these words, and they've been exposed to them, or they've seen them in a book, or they'd been taught them, you know, in secondary school. You only really know how to use vocabulary if you've seen it enough times, and if you've practiced and tried it out, trying these words out on a 'trial and error' basis, to know how they're used and what context they're used in.
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> ———
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> **Lecturer 2 (Business):** They may have a limited vocabulary, so they'll always use the same words, or even use some wrong explanations.
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> ———
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> **Instructor 11:** Again, it's not something we focus on at the ELC. I think. We do very little specific vocabulary practice and acquisition and so on. And I think I do think that the students' vocabulary is fairly limited, I think more limited than we often take into consideration. I think maybe in the ELC courses, it doesn't matter all that much. But I think it must be very difficult for many of these students to do the academic courses considering how limited their vocabulary is.

Instructor 3 was among those who identified students' difficulty with unfamiliar technical or discipline-specific vocabulary and noted that it is common for students to encounter this type of vocabulary in a wide variety of academic disciplines. Lecturer 8 also highlighted students lack of technical or discipline-specific

> **Instructor 3:** I think it's a very difficult area for them. If they're studying their subject, you know, whatever it is, whether it's design, or hotel tourism, or engineering, whatever it is, they have to encounter a lot of technical vocabulary, most of which will be in English. So, they're having to make sense of that.

Related to limited vocabulary knowledge in English, Instructor 3 also attributed students' difficulty with vocabulary in English to the relatively large number of words in the English language compared to other languages. The instructor explained that L2 students often have difficulty differentiating between words given the vast number of words with similar meanings in English.

> **Instructor 3:** Another factor is that English has a very broad and deep vocabulary bank. So, there's so much to choose from. And there's a lot of kind of nuanced language, you know, slightly different meanings depending on the context. And sometimes it might be very difficult for them to be able to understand exactly what the differences are.

Other instructors indicated that they believed that local and mainland students generally have limited English language input prior to entering university and therefore have fewer opportunities to develop their vocabulary in English. Similarly, Instructor 1, who considered reading to be the most challenging, emphasized the crucial link between vocabulary knowledge and being able to understand written texts in English. When asked about students' levels of vocabulary and to what extent it was difficult for students, the instructor explained that it was 'very difficult' for students, and that many of the students did not have adequate levels of vocabulary in English to be able to comprehend the academic material they were given.

> **Instructor 1:** They don't know enough words, in my opinion, for their disciplines. And I know it's not their fault, because they've only started a few months ago when they started studying a subject and they entered university. But we give them, you know, huge undertakings. So, from day one, they have to engage in reading literature, you know, books, journal articles, business reports, whatever it happens to be, you know, depending on what they study, of course. But yeah, they just don't have enough vocab to follow the line of argument of an article, or perhaps the subtleties of how academics write, to understand the meaning.

6.7.2 Use of online dictionaries / translation tools

Both instructors and lecturers discussed the use of online dictionaries and translation tools by students, and while the majority of lecturers seem to view these tools as mostly helpful, some lecturers and several instructors pointed out some disadvantages. Several pointed to what they perceived as students' overdependence on online dictionaries and translation tools, and several instructors viewed it as the primary reason that students' vocabulary knowledge is not sufficiently developed. The instructors explained that because students predominantly rely on such tools to quickly look up unfamiliar words and phrases, often to complete assignments or assessments, and often when they're under time constraints, less vocabulary is being learned and retained.

> **Instructor 3:** One of the factors nowadays is with the online stuff. You've got so many online tools, you know, thesaurus.com and free thesaurus.com, It's actually quite easy, if you're writing an essay or a script for a presentation, to quickly kind of latch on to something, you know, just to submit that paper, and then as soon as it's submitted it, it's gone. It doesn't really kind of have any lasting effect in terms of learning vocabulary.
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> **Instructor 4:** And, you know, when they're studying here, they tend to look a word up in a dictionary, or they might, you know, do a Chinese translation, and it comes out with some random English word. And they just throw that into the paper, even though it makes no sense, or the vocabulary word is not used at all in this situation. And that's the reason why they don't tend to use it correctly; it's because, of course, they haven't seen it used correctly, or they haven't been exposed to the correct usage enough times to really ingrain into their brain.
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> **Instructor 8:** I mean, they actually can't figure out what exactly the words are, but you know, they just sloppily copy them from dictionaries, or you know, just Google translations, and then they copy these words into their essay, which creates more trouble.
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> **Instructor 18:** My students put, whenever there's a text, they just paste the whole thing into a translation tool. And then they read it.

6.7.3 Vocabulary development, unfamiliar vocabulary & authentic English

Several participants highlighted four other causes / factors in terms of vocabulary. First, and related to the apparent dependence by students on translation apps and online dictionaries, four participants noted a lack of vocabulary-development skills among students. Instructors 3 and 9 explained that many students no longer develop strategies to learn and retain vocabulary, for example, by means of creating notes, lists, or journals, because they have so many other immediate online tools available.

> **Instructor 3:** I don't think they record stuff; I don't think they take notes and record vocabulary that is not directly related to their degree, not all of them, but as a generalization, I don't think they kind of actively look to kind of develop it or to enlarge it.
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> **Instructor 09:** It's very difficult for them because they don't form a good habit of learning the vocabulary.

In a similar vein, three participants noted students' lack of exposure to unfamiliar vocabulary, and one noted a lack of incidental vocabulary learning. This was echoed by Instructor 4 who indicated that many students may not practice enough English vocabulary to be able to develop it further.

> **Instructor 4:** They don't have enough practice trying out the vocabulary to, you know, to check that they've got it right.

One instructor indicated that students often lack exposure to real-world authentic English and instead seem to rely on very basic non-authentic language and simplified translations from their own L1s. As a result, students often choose language that is inappropriate and 'unnatural' sounding.

> **Instructor 20:** One of the things they do is they tend too often is choose inappropriate vocabulary. They'll will choose things that are not kind of idiomatic speech skills, we use things that we think is more correct, because again, they've had little exposure to natural English. So, the English can come off as just sounding unnatural. They choose vocabulary translations from their own language, translating their idiomatic language into English, or just choosing overly formal vocabulary when it's unnecessary.

Overall, the consensus by participants was that students' limited vocabulary knowledge was a result of reduced vocabulary exposure and English input, which was often exacerbated by a dependence on online dictionaries and translation tools. While such tools were generally thought to reduce immediate challenges in the short-term, they noted that dependence on such tools likely decreased students' overall vocabulary development.

6.8 Background & previous medium of instruction (PMOI)

In terms of possible variables or factors associated with students' language-related challenges, neither the instructors nor lecturers were specifically asked if any of the challenges faced by students varied based on factors such as background, previous medium of instruction (PMOI), or academic discipline, but some of these themes did emerge during the interviews. Several instructors and lecturers explained that they felt students' levels of challenges were often linked with some of these variables. Both the instructors and lecturers focused predominantly on two areas: EMI vs CMI backgrounds and local vs non-local students. In terms of differences between groups in terms of academic discipline (AD), neither the instructors nor the lecturers appeared to be well placed to make such comparisons. While the lecturers occasionally discussed what type of language activities students were required to perform in their respective disciplines, generally, they were not in a position to compare their students' performances or proficiency levels with other disciplines as they did not teach students from other faculties or departments. Similarly, while a few of the instructors occasionally (and rather informally) mentioned that some students from

various disciplines might have higher skills in some areas and weaker skills in other areas, they generally avoided making any specific comparisons between the disciplines.

6.8.1 Previous medium of instruction (PMOI)

Table 6.10 shows one of the main themes which is related to EMI vs CMI background. Fifteen participants mentioned that students' language challenges can vary greatly depending on if they come from an EMI secondary school background or a CMI background. Fifteen participants explained that those students from CMI backgrounds typically experience greater language-related challenges than those from EMI backgrounds as the former lack the exposure to English and the practice using English that students from EMI backgrounds experience.

Table 6.10 Theme: EMI vs CMI background

	Description	*Files*	*References*
Main Theme	EMI vs CMI secondary schools	15	15

Instructor 17 explains that those students from EMI backgrounds are generally used to studying through English whereas those from CMI backgrounds are not.

> **Instructor 17:** I think I think if they've come from EMI secondary schools, I think they're used to it. I think the ones that have not come from EMI schools, it's not. I think it's, it's the habit of learning using English, as the medium of instruction is an extension on what they did at secondary level.

Instructor 8 indicated that students from CMI schools reported that they often experienced fear of speaking English in class as they often feel that they lack practice and opportunities needed to interact in English.

> **Instructor 8:** We have increasingly more students coming from CMI schools. So, the students repeatedly mentioned to me in my classes that they are actually very scared of speaking and interacting with other students and the lecturer in class. And I guess this is also because of their lack of chances.

Instructors 10 and 15 argued that students from EMI backgrounds are generally equipped with greater vocabulary knowledge than those from CMI backgrounds, giving the former a decisive advantage over the latter in terms of academic performance.

> **Instructor 10:** So, if you're talking about their depth of vocabulary, that could be a problem, especially for those from CMI schools. That could be a problem, because they probably don't have enough vocabulary.
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> **Instructor 15:** It depends on the students. So, if they come from a Chinese medium education context, they actually find the vocabulary difficult for their content, apart from, you know, describing everyday life vocabulary. As for people from EMI backgrounds, they tend to have a better grasp of the academic vocabulary that is needed for whatever their study.

Alternatively, some participants indicated that while students from a CMI or other non-English backgrounds generally are thought to initially struggle with the transition to EMI, these students who enter university with lower language levels may be able to achieve greater language gains over their four years of study than students from EMI or international schools, as well as the international students who often enter with higher levels of English. These instructors believed the initially weaker students' challenges decreased substantially, or at least more than the ones from EMI or international backgrounds, many who might be experiencing language fossilization. The instructor noted that while the weaker students generally might have a difficult transition at the beginning of their studies in year one, as they get more exposure and practice, and when they start developing strategies, their language proficiency improves, and they make noticeable language gains.

> **Lecturer 12 (SHTM):** For Hong Kong local students, BSc students, maybe they don't see much improvement in writing, but you know, some Korean students or mainland Chinese students, starting with a year one, year two, year three, year four, I think their English will progress a lot.
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> **Lecturer 18 (HSS):** I think they get used to English speaking or using English as their learning language from year one to their senior year, especially for some, I think for the mainland Chinese students, you know, they do need to have some time to adapt to the learning environment. So, especially for those students who like, are not very good or not very proficient in English at the beginning when they enter the university, there's much more room for them to improve, right? So, if they study hard or pay attention, or take the opportunity to speak to write, they can increase and improve much more quickly.

> **Instructor 13:** Especially those students whose high schools are from CMI schools, that is, Chinese-medium instruction. They need to adjust when they are in year-one in PolyU, and I think there could be a slow transition period, but when we meet them, say for example, in years three and four, they get used to it.

Instructor 13 further elaborated that the students from EMI schools, who generally are entering the university with somewhat higher English-language proficiency levels, may view EMI at the tertiary level to be merely an extension of their academic experiences during secondary school. Consequently, students from EMI secondary schools may be making fewer overall language gains than those from CMI schools in Hong Kong, or those from Mainland China, who generally enter university with considerably less previous exposure to English and with relatively lower English-language levels.

6.8.2 Background: Local and non-local students

Table 3.11 shows the theme related to differences between groups in terms of local and non-local students. All comparisons made by both instructors and lecturers were based on the three main groups of students: local Cantonese-speaking students from Hong Kong; Putonghua-speaking students from mainland China; and non-Chinese international students from various backgrounds and various L1s.

Table 6.11 Theme: Local & non-local students

	Description	*Files*	*References*
Main Theme	Local & non-local students	11	11

Several of the participants believed that the majority of local students from Hong Kong generally have higher language skills than their mainland counterparts, especially in terms of speaking and listening, due to their experience in EMI secondary schools and greater exposure to English. Alternatively, some instructors suggested that the mainland students had superior writing skills.

Lecturer 7 (C&E): I think for the Hong Kong students, their listening is relatively good compared to the mainland students.

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Lecturer 6 (Humanities): When you're talking about local students, and perhaps also mainland Chinese students, for local students, their speaking is usually better, or their writing's not so good. And for mainland Chinese students, sometimes they're shy and their spoken English is not so good, but their writing is a bit stronger. And we have students like from India or South Asia, they are very strong in in speaking, and also perhaps reading, but their writing, you know, sometimes it's a bit disappointing.

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Instructor 17: Most difficult, though, probably speaking. Lack of opportunity, especially with the mainland students, who, from what I gather, prior to coming to the university have very little opportunity to speak the outside or inside the classroom setting.

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Instructor 13: If you just talk about local students, I think writing will be kind of difficult for them, because I found that students in Hong Kong do not like writing. So that could be a little bit challenging for local students here. If you talk about, say, for example, mainland students, I think speaking will be a challenging component for them. Because I suppose they've got less chance to speak in their hometown. So perhaps this is one of the areas that they need to focus on.

In terms of the non-Chinese international students, sometimes known as 'internationals', most of the participants indicated that the international students generally had higher levels of proficiency and fluency.

Instructor 16: I find the international students that I have had in the past or have now, are either native English speakers, or they might not be a native English speaker but they grew up in a very EMI environment, so almost native-speaker level.

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Instructor 19: With the international students that we've got, I don't think that there's much of a problem, certainly with the speaking, I think, perhaps accuracy might be a bit of an issue, but there's less of an issue with fluency with a lot of the international students.

Generally, both instructors and lecturers pointed out many local Hong Kong students come from an EMI background, and that they might enter university with a slight advantage over students from backgrounds with less exposure to English, such as those from mainland China. Nevertheless, these advantages may often only be temporary as the participants noted that students entering university with weaker proficiency levels may be making greater and faster language gains.

Participants also seemed to concur in terms of the 'internationals' who seem to generally have higher proficiency levels than both their local and mainland counterparts.

6.9 Language improvement over time

Instructors and lecturers were asked if they felt that students' language challenges generally decreased over their four years of studying in an EMI setting, and if their language skills generally improved. The large majority of instructors indicated that they did believe that students' proficiency levels improved by being in an EMI setting throughout their four-year undergraduate studies. A total of 18 out of the 20 instructors reported that they believed that at least some of the students' language skills had improved, although a few instructors indicated that they believed many students' improvement was likely only marginal. Nearly all of the lecturers (*n*=19) also believed that students' language-related challenges decreased over time and that skills improved over time with more exposure to and practice with English.

Table 6.12 Theme & subthemes: Language improvement / decreased challenges

	Description	*Participants*	*References*
Main Theme	Language improvement / decreased challenges	37	37
Sub-themes (causes & factors)	Increased exposure to English (general)	22	22
	Increased writing practice	10	10
	Increased confidence	8	8
	Increased speaking practice	7	7
	Increased exposure to academic style	6	6
	Increased listening practice	3	3
	Increased reading practice	3	3
	Increased fluency	3	3
	Early language support	3	3
	Development of coping strategies	3	3
	Potential for language gains	3	3
	Increased motivation	2	2
	Increased language practice (general)	1	1

As can be seen in **Table 6.12**, sub-themes under the main theme of Language improvement / decreased challenges include only causes and factors as these were the sub-themes that emerged during the interviews. In response to the question related to whether or not students' language-related challenges decreased and whether or not their language skills improved, instructors' and lecturers' responses were almost exclusively related to students' overall improvements and the perceived causes and factors rather than noticed improvement in any specific micro-skill. The majority of instructors and lecturers identified general increased exposure to English as the main factor leading to students' perceived language improvements. They also identified increased practice in both writing and speaking, as well as increased exposure to academic English and increased levels of confidence as the main reasons for language improvement and decreased language-related challenges.

6.9.1 Increased exposure to English

A total of 22 participants attributed students' apparent language improvements to an overall increased exposure to English while studying at an EMI university for four years. The majority of instructors and lecturers noted that for many students, the semi-immersive setting at EMI universities allows for opportunities for students to practice their English skills in all four areas, and that over time their language skills generally improve, at least to some extent and in some areas, and their overall language-related challenges decrease as well. Several instructors and lecturers noted the significance of four years of exposure in an EMI setting and the opportunities it affords students to practice their English.

> **Instructor 4:** Yeah, I'm sure they improve. Of course, you know, time cures everything, right? I mean, after four years, they get more exposure to reading and writing. Maybe a little bit of speaking, but yeah, speaking, reading and writing, definitely, they get a lot of exposure over those four years.
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> **Instructor 19:** I'm sure they do. If they're immersed in it throughout all of their university life, I'm sure that their level of English does improve.
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> **Lecturer 14 (Design):** So, when, when they're first coming in year one - or even during the admission interviews, compared with when they graduate, their English level absolutely improves,

> because they have to deal with everything in English, and their teachers are from international backgrounds.

Instructor 1 highlighted a noticeable difference between students' challenges in year 1 versus year 2 and reported fewer challenges faced by students in year 2 due to increased exposure and use of English. The instructor also noted less anxiety and being more comfortable working in groups and giving presentations.

> **Instructor 1:** From my experience, and what I gather, for my students, you know, it's much easier for them to understand, or to follow lectures in their second year of study. I think it's a matter of exposure as well. Speaking, yes, definitely [improves], because many courses require them to give presentations. So over time, they get less nervous, and they get the hang of how to do presentations, how to work together in groups, you know, working on projects. Yes, definitely writing and reading too. That's because of the sheer amount of reading they have to do.

6.9.2 Increased language practice

Related to the sub-theme of increased language exposure was increased language practice in the various skills. As shown in Table 3.11, a total of 24 participants cited increased practice as a main factor in students' language improvement and decreased challenges. Most of the respondents (17) focused on students' improvements in terms of the productive skills, speaking and writing. Ten participants noted increased writing practice while seven mentioned increased speaking practice. Increased reading and writing practice were each cited by three participants, and one participant cited increased practice in general.

> **Lecturer 1 (HSS):** I think definitely they will be more talkative, I mean, more able to express in English because they have got more presentations practice. And they have got the face to face, sometimes doing community service with the clients, clinical practice directly with the patients.

6.9.3 Increased confidence & motivation

Several participants also noted that with increased exposure to English and increased practice over the duration of their studies, students appeared to exhibit greater levels of confidence. Five instructors and three lecturers indicated that they saw increased confidence in students between their first year of study and their subsequent years, some noting increases after only one term or one year of learning in an EMI setting.

> **Instructor 5:** I can see the students, like, from the first lesson and the last lesson, it seems that when they get used to the language mode, they're more confident, and they will do better. They know what they are expected to do.
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> **Instructor 4:** By the time they reach year four, compared to where they were in year one, and maybe this just this also has to do with you know, just more, they're more confident by the time they get to year four. And not just confident in the language, but just confidence and you know, how to succeed in university. And that that probably bleeds into their usage of English where they're there. Because they're more confident trying it out. They tend to be more competent users of the language.
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> **Instructor 20:** I teach first year and final year students, and certainly the final year students, in general, their English appears to be stronger, much more confident, much more used to it, and I assume that is because they've had exposure to English. Again, I don't know. But yeah, so not all of them. Some of them are still pretty weak. But there is a big difference by the end of the fourth year, with their use of English, so something's happening.
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> **Lecturer 2 (Business):** After they join the university, in many subjects they need to do presentations, and gradually, they feel more confident and comfortable to speak. So, towards the end of their study, after three or four years, they are much better.
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> **Lecturer 20 (Design):** I think for sure [there is improvement], and a lot of it is self-confidence.

Two instructors also cited increased motivation over time. One instructor described noticing substantial language differences between first and final-year honors students, explaining that the latter were noticeably superior with fewer challenges and increased motivation.

> **Instructor 14:** I teach some honors students now that are doing a capstone project. And I'm actually really surprised at how high that level is. I mean, obviously, these are students that have made it through and they may be going on to do further study and research. So, they're more motivated, but definitely the level is much higher than the first-year students. And they don't have the same challenges that first-year students have. It's quite surprising how much better they are.

6.9.4 Development of coping strategies

Three participants indicated that the decrease over time in terms of language-related challenges faced by students may also be linked or attributed to their development and use of various coping strategies. Instructor 11 indicated that there is likely a combination of improvements in language

proficiency and increased effective coping strategies that students develop to deal with various language challenges during their studies.

> **Instructor 11:** I think that the challenges decrease. I do think they improve their language skills, gradually. I think maybe they don't think their language skills improved, hugely. I also think it's partly that there's a slight increase in language skills, but also a huge increase in strategies to deal with this. So partly, simply coping mechanisms, but also some fairly effective strategies, perhaps, the way they approach tasks, maybe they cooperate more, and they learn how to deal with it. So, I do think it gets better over time.

Alternatively, Instructor 16 focused on students' listening challenges and emphasized that in terms of difficulties that students experience understanding some speakers' accents, rather than being a case of students' improving their listening skills, many students simply develop coping strategies to work around such obstacles.

> **Instructor 16:** I think they probably develop these coping strategies that they adjust to the accents. I mean, I've definitely had these final year students that complain about certain tutors or professors because of their poor language skills. But also, I think that they know how to deal with it. And they know how to self-study; they know how to get around it. So, I would go with that, that they just have, they're better equipped by the time they get to their fourth year.

6.9.5 Limited improvement

A few instructors and lecturers expressed some doubt that there were substantial improvements in students' language skills. Some also explained that while there seemed to be improvements in some skills, other challenges often remained. Lecturer 6 believed that there was little improvement in terms of students' speaking and listening skills but thought that their writing skills did show improvement over time. The lecturer explained that through the sheer amount of papers and essays required of the students, they become accustomed to the technical jargon and writing academic papers.

> **Lecturer 6 (Humanities):** I don't see a lot of change in terms of their speaking and listening, but their writing and reading does improve, I think, you know, in the first year they have a lot of technical jargon, it's very difficult. But by year three or four they get familiar with, you know, all these things, and they can read much faster. And also, their writing improves because after producing so many term papers and assignments, they gradually grasp the conventions of academic writing, so you can see a significant improvement by year three and year four. And if you're looking

> at their capstone projects, then there's much improvement from their first to their second-year writing.

Instructor 17 indicated that despite being in an EMI setting for four years, many students may not be making significant language gains because they might not be motivated enough to take initiatives to self-study. The instructor felt that many undergraduate students in Hong Kong need more guidance and encouragement to be able to improve their language skills and make substantial language gains.

> **Instructor 17:** I think if they had continued in the same manner within secondary school, and that spilled over into tertiary, they would gain quite a bit. But because they're being too much left to their own devices, and they, many of our students are not good independent language learners, and they need to be guided all the time. Not always, again, but if we're looking at the collective, they need to be guided. And if they're not being guided, they may drift away a bit.

Instructor 18 explained that as the language instructors do not generally teach the same students from year one to year four, they were not able to determine whether or not students' language skills generally improved over time. The instructor did, however, offer some insight into some apparent language challenges over time between students in various disciplines, and stressed that while some students' language-related challenges may decrease over time, their language skills do not necessarily improve.

> **Instructor 18:** So, my answer to that is I don't know, because I've not ever had the same students in the first year, second year, third year and fourth year. So, where I could maybe form some kind of impression of that process? I teach final-year nursing students who are very good, but they're good on arrival, because it's competitive to get in. I teach final year fashion students who can barely write a single sentence. And I can guarantee that they've made no progress over the last four years. But in terms of challenges [decreasing], yeah, because I would imagine their listening skills have improved. If they are listening to lectures in English for four years, whether they like it or not, their listening skills are going to improve. So yeah, maybe their challenges have decreased. But has their proficiency improved? No, not necessarily.

Similarly, another instructor suggested that some students' language-related challenges, in particular local students from EMI secondary-schools, might not be improving due to language fossilization over many years.

> **Instructor 6:** I just feel that they will stay the same in terms of challenges, because, you know, some of the errors [students make] seem to be much more fossilized.

This instructor's point relating to language fossilization that may result in some students' limited improvement or lack of improvement was indirectly echoed by other participants who suggested that while some higher-level students might not improve significantly, weaker students who might not start university with higher levels may actually experience greater language gains. Alternatively, those already entering with adequate or high English skills may not be making substantial or notable language gains in some areas but may be honing and refining the specific language skills as needed for academic activities in EMI settings. Moreover, the findings from the interviews indicate that both instructors and lecturers generally agree that there are indeed language improvements by the students over time, and that this is attributed to the overall increased use of and exposure to English during their four years of study.

6.10 Chapter Summary

In summary, the key qualitative findings from the instructor and lecturer semi-structured interviews related to RQ1 are outlined below. The findings presented in this chapter reveal a number of common perspectives and themes in terms of their perceptions of students' overall language related challenges, specific challenges, and possible causes and factors. In terms of students' most challenging language skills, the majority of both instructors and lecturers generally considered the productive skills, speaking and writing, to be more challenging than the receptive skills, listening and reading. Roughly two thirds of both groups considered speaking to be more difficult than writing, with several participants indicating that the synchronous aspect of speaking often presented students with more difficulty than writing, which, while difficult in its own right, would usually be performed asynchronously and with much more time. Instructors from anglophone countries who reported English as their L1 considered speaking to be most difficult for students while their local Hong Kong counterparts predominantly viewed writing as most challenging. In the group of lecturers, there was no such notable difference between speakers of the different L1s. Reading was generally viewed as the least challenging language skill, albeit with a few notable exceptions. For clarity and brevity, the remaining key points are presented below in bullet point format.

Speaking

- Difficulty with fluency, speaking clearly, asking/answering questions, discussions
    - Lack of opportunities and practice to speak, lack of confidence
    - Reluctance to speak, shyness, anxiety

Writing

- Difficulty expressing ideas clearly & logically, using appropriate academic style
    - Lack of exposure to formal written English, lack of practice

Listening

- Difficulty understanding main ideas of lectures, understanding lecturers' accents
- Not assessed or evaluated, lack of evidence related to students' listening skills
    - Lack of exposure to spoken English, varieties of spoken English

Reading

- Difficulty understanding academic texts, reading quickly for overall meaning
- Not assessed or evaluated, lack of evidence related to students' reading skills
    - Lack of patience to read, practice reading; perceived lack of reading culture

Vocabulary

- Difficulty with technical / discipline-specific, academic vocabulary, idioms, & formal vs informal vocabulary
    - Limited vocabulary knowledge, reliance on online dictionaries & translation tools
    - Lack of vocabulary development, exposure to new & authentic vocabulary

Background & previous medium of instruction

- Students from EMI schools generally enter university with higher English language skills than those from CMI or non-English backgrounds
- Apparent differences in proficiency levels between local and non-local students. Local HK students may have higher levels than mainland students due to experience and

previous exposure to English. International students tend to have the highest levels of English.

Language improvement over time

- Language skills improve over time in some skills & to some extent; Language-related challenges decrease; sometimes only limited improvement in specific areas
    - Increased exposure to English, academic style & increased practice
    - Increased fluency, confidence, motivation
    - Language support early on in years 1 & 2
    - Development of coping strategies

Chapter 7 – Discussion

7.1 Introduction

This chapter discusses the key findings of this study in relation to the existing empirical evidence and relevant theory in the literature. This discussion compares the quantitative findings from the student questionnaire with the qualitative findings from the semi-structured interviews of the three groups of EMI stakeholders, the students, lecturers, and instructors. It also compares the findings from the interviews between the three different groups of EMI stakeholders. Chapter 7 is divided into ten sections. **Section 7.1** introduces the chapter, provides an overview of its content outlining the various sections. **Section 7.2** discusses the quantitative and qualitative findings related to perceptions of students' most challenging language skills. This includes a comparison of the two different sections with the questionnaire, a separate comparison of the findings of the three different groups of EMI stakeholders, and a comparison between the findings of the questionnaire and the semi-structured interviews. **Section 7.3** discusses perceptions of students' challenges related to writing in terms of the specific micro-skills identified in the questionnaire, and the sub-themes from the interviews. **Section 7.4** discusses perceptions of students' challenges related to speaking, the specific micro-skills identified in the questionnaire, and the sub-themes from the interviews. **Section 7.5** discusses perceptions of students' challenges related to reading, the micro-skills, and the sub-themes from the interviews. **Section 7.6** discusses students' challenges with listening with a specific focus primarily on the issue of 'understanding lecturers' accents'. **Section 7.7** discusses students' difficulty with vocabulary in EMI settings and the various sub-themes related to challenges and contributing factors. **Section 7.8** discusses how the aforementioned challenges may vary based on gender, background, L1, academic discipline (AD), or previous medium of instruction (PMOI). **Section 7.9** discusses how the challenges faced by students may change over time. Specifically, the discussion centers around two themes: 1) changes over time and 2) students' language improvement. Lastly, **Section 7.10** provides a brief discussion of the implications of language-related challenges in EMI HEIs.

7.2 Students' most challenging language skills

This section discusses the quantitative and qualitative findings related to perceptions of students' most challenging language skills. This includes a comparison of the two different sections with the questionnaire, a separate comparison of the findings of the three different groups of EMI stakeholders, and a comparison between the findings of the questionnaire and the semi-structured interviews.

7.2.1 Questionnaire findings

In terms of which of the four macro language skills (writing, reading, speaking, & listening) students generally find most challenging, findings from the online questionnaire were somewhat mixed. As explained in Chapters 3 and 4, there were two different sections of the questionnaire which were intended to be used to examine students' overall perceptions of what they consider to be most challenging (Section B & C), and what they consider to be specifically challenging in terms of the micro-skills (Section C), using the EMI Challenges Scale (ECS). The findings from Section B, the 4-item scale, revealed that students found writing to be most challenging, followed by speaking, both with mean averages over 4.0. Reading and listening were considered to be less challenging with mean scores below 4.0. In short, data from the 4-skills scale showed that students found the productive skills, writing and speaking, to be more challenging than the receptive skills, reading and listening. This echoes findings from Kamaşak et al., (2020) who actually used the ECS in the Turkish context to gage students' language related challenges in EMI courses and found writing and speaking most challenging for students. Alternatively, data from Section C using the ECS, which combines the average mean scores of the combined micro-skill items, indicated that writing was the most challenging followed by reading, speaking, and listening respectively, coinciding with earlier findings from Evans and Morrison (2011a) and Shepard and Morrison (2021). In other words, ostensibly, the two different instruments reveal two different sets of findings. Or do they? As discussed in Chapter 3, the purpose of the 4-skills scale (Section B) was to allow respondents to rate the four macro-skills (writing, reading, speaking & listening) individually and holistically. Hence, when respondents rate the four individual language macro-skills, their perception of each skill is based on each person's own weighting, how relevant each skill is to their own language and learning activities, and how they measure its overall level of difficulty. In contrast, when using the ECS, each of the micro skills, no matter how significant or

relevant it is to the respondent, carries equal weighting (6.6% each for writing items; 10% each item in speaking, reading, and listening). For example, in the writing category, 'using appropriate academic style' might be a skill that is not only quite challenging for students, but also one which requires a great deal of their time, attention, and effort. On the other hand, students might consider writing a bibliography to only be required a few times per year, regardless of how difficult or easy it is. Yet, both items contribute equally to the average mean scores. In short, as the two scales measure macro-skills differently, inevitably, they will yield different findings. More importantly, however, the ECS is the instrument by which the numerous specific language skills (micro-skills) are measured, which is central to this study and to the RQs.

7.2.2 Interview findings

As reported in Chapter 6, one of the first themes that emerged from the instructor and lecturer interviews in terms of students' language-related challenges was related to the differences between productive and receptive language skills. The large majority of both the instructors and lecturers considered the productive aspects of speaking and writing linked to students' difficulties with the two skills. Of the 20 instructors, 19 considered either speaking (13) or writing (6) to be most challenging for students. Of the 20 lecturers, 18 of 20 thought either speaking (12) or writing (6) was most challenging. Some postulated that local students' challenges in terms of speaking and writing were linked to their education in local Hong Kong public secondary schools, which tend to be more teacher centered, in which students are generally listen and read more than they write or speak. This would partly coincide with findings from the student interviews which identified a general trend among local students of a lack practice and/or opportunities to speak English. Moreover, aside from the lack of practice or opportunities of local students to 'produce' English as they generally use Cantonese as their daily language, the productive skills may be generally perceived as more challenging as it is in those two skills, writing and speaking, in which they are assessed in their university subjects (Lo, 2021). In other words, as students are rarely, if ever, assessed in listening or reading, and only in speaking and writing, this would indicate the level of importance placed on these skills by all three stakeholders: instructors, lecturers and students. As such, it is reasonable that all three groups would find the productive skills most important, and given their place in assessment, perhaps most challenging. Alternatively, some instructors noted that they could not estimate their students' receptive skills (listening and reading), but that they

did not seem to outwardly struggle with these skills. However, some supposed that listening could be more challenging for students than reading as it usually occurs in real-time where reading happens at the students' own pace. They also believed that students generally have time to read and work out the meanings of any written texts they find challenging. As noted above, the study by Kamaşak et al., (2021) examining language challenges of Turkish students also pointed to the two productive skills as most challenging. Additionally, as noted in Joe and Lee's (2013) study, what language skills students perceived to be challenging was not necessarily consistent with their actual performance, which was shown to be similar to those studying the same subject content through Korean.

7.3 Writing

The majority of students, instructors, and lecturers all considered writing to be the most challenging language skill for students. From the student interviews, findings showed that they struggled with writing challenges more than any of the other three macro skills. This was primarily due to difficulties using appropriate academic style. The students expressed that they had trouble with the formality of the language they were required to use in their writing essays and that they had not previously been exposed to such formal and objective writing styles. Moreover, even the high proficiency, high level students reported difficulties with academic language, writing academic using academic style for writing, reading difficult academic texts and struggling with unfamiliar technical or academic vocabulary, echoing a substantial amount of previous literature (Evans & Morrison 2011a; Shepard & Morrison 2021; Kamaşak et al., 2021; Arnbjörnsdóttir & Prinz, 2017).

It is important to note here that while academic writing by its very nature can be relatively difficult for students using either their L1 or an L2, as discussed in Section 2.6.1, an abundance of literature suggests that academic writing in an L2 poses considerably more challenges than it does for L1 writers (Appel & Murray, 2020; Chang & Schleppegrell, 2011; Chen & Baker, 2010; Eckstein & Ferris, 2018; He, 2020; Hong, 2019; Hyland & Milton, 1997; Keck, 2014; Lin & Morrison, 2021; Mur-Dueñas, 2012; Pan, 2018; Pan & Liu, 2019; Pérez-Llantada, 2014; Shen et al., 2023; Wang,

2012). Accordingly, L2 academic writing in EMI higher education settings presents far more difficulties for students than it does for those writing in their L1 in non-EMI settings.

7.4 Speaking

As mentioned previously, speaking was considered to be the most challenging language skill for students by 13 of the instructors (65%) and 12 of the lecturers (60%). From the student interviews, the finding generally indicated that speaking, while initially difficult for many local students and those with less exposure or opportunities to practice speaking, became much easier over time. Mean scores of the questionnaire data indicated that students found 'speaking accurately in terms of grammar', 'communicating ideas confidently', and 'communicating ideas fluently', and 'participating actively in discussions', The least challenging activities indicated by students were 'speaking from notes' and 'using visual aids (e.g. PowerPoint)'. Students in the interviews indicated that speaking was generally considered more difficult than most of the other skills, mainly due to the fact that the synchronous aspect of speaking often presented students with difficulties in unplanned real-time speaking activities. In contrast, students generally found planned and scripted speaking less challenging.

It is also important to note that the survey data indicated that from a 'macro-skills' perspective (Section B), students indicted that they generally found speaking substantially more challenging than reading. Alternatively, from a combined 'micro' skills perspective, students average scores in each of the 'micro-skills' indicate that they generally find the combined listed skills of *speaking* to be less challenging than the combined listed skills of *reading*. In other words, students' initial perceptions of speaking, a productive skill, is that it is generally more challenging than reading, a receptive skill, which also echoes findings from the interview data from all three stakeholders as well as previous findings from Kamaşak et al., (2021).

7.5 Listening

In terms of listening challenges, the findings from the online questionnaire and student interviews were quite similar and demonstrated that overall, students generally found listening to be less challenging than the three other macro skills. However, the findings from the online questionnaire

indicated that ‘understanding lectures, accents’, were found to be substantially more challenging than any of the other nine listening-related items from the ECS scale. It was evident from the findings of both the questionnaire and the student interviews that students generally found the other listening micro-skills less much less challenging than understanding lectures accents. Moreover, unlike the findings of the instructor and lecturer interviews, students did not appear to experience many challenges in terms of listening to understand key vocabulary, taking notes, understanding questions, or generally understanding the main idea of lectures. On the other hand, all of these became much more challenging when students were faced with lecturers’ difficult and unfamiliar accents. Students also noted that the rate of speaking and delivery of lectures could also be a factor contributing to students’ difficulties with lecture comprehension and struggling with lecturers’ accents. In other words, if the students are experiencing challenges listening to lecturers with heavy accents, an increased rate of speaking / delivery would exacerbate the situation further.

The student interviews showed that understanding lectures accents was by far the most prominent issue in terms of listening, as noted in chapter five, out of a total of 82 references to listening challenges, 79 of those referred directly to understanding lectures accents, this was compared with only eight referring to classmates accents, indicating a significant divide between what the students saw as lectures, challenging accents compared to the students accents, which they generally found comprehensible. These findings are supported by earlier studies that examine students challenges with lecture comprehension (Airey & Linder, 2006; Evan & Morrison, 2011; Evans & Morrison, 2018; Hellekjaer, 2010; Zhou et al., 2021). and echo previous research by Shepard and Morrison (2021) who found that although listening was generally considered less demanding than academic writing, reading, or even speaking by the majority of students, a considerable portion of students reported great difficulty understanding or following lectures. Similarly, Evan and Morrison’s (2011a) earlier research also noted students’ challenges with lecturers’ accents, although not to the same extent as reported more recently, which can be attributed, at least in part, to the increasing number of both international students and teaching faculty at HK EMI HEIs.

The student interview findings concurred mostly with the quantitative data, indicating that students generally viewed understanding key vocabulary and understanding lectures with lower proficiency, and understanding the main idea of lectures to be relatively easy. These issues were only referenced

a handful of times. Students from the interview group also typically attributed their challenges in terms of understanding lectures accents to a lack of exposure to different varieties of English. However, there seemed to be a sort of limit or threshold in terms of to what extent students perceived lecturers' accents. While the majority of students generally seemed to acknowledge that difficulties understanding accents could most often be attributed to their own lack of exposure to global varieties of English, there was a point where it became evident that no amount of exposure could render some accents intelligible. At least three of the high fluency students expressed that although they felt sufficiently exposed to a wide variety of English accents and could generally understand them, there were some speakers whose levels of English and heavy accents prevented meaningful communication.

This also related to students' perceptions of their lecturers, and in particular, perceptions of their lecturers' language proficiency (Abdeljaoued, 2023; Hendricks et al., 2018). Several students from the interview group raised concerns about their lecturers' levels of English proficiency and their preparedness to teach in EMI settings. One student in particular, Armand, noted that while some of the lecturers' subject-specific knowledge was clearly more than adequate, their levels of English often rendered their lectures incomprehensible, which had detrimental effects on students' attitudes, learning, and motivation. This is not surprising given that students are required meet specific criteria in terms of English language proficiency to be admitted to any of the HK EMI publicly funded universities, one would presume the teaching faculty to be prepared in terms of their language skills to deliver lectures in EMI courses (Airey, 2012; Byun et al., 2011; Pecorari et al., 2011; Sert, 2008; Tange, 2010; Wilkinson, 2013). As previous studies have shown, however, this is often not the case, and in many EMI contexts, there is no criteria or standards in terms of preparedness to teach in EMI settings (O'Dowd, 2018), but rather only assumptions that trained academics, especially those that studied in Anglophone countries, are sufficiently prepared to teach in EMI settings (Byun et al., 2011).

Interestingly, triangulating the perspectives of the students, instructors, and lecturers, there was a discrepancy between the three groups in terms of the causes and factors associated with students' listening difficulties. While the instructors and lecturers generally viewed students' listening challenges as less prevalent and seem to attribute them to a general lack of exposure and

proficiency, the students themselves regarded listening and lecture comprehension as more challenging. Moreover, many of the students seem to feel that their listening challenges are not generally attributed to their own listening proficiency, but rather to the accents or English proficiency levels of their lecturers. The instructors and lecturers also assumed that students were unaccustomed to 'native' speakers of English, but for many of the students, the more prevalent issue was a lack of exposure to various accents and global varieties of English.

7.6 Reading

While the data from the online questionnaire, particularly from the ECS, depicts reading as the second most challenging language skill for HK undergraduate students in EMI universities, perceptions of reading challenges from the semi-structured interviews are somewhat mixed. The findings from instructors, lecturers, and student interviews generally indicated that they considered reading to be the least difficult of the language skills, raising questions once more related to productive vs receptive and synchronous vs asynchronous skills. However, regardless of where exactly reading falls in the order of difficulty, there is general consensus in this study from both the quantitative and qualitative data in terms of reading challenges faced by students. From the questionnaire findings, it was clear that students once again found reading challenges stemming from issues of unfamiliar vocabulary. Interview responses showed that students found 'understanding specific vocabulary' the most challenging aspect of reading, followed by the similar 'working out the meaning of difficult words', both items clearly related to unfamiliar vocabulary. Students also found that reading quickly to find information and reading quickly to get overall meaning were both challenging, suggesting that L2 learners in EMI settings need ample time to properly navigate through written texts with sufficient time to comprehend both specific information and overall ideas.

In terms of specific reading challenges, findings from the students semi-structured interviews revealed that students typically struggled with reading in part because it generally took a significant amount of time and added extra workload. Students reported that issues with academic style and the abundance of unfamiliar academic, technical, or discipline specific vocabulary rendered their reading effectiveness and efficiency quite low. Moreover, several students noted

that although they felt prepared to study academic subjects through English, they typically encountered a large number of academic or technical words when reading that they seldom or never used previously in their daily lives. Hence, they spent a large amount of time referring to dictionaries or conducting Google searches to look up the meaning of unfamiliar vocabulary, highlighting what Grabe and Zhang (2013, p. 11) refer to as "the challenge of reading long passages, a lack of fluency in reading". Other students explained that understanding more technical vocabulary was more challenging because unlike understanding general vocabulary, where one could understand meaning from context or build upon previous vocabulary knowledge, understanding specific technical vocabulary was quite difficult, and took students much more time to work out meanings. Moreover, students often reported feeling as if they didn't understand the main ideas of the texts immediately after they completed reading it. This was in part due to what they perceived as complicated technical vocabulary, or as one student put it 'complicated nouns', which are discipline specific terms. These findings correspond with those of previous studies (Guarda, 2021; Grabe & Zhang, 2013; Shepard & Morrison, 2021; Tatzl, 2011) which highlight several challenges faced by students when reading in EMI settings, and in particular, when reading academic texts (Eriksson, 2023 ; Hellekjaer, 2009, Jin et al., 2024). Similarly, students noted that a substantial amount of reading was quite heavy in terms of subject-specific jargon. They explained that this type of material was not only difficult to read and learn, but that the students were often required to use the same unfamiliar jargon and vocabulary in their own writing, research papers, and assessments, and presentations. This also follows research by Grabe and Stoller (2020, p. 138) who note that students often struggle with "heavy reading loads, challenging texts, and the need to make effective use of textual information for multiple purposes (e.g., writing papers, giving oral presentations, completing projects)."

Lastly, and although not as common, some of the more highly fluent students noted that they had difficulties reading what they considered to be translated texts from their lecturers. Students reported that they would often receive instructions, texts, emails, or summaries of academic information that was rife with common mistakes, inaccurate grammar, and at times, texts that were ambiguous making it difficult to decipher either the overall meanings. One of these students explained that this was likely due to the lecturers' own lack of vocabulary and low English proficiency.

7.7 Vocabulary

The findings related to vocabulary challenges from the semi-structured instructor and lecture interviews matched closely with those from the student interviews. Vocabulary challenges were referenced 47 times by students, with technical / discipline-specific vocabulary, referenced 22 times, somewhat more than academic vocabulary, referenced by students 14 times. Students reported that low frequency technical vocabulary was particularly challenging as they were often unrelated to other, general vocabulary words, which made working out the meanings of technical words and terms quite challenging. The reported vocabulary challenges in this study closely resemble findings from Evans and Morrison's 2011 study, which also cited students' difficulties with both academic vocabulary and technical / discipline specific vocabulary. Many of the students reported frustration that they were unfamiliar with so much of the required subject-specific vocabulary. Most had little to no exposure to such words and subject terminology prior to arriving at university, and they struggled with so many specialized words, concurring with earlier Hong Kong studies that also cite students' difficulties comprehending and acquiring discipline-specific vocabulary (Evans & Green, 2007; Evans & Morrison, 2011a). These issues with vocabulary, as mentioned previously, were also inherent to other language challenges in all of the four language skills, but in particular, listening and lecture comprehension. As several students reported, unfamiliar vocabulary rendered academic lecture comprehension quite difficult echoing previous findings by Hellekjaer (2010). In addition to affecting lecture comprehension, students reported that limited vocabulary knowledge also impacted their reading and writing, as shown in another four-year longitudinal study by Pessoa et al. (2014) in Qatar. These findings coincide with other previous studies which indicate that students often struggle to comprehend a variety of subject-specific words and technical terms during the course of their studies (Evans and Green, 2007, Evans and Morrison, 2011a, 2011b; Mežek, 2013; Yıldız et al., 2017).

7.8 Background, gender, & previous medium of instruction (PMOI)

In terms of possible variables or factors associated with students' language-related challenges, the findings of this study are somewhat similar to those of previous studies. In terms of differences in levels of language-related challenges based on gender, the findings of this study match closely with Kamaşak et al., (2021), in that there were no significant differences between females and

males in three of the four language skills, but there was, however, a statistically significant difference between the two groups in terms of listening. Similar to the findings in the Turkish study, female females found listening significantly less challenging than males.

In terms of first language differences between first language (L1) groups, these findings were quite similar to those of Shepard and Rose (2023) who examined language-related challenges among first-year undergraduates in Hong Kong and also found statistically significant differences in scores between the three types of L1 groups used in this present study: local Cantonese-speaking students (CL1), Putonghua-speaking students from mainland China (PL1), and non-Chinese speaking international university students (OL1). In the present study, findings revealed statistically significant differences between the CL1s and the PL1s in speaking, listening, and reading, with the Putonghua speaking students reporting significantly higher levels of challenges. Additionally, findings showed that the international students (OL1s) had significantly lower levels than the CL1s and PL1s in all four skills.

These findings are further supported by earlier studies (Kim et al., 2014; Huang, 2015; Chapple, 2015). In the study by Kim et al., (2014), the researchers found that the that international students had much higher levels of confidence in their language proficiency than did the local Korean students. In the Taiwanese context, Huang (2015) found there were significant differences between the international students and the local Taiwanese students in terms of language anxiety, motivation, and perceived academic success. The local students had lower self-perceptions of their English proficiency, which, in turn, resulted in them experiencing higher levels of anxiety, lower motivation, and lower achievements compared to the international students. Another study in the Japanese EMI context revealed similar results to this study. Chapple (2015) found that international students felt the disparity in terms of English proficiency was so prominent that they felt their participation in the EMI programme was fruitless as the learning pace and workload had been substantially reduced to accommodate the much lower levels of the local students.

In terms of differences in language challenges based on previous medium of instruction (PMoI), the findings showed significant differences between the four different PMoI groups. In short there were significant differences between the groups of CMI group and the OMI and EMI groups. The

CMI groups reported significantly higher levels of challenges in all four skills. Additionally, there were statistically significant differences between the groups of PMI group and the OMI and EMI groups. The PMI groups reported significantly higher levels of challenges than the EMI and OMI groups in all four skills. There were no statistically significant differences between the English medium instruction group and the other medium of instruction group, although the OMI group consistently showed lower levels of challenges than the EMI group. While this might seem somewhat counterintuitive, the OMI group reflected the non-local, non-Chinese speaking international students, while the EMI group was comprised almost exclusively of local Cantonese-speaking students who came from local EMI secondary schools. These current findings echo those of Aizawa and Rose (2020) who found that in the Japanese EMI context, even limited exposure to English in high school resulted in a more positive transition to Japanese EMI universities.

In addition to the four PMoI groups discussed above, as this study was conducted in the context of Hong Kong higher education, there was a need to look further at two specific sub-groups pertaining to PMoI: those from local EMI secondary schools and those from local CMI secondary schools. As discussed in previous chapters (2 & 4), Hong Kong public secondary schools are generally categorized as either CMI (Chinese (Cantonese) medium of instruction), secondary schools, which comprises the large majority at around 70%, and EMI secondary schools. Previous research (Lin and Morrison, 2010; Lo & Murphy, 2010; Tsang, 2009) has indicated that those students coming from an EMI background in Hong Kong not only have a better chance for admission to HK universities, but that they generally experience fewer language-related challenges at HK EMI universities as they have had previous exposure to English as a medium of instruction. Findings from this current study echo previous findings and reveal that, between the two groups, the students from EMI secondary schools reported statistically significant lower levels of language-related challenges in all four skills than those who came from CMI Hong Kong secondary schools. In other words, the students from CMI secondary schools reported significant higher levels of challenges than those from EMI backgrounds in writing, reading, speaking, and listening. Furthermore, it interesting that while the online questionnaire sample (n = 1,982) appeared highly consistent with most normal student demographics in HK at the tertiary level (i.e., L1, gender, AD), approximately 70% of respondents in the questionnaire reported coming from EMI HK secondary schools, while only 30% reported coming from CMI HK secondary schools.

Given that only 30% of secondary schools in HK are EMI and 70% are CMI, the numbers shown above should raise questions in terms of CMI students' access to HK higher education. However, this disparity is not a recent development, and as noted earlier, previous studies have found similar findings. Tsang's (2009) study revealed that students in HK CMI schools have around half as much chance of admission to HK HEIs than those from EMI schools. Lin and Morrison (2010) found that those from EMI secondary schools produced superior academic essays than those from CMI schools. Similarly, Lo and Murphy (210) found that found that students in the EMI schools generally showed greater vocabulary knowledge than students from CMI schools.

In terms of differences based on academic discipline, the findings revealed only that there were significant differences between a limited number of schools and faculties in terms of speaking and listening. In short, the students from the faculties of SHTM and FHSS reported significantly lower levels of challenges in both speaking and listening than the students from FCE and FAST. These findings, and in particular those related to the Faculty of Applied Science and Technology (FAST), appear to be in sharp contrast with those of Pun and Jin (2021, p. 1) who found that science students (n = 73) perceived a 'relatively low level of language and learning challenges'.

7.9 Language-related challenges over time

In terms of how students' language-related challenges may change over time, there are two key areas to address: 1) how these challenges change and vary year on year, and 2) if language skills improve over time.

7.9.1 Changes over time

Based on the findings of the student questionnaire, there were no significant differences between the year cohorts in terms of language-related challenges. In other words, the questionnaire did not indicate that Y1 or Y2 students face greater or lesser levels of challenges than those in Y3 or Y4. However, as the analysis only compared students at year levels, but not over time, it was not possible to show students' developmental journeys, only different students' challenges at different stages of their learning process. Nonetheless, based on the mean scores for each year, it could be inferred that students' perceptions of their linguistic challenges do not vary significantly from year to year (See Chapter 4). On the other hand, based on findings from the student interviews, it

appears that students' challenges do change over time. Based on students' interview responses, the findings seem to indicate that in terms of changes over time, students' trajectories could be broadly categorized into three types of developmental journeys.

In terms of the students with lower English proficiency levels and less previous exposure to English prior to entering university, there seems to be, not surprisingly, a difficult transition in Y1 when they transition from secondary school to university. These students are likely to struggle with productive skills, writing and speaking. This may be due primarily to them coming from CMI secondary schools in either Hong Kong or mainland China. Alternatively, they could be local students who attended English medium instruction secondary schools in Hong Kong, but who generally use Cantonese as their daily language and have limited exposure to English in their daily lives prior to coming to university. As mentioned, these students may experience challenges in the productive early on in Y1 and Y2, but after more practice and exposure, they make substantial gains in Y1 or Y2. Consequently, with more practice and exposure, they may experience fewer overall challenges in Y2 and Y3 in, for example, speaking or writing, but increased challenges in reading or listening. In Y3 and Y4, their challenges may evolve again based on numerous factors, including variables such as AD, workload, lecturers, courses, and types of assignments / projects. One important characteristic is that these students generally start university with relatively lower proficiency and less exposure to English. These students might report substantial challenges in different areas each year (See Section 5.2).

The second group may reflect the larger HK student demographic. These students could be from HK EMI schools and have had several years of exposure to English with medium to high levels of English. As reported in the student interviews, these students may not experience substantial changes in terms of their language-related challenges In Y1 or Y2 given that they transition from EMI secondary schools. Moreover, there could be some level of fossilization in terms of their language skills. In other words, they are not likely to experience immediate substantial changes, either positive or negative, as they are essentially transitioning from one EMI setting to another. Students from this group might identify between two and three different challenges each year, but it is unlikely that they will experience substantial changes year on year as they have had considerable exposure to English before university.

The third and probably smallest group would include those highly fluent or near-native speaking students from international secondary schools, either in HK or elsewhere. This group also likely includes the 'internationals', the non-local, non-Chinese students from various countries. These students would likely be in the OL1 (LI) and OMI (PMoI) groups, which generally reported significantly fewer language-related challenges than the other groups. While students from this group also experience some challenges in their Y1 or Y2, attributed primarily to unfamiliarity with academic writing and/or academic or technical vocabulary, their challenges are not likely to vary substantially or show much change over time. The findings from the student interviews indicate that these types of students' challenges did not vary year on year, unlike those of students with relatively lower levels of English. Instead, they remained relatively stable, with some of them saying that there was little to no change over the years. This is not surprising, given that students with high English fluency such as these generally enter university with relatively high levels of English. Unlike the lower-level students, for whom there is much more room to improve, much higher proficiency students, such as Derek, Hyun, and Armand, may only experience challenges that are predominantly centered around other speakers' language issues. In the case of these three students, they reported 'listening' as the most challenging language skill in all four years, citing 'lecturers' accents' as the main issue. Other students with very high fluency, such as Tatiana, Adelle, and Victoria, each reported the same challenge for three years and a separate challenge for one year (in these cases, only listening and writing). These findings are somewhat supported by earlier studies, such as those by Aizawa and Rose (2020), which reported that students with lower proficiency levels generally saw their challenges differ across the stages of their university study.

It is also important to highlight that these changes in terms of students' challenges over time did not always seem to be linear, and that students' challenges varied over time, often seeming to correspond to the introduction of various factors, such as difficult writing or speaking tasks, complicated academic texts, or unfamiliar accents. As noted by Pessoa (2014, p. 151) in her research on students' academic writing, students' writing development "is difficult to measure as students are constantly introduced to new genres", and that their progress "was not always upward".

7.9.2 Improvement over time

In terms of language improvement over time through learning through English at an EMI university, both the quantitative and qualitative findings indicated similar results. In the online questionnaire, there was one item related to language improvement. Students responded to a Likert-type scale with a 6-point scale ranging from 1 (strongly agree) to 6 (strongly disagree) to the following statement: 'My English has improved from learning subject content through English'. The questionnaire findings showed that roughly 90% of respondents believed that their language had improved from studying in an EMI programme. Moreover, the large majority of the semi-structured interview participants (students, instructors, and lecturers) believed that students' language skills improve studying through EMI (more than 90% in each group). In other words, in both the quantitative and qualitative findings, at least roughly 9 out of 10 students reported that their language had improved from learning subject content through English in an EMI HEI in Hong Kong. These findings generally echo earlier studies in the Hong Kong context, including research by Evans and Morrison (2011a, 2011b), who also concluded that students' generally reported language improvement over the course of their studies. Similarly, these findings are congruent with research from other EMI HE contexts (Aguilar and Rodríguez, 2012; Byun et al., 2011; Costa & Coleman, 2013; Huang, 2015; Macaro & Akincioglu, 2018; Park, 2017; Pecorari et al., 2011; Sert, 2008; Tatzl, 2011), which indicate that students' English language skills improve through studying in EMI programmes.

7.9.3 Triangulating multiple perspectives

In is important to note that through triangulation of the data from the three different groups of EMI stakeholders which participated in this study, we can better understand students' language-related challenges, their respective causes and factors, and how they may change over time. For example, in terms of the listening challenges experienced by students, while the instructors and lecturers generally attributed listening difficulty to students' proficiency levels and lack of exposure to proficient 'native' speakers, students revealed that the main listening challenge was understanding lecturer strong L2 accents. Moreover, this difficulty was initially seen by all three groups of stakeholders as an issue that would diminish over time. However, the longitudinal interviews revealed how for many students this persisted throughout their four years of study, and that even those highly fluent students with ample exposure to different varieties of English struggled to

understand heavy accents or less proficient lecturers. The MPIs also revealed that both the instructors and lecturers overwhelmingly felt that speaking was most challenging for students. On the other hand, the student interviews seem to suggest that speaking was somewhat less challenging, but this is likely due to the high proportion of international students as a result of the purposeful sampling approach explained in Chapter 3. In addition, and in sharp contrast to the survey findings from Section C, all three groups felt that reading was the least challenging language skill, which was more in line with the survey findings from Section B, which focused on the four overall language macro skills. This further highlights the apparent discrepancy in terms of the survey findings between Sections B and C, and raises questions about the potential misalignment between what find difficult overall versus what specific language tasks they find challenging. Moreover, the MPIs also revealed that all three groups were in agreement that speaking challenges did decrease over time, with the student interviews providing the most compelling evidence.

In short, by triangulating and bringing these perspectives together, a more comprehensive view of students' language-related challenges is uncovered. By means of analysing and comparing these different perspectives, a more accurate picture emerges of the various challenges, their extent, and how they can change over time. As a result, these findings can better equip those within these three groups of stakeholders, in terms which skills and strategies need more focus. Instructors can provide students with more appropriate, relevant, and focused support for their learning in EMI settings, while lecturers can enhance their subject content delivery to align better with students' potential language-related challenges. Moreover, students can receive more focused appropriate language support and development strategies that better align with their needs.

Chapter 8 – Conclusion

8.1 Introduction

This study has contributed to the expanding body of research on EMI by examining tertiary students' language-related challenges at EMI universities in Hong Kong through multi-perspective longitudinal research. The key findings were presented in the preceding chapters 4, 5, and 6.

The study was guided by the following research questions:

- What language-related challenges do undergraduate students face during their four years at Hong Kong EMI universities?
- Do these challenges vary based on background, previous medium of instruction, or academic discipline? If so, how?
- Do students' challenges change over their years of study? If so, how?

8.2 Review of aims and major findings

8.2.1 What did this study do?

This study examined language-related challenges faced by undergraduate students at EMI universities in Hong Kong. The project used a mixed-methods multi-perspective longitudinal design which combined a series of semi-structured interviews (153) over four years with a multi-institutional online survey. The semi-structured interviews were conducted at one university, with language-support instructors, subject-content lecturers, and undergraduate students. This included semi-structured interviews with 20 EAP language-support instructors, 20 subject-content lecturers, and 26 students who were tracked over four years throughout their undergraduate study. The study investigated language-related challenges of students and included the perceptions the lecturers and language instructors from an English-medium instruction (EMI) universities in Hong Kong. Additionally, it explores the interplay of language challenges with a range of background variables such as gender, L1, previous medium of instruction, academic discipline, and year of study. The online survey was administered at four Hong Kong universities: City University of Hong Kong (CityU), The Hong Kong Polytechnic University (PolyU), The Hong Kong University of Science and Technology (HKUST), and Hong Kong University (HKU), and a total of 1,982 students completed the survey.

8.2.2 What did this study find?

This study found that students' writing challenges are linked predominantly to difficulties with accuracy, cohesion, and using formal academic writing style, with the large majority of students reporting that their exposure to appropriate academic writing style prior to entering university ranged from little to none. Students' writing generally improves as they progress through their studies with increased practice and exposure to academic style. Students' speaking challenges primarily include issues with accuracy (grammar), fluency, and confidence speaking. Additionally, students perceive unplanned speaking in real-time to be considerably more challenging than planned speaking tasks (i.e., presentations). Students' reading challenges are linked to issues with unfamiliar vocabulary and unfamiliarity with academic texts. Students have difficulty reading academic texts, and struggle with reading quickly for specific or overall main ideas. In terms of listening, understanding lecturers' accents was shown to be the principal challenge as evidenced in both the student questionnaire and the student interviews. Students' vocabulary challenges generally centered around unfamiliar, academic, and technical and/or discipline-specific vocabulary. Students reported that although many had substantial previous exposure to general English vocabulary, low frequency technical vocabulary and academic vocabulary were quite challenging and difficult to learn.

8.3 Limitations of the study

This study is not without its limitations. The original scope of the study was intended to look at three topics related to EMI in higher education in Hong Kong. The topics were language related challenges faced by students, classroom language use, and effectiveness of EMI programs in Hong Kong. However, after consultations with supervisors, and T.O.S and C.O.S. examiners, it was decided to reduce the scope and limit it to language-related challenges. While the author is confident that this was the appropriate decision, the original research focus and design, which included overlapping topics (e.g. classroom language use – listening / speaking challenges), was substantially altered.

Next, in terms of student participants, students from four universities were included in the study. However, the sample sizes are considerably unequal, and the Hong Kong Polytechnic University

provided the large majority of questionnaire participants. As discussed in Chapter 3, there were no means for this author to directly contact the individual instructors at the three external universities who administered the online survey, and few options were available to ensure adequate participation from these universities. Consequently, overall participation by the three external universities (CityU, HKU, HKUST) was limited (n = 195). Moreover, a one-way ANOVA test showed that there were statistically significant differences between the universities in terms of language-related challenges. Given the significant differences in the universities, as well as the lower number of participants from the other three universities, further analysis in terms of academic discipline and was reduced and limited to students from the Hong Kong Polytechnic University, and data from the three external universities was not used in the analysis of possible differences between academic disciplines (AD). It should be noted, however, that the comparison of mean scores in terms of AD across all four universities would have been problematic at best given the considerable differences in the faculties and schools at each of the four universities. Specifically, very few of the faculties and departments across all four universities were similar and were comprised of very different academic fields and programmes. In other words, the four universities have very dissimilar faculties and departments rending direct comparisons very difficult. Thus, any AD comparisons would likely be limited to specific UG programmes or courses.

In terms of the interview data collection, there were minor setbacks in terms of collecting appropriate data for the lecture and instructor interviews after one year of collecting data, after one year of student and lecture, Specifically, after one year of lecture and instructor interviews, the author determined there were not enough interview participants. Consequently, a second round of invitations and recruitment was sent to potential lecturers and instructors, and a second round of interviews was conducted the following year. While this did not affect the longitudinal aspect of the study and should not negatively impact the findings, it would have been preferred to include all of the interviews within a shorter time period.

In terms of the questionnaire itself, while the instruments have been established in several other studies, including by this author, there are always some limitations when using self-report studies, either in the quantitative sense or in the qualitative sense. Moreover, after analysing the

questionnaire data from both Sections B and C, this author has raised questions regarding the reliability of the ECS in terms of accurately determining students' overall levels of language-related challenges in each respective macro-skill (reading, writing, speaking, and listening).

Next, it is important to acknowledge that self-report studies are not without their limitations. They can include social desirability bias, recall bias, where memory can affect the accuracy of the responses. They are inherently subjective, in terms of both interpretation of the questions and the responses provided. Additionally, they often involve self-assessment, which can often be inaccurate on the part of the interviewee or respondent. Moreover, despite the planning and preparation of the instruments used in this study, as well as mixed-methods, which included quantitative and qualitative data, the multi-perspective longitudinal approach, and the triangulation of data, instructors and lecturers were asked to evaluate students' language-related challenges in terms of the four macro-skills: reading, writing, speaking, and listening. As mentioned previously, instructors and lecturers generally do not have enough information to be able to evaluate their students' receptive skills (listening and reading) as these are not productive, not assessed, and rarely observed. In other words, while both groups have a considerable amount of expertise in terms of students' speaking and writing, the views on listening and reading are, for the most part, speculative.

Additionally, MPIs do complicate the research design. In this study, two of the stakeholders (instructors and lecturers) were interviewed at one timepoint and queried on their perspectives through the time window of students progressing through their four years of study. The reason for this was that the students' challenges and experience over time was the primary focus of the study. As Shepard and Rose (2025) point out, engaging the various stakeholders at multiple data collection points could provide more data on students' experiences and progress over time, but this would likely result in an increase in attrition as it could be difficult to maintain commitment from various stakeholders in extended longitudinal studies.

8.4 Contributions of the study

This study has contributed to the existing research in the area of EMI in the following ways:

First, in terms of this study's scope and focus, it employed a multi-institutional approach to examine language related challenges in Hong Kong universities. Moreover, the scope was expanded to four publicly funded universities in Hong Kong, and the questionnaire yielded just under 2,000 responses, providing an abundance of valuable data in terms of EMI students in Hong Kong. Moreover, the multi-perspective approach in terms of EMI stakeholders has provided not one set of perspectives, but three from, arguably, the most relevant EMI practitioners: students, subject teachers, and language instructors. While previous studies have looked at language-related challenges from the perspective of either students, language instructors, or subject-content lecturers, at the time of this writing, this author does not know of any other study that has taken a triangulated multi-perspective approach employing all three.

By including the three different EMI stakeholders to triangulate their perspectives, the findings are layered and nuanced in terms of how students' challenges are viewed and perceived. In addition, this author is not aware of any other EMI-related research in almost two decades that has taken a longitudinal approach and tracked a group of students over the duration of their studies. It is believed that the last study to take a longitudinal approach was that of Evans and Morrison (2011a) when the university curriculums followed the UK system and were limited to three years of study. By following a 4-year longitudinal approach, this study was able to examine students' language-related challenges, not only through time, but over the time of their entire university study. As such, this study has yielded an abundance of both quantitative and longitudinal qualitative data that can provide valuable contributions to the area of EMI.

8.5 Implications of the study

This study has implications for a number of EMI stakeholders. First at a policy level, this study has provided valuable information that could be considered by EMI policy makers at both the tertiary level, as well as the secondary school level. For many years in Hong Kong, there has been a gap between EMI policies at the secondary school level and those at the tertiary level. Findings from this study, building on previous EMI-related studies in the Hong Kong context, show that

there is a substantial gap between the language policies at the secondary school and university levels. This results in a challenging transition period for students who transition between HK secondary schools and Hong Kong universities in terms of adapting to learning through the medium of English at the university level. This study provides key findings that will help policymakers make informed language policy decisions. These findings also have implications for subject lectures, curriculum developers, and language support instructors - both at the tertiary level and the secondary school level in Hong Kong. The information in the findings indicates that a number of language-related challenges can be either mitigated or reduced by addressing specific issues in a more proactive and comprehensive approach.

These findings also have implications for EAP and ELA practitioners, such as teachers, subject leaders, and curriculum designers. The findings from this multi perspective, mixed method study which collected data from four universities and interviewed students over four years has provided an abundance of data which can better inform EMI practitioners in terms of what students need to reduce or offset their language related challenges, as well as to enhance their academic performance. Additionally, the findings from this study can prove valuable to heads of language centres, English departments, and those in the field of applied linguistics who may be examining similar language-related challenges in various EMI contexts.

The findings from this study have valuable implications, both for students already in EMI HEIs, as well as those who will be transitioning from secondary schools to EMI HEIs. These findings also have particular value for policy makers in Hong Kong and elsewhere where the transition to EMI HEIs may be considerably challenging for students, often resulting in problematic and difficult learning experiences. In particular, while the ‘fine-tuning’ of the Hong Kong secondary schools’ MOI policy may have offered some added flexibility, the findings of this study and much of the other relevant EMI-related literature in the Hong Kong context indicates that a substantial portion of secondary students need to be better prepared when they enter Hong Kong EMI universities. This is especially evident in terms of those students transitioning from local Hong Kong CMI secondary schools. Future research in this area, specifically comparing the English language-related difficulties of students from EMI and CMI Hong Kong secondary schools is also

warranted in order to ensure that all Hong Kong secondary school students have equal access to local EMI universities.

Lastly, this author hopes that the findings from this study can be used to support and enhance students' learning, so that moving forward they will have more opportunities to achieve academic success in EMI HE settings and not be hindered by learning subject content through English.

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Appendices

Appendix A: Participant Information Document

PARTICIPANT INFORMATION

Central University Research Ethics Committee (CUREC) Approval Reference: CIA-21-259

Challenges of English medium instruction (EMI) in higher education in Hong Kong

1. ***Why is this research being conducted?***
   This research has three key aims. The first aim is to identify and examine challenges faced by students studying in English medium instructed (EMI) programmes in higher education in Hong Kong. The second aim is to evaluate the effectiveness of these EMI programmes. The third aim is to better understand language use and spoken interaction in multilingual classrooms at EMI universities in Hong Kong. In order to achieve these aims, the researcher will use two different methods to gather data including an online questionnaire and semi-structured interviews. This information sheet pertains to the interviews. The research will involve the participation of English language instructors, subject lecturers, and undergraduate students.

2. ***Why have I been invited to take part?***
   You have been invited because you meet the researcher's criteria for inclusion in the study. The researcher is looking for instructors, subject lecturers, and undergraduate students at EMI universities in Hong Kong.

3. ***Do I have to take part?***
   No. You can ask questions about the research before deciding whether or not to take part. If you do agree to take part, you may withdraw yourself from the study, without giving a reason, by advising me of this decision.

   Your data will always be stored safely in an encrypted folder within the University of Oxford's computer network. It will never be shared to anyone who is not authorised to look at your data. If you decide to quit from the study by the 17th of June 2022, your personal data and record will be deleted immediately. It will not be used in the study. Otherwise, I will safely store your anonymised data for at least three years after my thesis is submitted or published. This is based on the University's guidance on research data management and sharing.

4. ***What will happen to me if I take part in the research?***

   Semi-structured interviews with instructors, lecturers, and students:
   I am a researcher at the University of Oxford examining English medium instruction in higher education in Hong Kong. I will be conducting online interviews with participants and conducting an online questionnaire. Due to the coronavirus pandemic, the interviews will be done online via Microsoft Teams. Before the start of the interview, I will talk you through the study procedures and give you the chance to ask any questions. The questionnaire and the interviews will be conducted in English. As the interviews will be conducted online, I will make audio recordings of each interview directly on my computer and then transcribe the recordings. Only

the audio portion will be recorded, so participants can switch off their cameras if they prefer. These methods of data collection are important for producing an accurate record of your activities in the classroom and your thoughts during the interview. The interviews include only the participant and myself, the researcher, and they typically last between 15 and 25 minutes. After the research study is completed, the audio recordings will be deleted, and only the anonymised written transcriptions will be retained for a limited extended duration (3 years). If you agree to part in the research, you will be asked to participate in the procedures that I have mentioned above, and sign a consent form before the interview.

5. ***Are there any potential risks in taking part?***

The following risks are involved in taking part in the research: breach of confidentiality, and data privacy and security issues. To reduce any potential risks, all data and record relating to you will be pseudonymised for confidentiality purposes. An example of pseudonymisation is shown below:

- Real data: Kelvin, 22, Year-3 student, Cantonese speaker
- Pseudonymised data: Thomas, 22 (false name), Year-3 student, Cantonese speaker

Results are kept strictly confidential, and only the researcher has access to the data. The pseudonym will be used to identify you, and all information and results are kept in a password-protected computer and encrypted electronic folder in the University. Additionally, the recordings are securely stored, encrypted, and only accessible to the researcher. Any identifying characteristics will be removed from the findings when I write about my research, and no one will know that you have taken part unless you tell them yourself.

6. ***Are there any benefits in taking part?***

There are no immediate educational benefits from taking part in the study, as the research is not designed to introduce and administer interventions to student learning. However, participation in this research will provide participants an opportunity to provide valuable knowledge and insight into the field of EMI study.

7. ***Expenses and payments***

You will be remunerated for participating in the semi-structured interviews. Gift vouchers worth approximately £15 (roughly HK$150) will be provided for each interview session, either for pick-up at your university or sent to you either electronically to your email address.

8. ***What happens to the data provided?***

The information you provide during the study is the **research data**. Any research data from which you can be identified (e.g., name, age, gender, and even video and audio recordings) is known as **personal data**.

Personal data will be stored in an encrypted folder within the University of Oxford's computer network for at least three years after publication or public release of the work of the research, as per the university's guidance on research data management and sharing. Any personal data or record that is gathered but unused/unpublished need not be retained for three years and will be

properly discarded. However, in the event that you decide to drop out of the study while the research is still being conducted, your data and record will be deleted immediately before the study is completed and approved for publication.

Other research data (including consent forms) will be stored for at least three years after publication or public release of the work of the research. Your personal data may be transferred to, and stored at, a destination outside the UK and the European Economic Area. Identifiable data will be removed whenever possible and any data transfer will be done securely and with a similar level of data protection as required under UK law.

I and my doctoral supervisors will have access to the research data. Responsible members of the University of Oxford may be given access to data for monitoring and/or audit of the research.

I would like your permission to use direct quotes against a pseudonym in any research outputs.

I would also like your permission to use pseudonymised data in future studies, and to share data with other researchers (e.g. in online databases). All personal information that could identify you will be removed or changed before information is shared with other researchers or results are made public.

9. ***Will the research be published?***

The research may be published in the University of Oxford's archives, in journal publications, or as part of a book chapter or review.

The University of Oxford is committed to the dissemination of its research for the benefit of society and the economy and, in support of this commitment, has established an online archive of research materials. This archive includes digital copies of student theses successfully submitted as part of a University of Oxford postgraduate degree programme. Holding the archive online gives easy access for researchers to the full text of freely available theses, thereby increasing the likely impact and use of that research.

The research will be written up as a student's thesis. On successful submission of the thesis, it will be deposited both in print and online in the University archives to facilitate its use in future research. If so, the thesis will be openly accessible.]

10. ***Who has reviewed this study?***

This study has been reviewed by, and received ethics clearance through, the University of Oxford Central University Research Ethics Committee (Reference number: CIA-21-259).

11. ***Who do I contact if I have a concern about the study or I wish to complain?***

If you have a concern about any aspect of this study, please contact Christopher Shepard at christopher.shepard@education.ox.ac.uk or Dr Heath Rose at heath.rose@education.ox.ac.uk, and we will do our best to answer your query. We will acknowledge your concern within 10 working days and give you an indication of how it will be dealt with. If you remain unhappy or wish to make a formal complaint, please contact the Chair of the Research Ethics Committee at the University of Oxford who will seek to resolve the matter as soon as possible:

Departmental Research Ethics Committee (DREC)] Chair, Dr. Liam Gearon at student.curec@education.ox.ac.uk; Address: Department of Education, University of Oxford, 15 Norham Gardens, Oxford OX2 6PY

12. *Data Protection*

The University of Oxford is the data controller with respect to your personal data, and as such will determine how your personal data is used in the study.
The University will process your personal data for the purpose of the research outlined above. Research is a task that is performed in the public interest.
Further information about your rights with respect to your personal data is available from http://www.admin.ox.ac.uk/councilsec/compliance/gdpr/individualrights/.

13. *Further Information and Contact Details*

If you would like to discuss the research beforehand (or if you have questions afterwards), please contact:

Christopher Shepard
Department of Education
Department of Education, University of Oxford, 15 Norham Gardens, Oxford OX2 6PY
christopher.shepard@education.ox.ac.uk

Appendix B: Student questionnaire

English medium instruction (EMI) in Higher Education in Hong Kong

Start of Block: SURVEY INSTRUCTION

Q1

English medium instruction (EMI) in Higher Education in Hong Kong

End of Block: SURVEY INSTRUCTION

Start of Block: Block 8

Q2
This questionnaire is for students studying at English medium instruction universities in Hong Kong (e.g. CityU, PolyU, HKU).

It relates to students' attitudes and language-related challenges learning and studying subject content courses through English at university.

If you complete the questionnaire, you will be eligible to enter a lucky draw to win prizes including a new iPad.

This project has been reviewed and approved by the University of Oxford Central University Research Ethics Committee.

End of Block: Block 8

Start of Block: Informed Consent

Q3

I am at least 18 years of age, and I would like to participate in the study.

○ I agree (1)

End of Block: Informed Consent

Start of Block: Background

Q6 Which university do you attend?

- ○ City University of Hong Kong (CityU) (1)
- ○ Hong Kong Baptist University (HKBU) (2)
- ○ The Hong Kong Polytechnic University (PolyU) (3)
- ○ The Hong Kong University of Science and Technology (HKUST) (4)
- ○ The University of Hong Kong (HKU) (5)



Q5 What is your year of study?

- ○ 1 (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)

Q7 What is your College or School at CityU?

- College of Business (CB) (1)
- College of Engineering CENG) (2)
- College of Liberal Arts and Social Science (CLASS) (3)
- College of Science (CSCI) (4)
- College of Veterinary Medicine and Life Sciences (5)
- School of Creative Media (SCM) (6)
- School of Data Science (SDSC) (7)
- School of Energy and Environment (SEE) (8)
- Other (9)

Q8 What is your Faculty or School HKBU?

- Faculty of Arts (1)
- School of Business (2)
- School of Chinese Medicine (3)
- School of Communication (4)
- Faculty of Science (5)
- Faculty of Social Sciences (6)
- Academy of Visual Arts (7)
- Other (9)

Q71 What is your Faculty or School HKU?

- Faculty of Architecture (10)
- Faculty of Arts (1)
- HKU Business School (2)
- Faculty of Dentistry (3)
- Faculty of Education (12)
- Faculty of Engineering (4)
- Faculty of Law (7)
- Faculty of Medicine (11)
- Faculty of Science (5)
- Faculty of Social Sciences (6)
- Other (9)

Q73 What is your Faculty or School HKUST?

- School of Business and Management (2)
- School of Engineering (4)
- School of Science (5)
- School of Humanities and Social Science (6)
- Other (9)

Q9 What is your Faculty or School at PolyU?

- ○ Faculty of Applied Science and Textiles (1)
- ○ Faculty of Business (2)
- ○ Faculty of Construction and Environment (3)
- ○ Faculty of Engineering (4)
- ○ Faculty of Health and Social Science (5)
- ○ Faculty of Humanities (6)
- ○ School of Design (7)
- ○ School of Hotel and Tourism Management (8)
- ○ Other (9)

Q48 If 'Other', what is your College, School, or Department?

_____

Q49 If 'Other', what is your College, School, or Department?

_____

Q50 If 'Other', what is your College, School, or Department?

_____

Q72 If 'Other', what is your Faculty or School?

_____

Q74 If 'Other', what is your Faculty or School?

_____

Q10 What is your major, or area of study? (e.g. Accounting, Business, Construction, Engineering, etc.)

_____

Q11 What is your first language?

- Cantonese (1)
- Putonghua (2)
- Other (3)

Q12 If 'Other', what is your first language? (please state all your first languages if you have more than one)

_____

Q13 Gender

- Female (1)
- Male (2)
- Prefer not to say (3)

X→

Q14 What is your age?

- 18 (18)
- 19 (19)
- 20 (20)
- 21 (21)
- 22 (22)
- 23 (23)
- 24 (24)
- 25 (25)
- 26 or older (26)

Q18 What was the main language of instruction at your secondary school?

- English (1)
- Cantonese (2)
- Putonghua (3)
- Other (4)

Q19 If 'Other', please state the language (e.g. French, German, Indonesian, Korean, Russian, Spanish, Thai).

_____

Q51 What percentage of your classes in secondary school / high school were taught in English? (An approximate estimate is fine.) Please drag the mark to the appropriate point on the slider from **0%** = None, to **100%** = All.

	0 10 20 30 40 50 60 70 80 90 100
0% - None ()	

End of Block: Background

Start of Block: Block 9

Q45 Academic Language Skills: Thinking about your **university classes taught in English**, please rate how easy or difficult you find each language skill. For each language skill, please select the appropriate point on the scale from 1 = Very easy, to 7 = Very difficult.

	Very easy (1)	easy (2)	somewhat easy (3)	Neither (4)	somewhat difficult (5)	difficult (6)	Very difficult (7)
Academic Reading (1)	○	○	○	○	○	○	○
Academic Writing (2)	○	○	○	○	○	○	○
Academic Speaking (3)	○	○	○	○	○	○	○
Academic Listening (4)	○	○	○	○	○	○	○

End of Block: Block 9

Start of Block: Language-related challenges

Q41 **Language challenges in academic subjects (non-ELC courses)**

Q30 Part 1: Academic Writing Skills Please answer each item by selecting the appropriate point on the scale from 1 = very easy, to 7 = very difficult.

	Very easy (1)	easy (2)	somewhat easy (3)	Neither (4)	somewhat difficult (5)	difficult (6)	Very difficult (7)
Planning written assignments (1)	○	○	○	○	○	○	○
Expressing ideas in correct English (2)	○	○	○	○	○	○	○
Revising written work (3)	○	○	○	○	○	○	○
Using appropriate academic style (4)	○	○	○	○	○	○	○
Writing a bibliography/ references section (5)	○	○	○	○	○	○	○
Integrating sources in written work (7)	○	○	○	○	○	○	○
Summarizing/ paraphrasing ideas in sources (8)	○	○	○	○	○	○	○
Organizing ideas in coherent paragraphs (9)	○	○	○	○	○	○	○
Expressing ideas clearly and logically (10)	○	○	○	○	○	○	○
Linking ideas from different sources (11)	○	○	○	○	○	○	○

Writing the introduction of an essay (12)	○	○	○	○	○	○	○
Writing the body of an essay (13)	○	○	○	○	○	○	○
Writing the conclusion of an essay (14)	○	○	○	○	○	○	○
Linking sentences smoothly (15)	○	○	○	○	○	○	○
Proofreading written work (16)	○	○	○	○	○	○	○

Q31 Part 2: Academic Reading Skills: Please answer each item by selecting the appropriate point on the scale from 1 = very easy, to 7 = very difficult.

	Very easy (1)	easy (2)	somewhat easy (3)	Neither (4)	somewhat difficult (5)	difficult (6)	Very difficult (7)
Understanding specific vocabulary (1)	○	○	○	○	○	○	○
Working out the meaning of difficult words (2)	○	○	○	○	○	○	○
Reading carefully to understand a text (3)	○	○	○	○	○	○	○
Reading quickly to find specific information (4)	○	○	○	○	○	○	○
Identifying supporting ideas and examples (5)	○	○	○	○	○	○	○
Reading quickly to get overall meaning (6)	○	○	○	○	○	○	○
Identifying the key ideas of a text (7)	○	○	○	○	○	○	○
Taking brief, relevant notes (8)	○	○	○	○	○	○	○
Using your own words when taking notes (9)	○	○	○	○	○	○	○
Understanding the organization of a text (10)	○	○	○	○	○	○	○

Q32 Part 3: Academic Speaking Skills: Please answer each item by selecting the appropriate point on the scale from 1 = very easy, to 7 = very difficult..

	Very easy (1)	easy (2)	somewhat easy (3)	Neither (4)	somewhat difficult (5)	difficult (6)	Very difficult (7)
Speaking accurately (grammar) (1)	○	○	○	○	○	○	○
Speaking clearly (pronunciation) (2)	○	○	○	○	○	○	○
Presenting information/ ideas (3)	○	○	○	○	○	○	○
Participating actively in discussion (4)	○	○	○	○	○	○	○
Communicating ideas fluently (5)	○	○	○	○	○	○	○
Speaking from notes (6)	○	○	○	○	○	○	○
Asking questions (7)	○	○	○	○	○	○	○
Answering questions (8)	○	○	○	○	○	○	○
Communicating ideas confidently (9)	○	○	○	○	○	○	○
Using visual aids (e.g. PowerPoint) (10)	○	○	○	○	○	○	○

X→

Q33 Part 4: Academic Listening Skills: Please answer each item by selecting the appropriate point on the scale from 1 = very easy, to 7 = very difficult.

	Very easy (1)	easy (2)	somewhat easy (3)	Neither (4)	somewhat difficult (5)	difficult (6)	Very difficult (7)
Understanding the main ideas of lectures (1)	○	○	○	○	○	○	○
Understanding the overall organization of lectures (2)	○	○	○	○	○	○	○
Understanding key vocabulary (3)	○	○	○	○	○	○	○
Taking brief, clear notes (4)	○	○	○	○	○	○	○
Identifying supporting ideas and examples (5)	○	○	○	○	○	○	○
Understanding lecturers' accents (6)	○	○	○	○	○	○	○
Following a discussion (7)	○	○	○	○	○	○	○
Identifying different views and ideas (8)	○	○	○	○	○	○	○
Understanding questions (9)	○	○	○	○	○	○	○
Understanding classmates' accents (10)	○	○	○	○	○	○	○

End of Block: Language-related challenges

Start of Block: Block 9

Start of Block: Questionnaire for language use in academic subjects



Q35

Classroom language use in academic subjects (non-ELC courses)

Thinking about your spoken language in your university classes, please rate how often you use English or your first

language. Please answer each item by selecting the appropriate point on the scale from 1 = Always in English, to 7 = Always in my first language (e.g. Cantonese, Putonghua)

	Always in English (1)	- (2)	- (3)	in roughly equal amounts (4)	- (5)	- (6)	Always in first language (7)
Asking the teacher questions (2)	○	○	○	○	○	○	○
Answering the teacher's questions (1)	○	○	○	○	○	○	○
Taking part in pair-work activities (4)	○	○	○	○	○	○	○
Taking part in group work activities (5)	○	○	○	○	○	○	○
Taking part in whole class discussions (3)	○	○	○	○	○	○	○
Discussing classwork with classmates (6)	○	○	○	○	○	○	○
Discussing non-academic matters (7)	○	○	○	○	○	○	○

End of Block: Questionnaire for language use in academic subjects

Start of Block: Effectiveness of EMI Programmes

Q40 **Effectiveness of EMI programmes at university**

Please answer each item by selecting the appropriate point on the scale from 1 = Strongly agree, to 6 = Strongly disagree.

	Strongly agree (1)	Agree (2)	Somewhat agree (3)	Somewhat disagree (4)	Disagree (5)	Strongly disagree (6)
English medium instruction (EMI) is effective for learning subject content (1)	○	○	○	○	○	○
English medium instruction (EMI) is effective for improving English language proficiency (4)	○	○	○	○	○	○
My learning of subject content through English is successful (5)	○	○	○	○	○	○
My English has improved from learning subject content through English (6)	○	○	○	○	○	○
I prefer to have classes delivered in English instead of in my first language (11)	○	○	○	○	○	○
I am in favour of English medium instruction (EMI) at university (10)	○	○	○	○	○	○

End of Block: Effectiveness of EMI Programmes

Start of Block: Block 10

Q52
Standardized English Language Tests (Optional)
Which of these standardized English language proficiency exams have you taken?

- HKDSE - Hong Kong Diploma of Secondary Education (1)
- IELTS - International English Language Testing System (2)
- TOEFL - Test of English as a Foreign Language (3)
- TOEIC - Test of English for International Communication (7)
- Gao Kao (高考) (4)
- Duolingo (6)
- Other (5)

Q54 What was your **English score** on the HKDSE?

- 2 (1)
- 3 (2)
- 4 (3)
- 5 (4)
- 5* (5)
- 5** (6)

X→

Q55 What was your score on the IELTS exam?

- ○ Below 5 (3)
- ○ 5 (4)
- ○ 5.5 (5)
- ○ 6 (6)
- ○ 6.5 (7)
- ○ 7 (8)
- ○ 7.5 (9)
- ○ 8 (10)
- ○ 8.5 (11)
- ○ 9 (12)

Q63 Did you take the **TOEFL iBT** (internet based test) or the **TOEFL PBT** (paper based test)?

- ○ TOEFL iBT (3)
- ○ TOEFL PBT (4)

Q64 What was your score on the TOEFL IBt exam?

- ○ Below 30 (3)
- ○ 30 - 34 (4)
- ○ 35 - 45 (5)
- ○ 46 - 59 (6)
- ○ 60 - 78 (7)
- ○ 79 - 93 (8)
- ○ 94 - 101 (9)
- ○ 102 - 109 (10)
- ○ 110 - 114 (11)
- ○ 115-117 (12)
- ○ 118-120 (13)

Q65 What was your score on the TOEFL PBT exam? (Please input your score)

_____

Q66 What was your overall score on the TOEIC exam? (Please input your score)

_____

Q67 What was your overall score on the Gao Kao (高考) exam? (Please input your score)

_____

Q68 What was your overall score on the Duolingo exam? (Please input your score)

_____

Q69 What other standardised English proficiency exam have you taken? (Please type name of exam)

_____

Q70 What was your overall score on the exam? (Please input your score)

_____

End of Block: Block 10

Start of Block: Block 11



Q56 **English Language Proficiency**

On a scale from zero to ten, please select your level of proficiency in **reading**.

- ○ 0 - none (0)
- ○ 1 - very low (1)
- ○ 2 - low (2)
- ○ 3 - fair (3)
- ○ 4 - slightly less than adequate (4)
- ○ 5 - adequate (5)
- ○ 6 - slightly more than adequate (6)
- ○ 7 - good (7)
- ○ 8 - very good (8)
- ○ 9 - excellent (9)
- ○ 10 - perfect (10)



Q60 **English Language Proficiency**

On a scale from zero to ten, please select your level of proficiency in **writing**.

- ○ 0 - none (0)
- ○ 1 - very low (1)
- ○ 2 - low (2)
- ○ 3 - fair (3)
- ○ 4 - slightly less than adequate (4)
- ○ 5 - adequate (5)
- ○ 6 - slightly more than adequate (6)
- ○ 7 - good (7)
- ○ 8 - very good (8)
- ○ 9 - excellent (9)
- ○ 10 - perfect (10)



Q61 **English Language Proficiency**

On a scale from zero to ten, please select your level of proficiency in **speaking**.

- ○ 0 - none (0)
- ○ 1 - very low (1)
- ○ 2 - low (2)
- ○ 3 - fair (3)
- ○ 4 - slightly less than adequate (4)
- ○ 5 - adequate (5)
- ○ 6 - slightly more than adequate (6)
- ○ 7 - good (7)
- ○ 8 - very good (8)
- ○ 9 - excellent (9)
- ○ 10 - perfect (10)



Q62 **English Language Proficiency**

On a scale from zero to ten, please select your level of proficiency in **listening**.

- ○ 0 - none (0)
- ○ 1 - very low (1)
- ○ 2 - low (2)
- ○ 3 - fair (3)
- ○ 4 - slightly less than adequate (4)
- ○ 5 - adequate (5)
- ○ 6 - slightly more than adequate (6)
- ○ 7 - good (7)
- ○ 8 - very good (8)
- ○ 9 - excellent (9)
- ○ 10 - perfect (10)

End of Block: Block 11

Start of Block: Future Participation

Q43 Participation in Lucky Draw

If you would like to participate in the **Lucky Draw**, you will be eligible to win one of dozens of **$HK50 grocery vouchers** or a new **Apple iPad**.

By participating in the Lucky Draw, you agree to be contacted via your university email account in order to:

1) **notify you in case you win a prize**
2) **invite you to participate in any additional or follow-up questions or study conducted by the researcher**

IMPORTANT: **All personal information will remain strictly confidential** and will only be available to the lead investigator.

- ○ I would like to participate in the Lucky Draw. (1)
- ○ I would not like to participate. (2)

Q44 What is your first name? (Please write your name in English)

_____

Q45 What is your university email address? (university email account required for Lucky Draw)

_____

End of Block: Future Participation

Appendix C: Interview questions

Student Interview Questions

1. **What challenges have you faced when learning academic subjects through English?**

   - Do you find listening tasks challenging at university? If so, what in particular?
   - Do you find writing tasks challenging at university? If so, what in particular?
   - Do you find speaking tasks challenging at university? If so, what in particular?
   - Do you find reading tasks challenging at university? If so, what in particular?
   - Of Reading, Writing, Speaking, or Listening skills, which is MOST difficult?
   - Why is _____ the most difficult
   - What about vocabulary in English? Is it difficult for you?
   - Do you think it is more efficient to learn academic subjects in English?
   - Do you think you are learning as much in English as you would if you were using your L1?
   - Have these language-related challenges decreased since your first year? If so, how?

2. **What is your experience of classroom language use?**

   - Do you use different languages in classes?
   - Which language do you use more?
   - What language(s) do other students / instructors use?
   - Does your language use in classrooms vary depending on the subject or teacher?
   - Has it been difficult using only English to learn academic subjects?

3. **Reflection: What have been the benefits and costs of EMI?**

   - What do you think the most significant benefit of EMI programmes has been?
   - What do you think are the problems of EMI?
   - Do you think EMI has been effective for your learning of subject content?
   - Do you think EMI has been effective for improving your English language skills?
   - In terms of English language support, what, if anything, has been most helpful to you?
   - What do you think could be improved in terms of this EMI programme?
   - Are you in favour of EMI, or would you prefer to learn at university in another language medium like Chinese (Cantonese/Putonghua)?

4. **What do you think about internationalization of the university as a result of using EMI:**

   - Do you think the university is attracting more international students?
   - Do you think it is attracting more international faculty?
   - Do you think the university ranking of your university is higher in part because of EMI?
   - Do you think your university is more internationalized in general because of EMI?

5. **What do you think was challenging in terms of online learning at an EMI university?**

   - What did you find to be the most challenging in terms of online learning using EMI?
   - Were there any major benefits?
   - Do you think you were writing (reading? speaking? listening?) as much in English?
   - Do you think you were learning as much vocabulary?

Instructor Interview Questions

1. **Instructor background** (first language / years of teaching experience / qualifications)

2. **What challenges do students face when learning academic subjects through English?**

   - Which of these skills is MOST difficult for students: Reading, Writing, Speaking, or Listening?
   - Why do you think _____ is the most difficult?
   - What about vocabulary in English - is it difficult for students?
   - Do you think it is more efficient for students to learn academic subjects in English?
   - Do you think students are learning as much in English as they would in their L1?
   - Do you think students language-related challenges decrease at university over time? If so, how?

3. **What is your experience of classroom language use?**

   - Do you notice students use different languages in ELC classes?
   - Which languages do they use more?
   - What language(s) do you use for teaching?
   - What language(s) do you use for answering students questions?
   - Do you think it is challenging for students using only English to learn academic subjects?

4. **What are the benefits and costs of EMI?**

   - What do you think are the most significant benefits of EMI programmes?
   - What do you think are some the problems of EMI?
   - Do you think there are issues with English proficiency levels for some students?
   - Do you think EMI is effective for learning subject content? (non-ELC classes)
   - Do you think EMI is effective for improving English language skills? (non-ELC classes)
   - Are you in favour of EMI?

5. **What do you think about internationalization of the university as a result of using EMI:**

   - Do you think the university is attracting more international students?
   - Do you think there is more internationalisation among faculty members?
   - Do you think the university ranking of the university is higher in part because of EMI?
   - Do you think the university is more 'internationalized' in general because of EMI?

6. **What do you think has been challenging in terms of online / hybrid learning?**

   - What do you think was most challenging for students in terms of learning online through EMI?
   - Were there any major disadvantages for students in terms of learning online through EMI?
   - Were there any major benefits?
   - Do you think you students are writing (reading? speaking? listening? vocab?) as much in English?

7. **Would you like to discuss anything else or provide any additional comments?**

Lecturer Interview Questions

1. **Lecturer background** (first language / years of teaching experience / qualifications)

2. **What challenges do students face when learning academic subjects through English?**

   - Which of these skills is MOST difficult for students: Reading, Writing, Speaking, or Listening?
   - Why do you think _____ is the most difficult?
   - What about vocabulary in English - is it difficult for students?
   - Do you think it is more efficient for students to learn academic subjects in English?
   - Do you think students are learning as much in English as they would in their L1?
   - Do you think students language-related challenges decrease at university over time? If so, how?

3. **What is your experience of classroom language use?**

   - Do you notice students use different languages in classes?
   - Which languages do they use more?
   - What language(s) do you use for teaching?
   - What language(s) do you use for answering students questions?
   - Do you think it is challenging for students using only English to learn academic subjects?

4. **What are the benefits and costs of EMI?**

   - What do you think are the most significant benefits of EMI programmes?
   - What do you think are some the problems of EMI?
   - Do you think there are issues with English proficiency levels for some students?
   - Do you think EMI is effective for learning subject content?
   - Do you think EMI is effective for improving English language skills?
   - Are you in favour of EMI?

5. **What do you think about internationalization of the university as a result of using EMI:**

   - Do you think the university is attracting more international students?
   - Do you think there is more internationalisation among faculty members?
   - Do you think the university ranking of the university is higher in part because of EMI?
   - Do you think the university is more 'internationalized' in general because of EMI?

6. **What do you think has been challenging in terms of online / hybrid learning?**

   - What do you think was most challenging for students in terms of learning online through EMI?
   - Were there any major disadvantages for students in terms of learning online through EMI?
   - Were there any major benefits?
   - Do you think you students are writing (reading? speaking? listening? vocab?) as much in English?

7. **Would you like to discuss anything else or provide any additional comments?**

Appendix D: Sample email for invitation to interview

Dear Dr XXXXX,

I would like to invite you to participate in a short **online interview.**
The interviews are part of a research project I am currently working on as part of the **EMI Oxford Research Group** exploring challenges faced by university students in Hong Kong studying at English medium instruction (EMI) universities.

The interviews are conducted **online** (i.e., Zoom, Teams, Blackboard, etc.) and usually last between 20-25 minutes.

They can be scheduled almost anytime **according to your availability**, and all participants and their responses will remain **anonymous**.

All those who participate will be compensated in the form of **Park-N-Shop vouchers worth HK$ 150.**

I have attached the **Participant Information Sheet**, which provides additional information about the interviews and the project.

If you choose to participate, I will also send you a **consent form** and the list of the **interview questions** for your review prior to the interview.

Given your experience with students at Hong Kong universities, your participation would be very much appreciated and is expected to contribute valuable information about EMI programmes in Hong Kong.

Whenever you have some free time and would like to participate, I can arrange a suitable time with you.

Thank you for your consideration, and I hope to hear back from you.

Best regards,

Christopher Shepard
Postgraduate Researcher
Department of Education
University of Oxford

Appendix E: Sample consent form

PARTICIPANT CONSENT FORM (PAPER VERSION)

Central University Research Ethics Committee (CUREC) Approval Reference: CIA-21-259

Challenges of English medium instruction (EMI) in higher education in Hong Kong

Purpose of Study: The aim of this research is to examine Hong Kong tertiary students' language-related academic challenges, classroom language use in EMI HE classrooms, and attitudes towards and perceptions of the effectiveness of EMI university programmes in Hong Kong. The interviews will be conducted individually online and will involve the participation of instructors, lecturers, and students.

		Please initial each box
1	I confirm that I have read and understand the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.	☐
2	I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, and without any adverse consequences or penalty.	☐
3	I understand that research data collected during the study may be looked at by authorised people outside the research team. I give permission for these individuals to access my data.	☐
4	I understand that this project has been reviewed by, and received ethics clearance through, the University of Oxford Central University Research Ethics Committee.	☐
5	I understand who will have access to personal data provided, how the data will be stored and what will happen to the data at the end of the project.	☐
6	I understand how this research will be written up and published.	☐
7	I understand how to raise a concern or make a complaint.	☐
8	I consent to being audio recorded.	☐
9	I understand how audio recordings will be used in research outputs.	☐
10	I agree to the use of pseudonymised quotes in research outputs.	☐
11	I agree to take part in the study.	☐
Optional:	I agree for research data collected in this study to be given to researchers, including those working outside of the UK and the EU, to be used in other research studies. I understand that any data that leave the research group will be anonymised so that I cannot be identified.	☐

Optional: I agree that my personal contact details can be retained in a secure database so that the researchers can contact me about future studies. ☐

_____	dd / mm / yyyy	_____
Name of Participant	Date	Signature
_____	dd / mm / yyyy	_____
Name of person taking consent	Date	Signature

Appendix F: Ethics Approval – PolyU & CUREC

PolyU: PolyU's Human Subjects Ethics Application Review System

From: rohsesc@polyu.edu.hk <rohsesc@polyu.edu.hk>
Sent: Thursday, April 29, 2021 4:41 PM
To: SHEPARD, Chris [ELC] <chris.shepard@polyu.edu.hk>
Cc: MCMINN, Sean [ELC] <sean.mcminn@polyu.edu.hk>
Subject: Application Result (HSEARS20210410002)

Dear Shepard Christopher Lee

Please note that the following application for human ethics approval has been approved:

Project Title: EMI Challenges
Application Number: HSEARS20210410002 (Click here to view the application)
Principal Investigator: Shepard Christopher Lee
Department: English Language Centre
Approver / Delegate: Mcminn Sean William John

Human Subjects Ethics Application Review System
(It is a system-generated message. Please do not reply to it)

c.c. Approver / Delegates

Disclaimer:

This message (including any attachments) contains confidential information intended for a specific individual and purpose. If you are not the intended recipient, you should delete this message and notify the sender and The Hong Kong Polytechnic University (the University) immediately. Any disclosure, copying, or distribution of this message, or the taking of any action based on it, is strictly prohibited and may be unlawful.
The University specifically denies any responsibility for the accuracy or quality of information obtained through University E-mail Facilities. Any views and opinions expressed are only those of the author(s) and do not necessarily represent those of the University and the University accepts no liability whatsoever for any losses or damages incurred or caused to any party as a result of the use of such information.

Oxford CUREC Approval

From: Sandra Mathers <sandra.mathers@education.ox.ac.uk>
Sent: Monday, June 28, 2021 12:13 PM
To: Heath Rose <heath.rose@education.ox.ac.uk>; Christopher Shepard <christopher.shepard@education.ox.ac.uk>
Cc: Student CUREC <student.curec@education.ox.ac.uk>
Subject: CUREC approval

Dear Christopher and Heath

Attitudes, challenges, and classroom practices of English Medium Instruction (EMI) in higher education in Hong Kong - reference CIA-21-259

The above application has been considered on behalf of the Departmental Research Ethics Committee (DREC) in accordance with the procedures laid down by the University for ethical approval of all research involving human participants. I am pleased to inform you that, on the basis of the information provided to DREC, the proposed research has been judged as meeting appropriate ethical standards, and accordingly, approval has been granted.

Please continue to follow all current guidance issued by CUREC during the pandemic, notably COVID-19: CUREC guidance on research involving human participants, and on internet-based research: https://researchsupport.admin.ox.ac.uk/governance/ethics/coronavirus

If relevant, please also check the CUREC website for their best practice research guides: https://researchsupport.admin.ox.ac.uk/governance/ethics/resources/bpg

Should there be any subsequent changes to the project which raise ethical issues not covered in the original application you should submit details to research.office@education.ox.ac.uk for consideration.

Good luck with your research study.

With kind regards,

Dr. Sandra Mathers

Senior Researcher
Department of Education
University of Oxford

Appendix G: EMI Challenges Scale (ECS)

The EMI Challenges Scale (content)

Academic Writing Skills

- Planning written assignments
- Expressing ideas in correct English
- Revising written work
- Using appropriate academic style
- Writing a bibliography/references section
- Proofreading written work
- Referring to sources in written work
- Summarizing/paraphrasing ideas in sources
- Organising ideas in coherent paragraphs
- Expressing ideas clearly and logically
- Linking ideas from different sources
- Writing the introduction to an assignment
- Writing the body of an assignment
- Writing the conclusion to an assignment
- Liking sentences smoothly

Academic Reading Skills

- Understanding specific vocabulary
- Working out the meaning of difficult words
- Reading carefully to understand a text
- Reading quickly to find specific information
- Identifying supporting ideas and examples
- Reading quickly to get overall meaning
- Identifying the key ideas of a text

- Taking brief, relevant notes
- Using your own words when taking notes
- Understanding the organisation of a text

Academic Speaking Skills

- Speaking accurately (grammar)
- Speaking clearly (pronunciation)
- Presenting information/ideas
- Participating actively in discussion
- Communicating ideas fluently
- Speaking from notes
- Asking questions
- Answering questions
- Communicating ideas confidently
- Using visual aids (e.g. PowerPoint)

Academic Listening Skills

- Understanding the main ideas of lectures
- Understanding the overall organisation of lectures
- Understanding key vocabulary
- Taking brief, clear notes
- Identifying supporting ideas and examples
- Understanding lecturers' accents
- Following a discussion
- Identifying different views and ideas
- Understanding questions
- Understanding classmates' accents

Appendix H: Cronbach's alpha coefficients

Reliability

Notes

Output Created		10-OCT-2025 10:36:35
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Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.
Syntax		RELIABILITY /VARIABLES=Q30_1 Q30_2 Q30_3 Q30_4 Q30_5 Q30_6 Q30_7 Q30_8 Q30_9 Q30_10 Q30_11 Q30_12 Q30_13 Q30_14 Q30_15 /SCALE('Writing') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE CORR /SUMMARY=MEANS

		CORR.
Resources	Processor Time	00:00:00.00
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Scale: Writing

Case Processing Summary

		N	%
Cases	Valid	1982	100.0
	Excluded[a]	0	.0
	Total	1982	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.958	.958	15

Item Statistics

	Mean	Std. Deviation	N
Q30_1	3.96	1.256	1982
Q30_2	4.10	1.395	1982
Q30_3	3.92	1.309	1982
Q30_4	4.06	1.382	1982
Q30_5	3.78	1.435	1982
Q30_6	3.87	1.345	1982
Q30_7	3.86	1.355	1982
Q30_8	3.92	1.318	1982
Q30_9	3.97	1.350	1982

Q30_10	3.89	1.319	1982
Q30_11	3.66	1.329	1982
Q30_12	4.07	1.323	1982
Q30_13	3.66	1.306	1982
Q30_14	4.01	1.329	1982
Q30_15	3.92	1.355	1982

Inter-Item Correlation Matrix

	Q30_1	Q30_2	Q30_3	Q30_4	Q30_5	Q30_6	Q30_7
Q30_1	1.000	.631	.613	.608	.507	.574	.610
Q30_2	.631	1.000	.676	.603	.466	.543	.598
Q30_3	.613	.676	1.000	.640	.524	.586	.609
Q30_4	.608	.603	.640	1.000	.650	.638	.586
Q30_5	.507	.466	.524	.650	1.000	.714	.562
Q30_6	.574	.543	.586	.638	.714	1.000	.705
Q30_7	.610	.598	.609	.586	.562	.705	1.000
Q30_8	.592	.617	.629	.586	.520	.643	.745
Q30_9	.583	.695	.655	.588	.467	.596	.672
Q30_10	.594	.585	.605	.579	.516	.636	.658
Q30_11	.566	.559	.559	.537	.487	.557	.613
Q30_12	.644	.641	.627	.561	.477	.590	.643
Q30_13	.548	.564	.581	.555	.483	.554	.626
Q30_14	.557	.647	.626	.559	.462	.534	.613
Q30_15	.513	.582	.701	.564	.486	.536	.557

Inter-Item Correlation Matrix

	Q30_8	Q30_9	Q30_10	Q30_11	Q30_12	Q30_13	Q30_14
Q30_1	.592	.583	.594	.566	.644	.548	.557
Q30_2	.617	.695	.585	.559	.641	.564	.647
Q30_3	.629	.655	.605	.559	.627	.581	.626
Q30_4	.586	.588	.579	.537	.561	.555	.559
Q30_5	.520	.467	.516	.487	.477	.483	.462
Q30_6	.643	.596	.636	.557	.590	.554	.534
Q30_7	.745	.672	.658	.613	.643	.626	.613
Q30_8	1.000	.768	.710	.649	.674	.648	.662
Q30_9	.768	1.000	.723	.647	.705	.653	.688
Q30_10	.710	.723	1.000	.626	.687	.622	.617
Q30_11	.649	.647	.626	1.000	.646	.742	.616

Q30_12	.674	.705	.687	.646	1.000	.667	.664
Q30_13	.648	.653	.622	.742	.667	1.000	.646
Q30_14	.662	.688	.617	.616	.664	.646	1.000
Q30_15	.584	.594	.547	.535	.591	.581	.663

Inter-Item Correlation Matrix

	Q30_15
Q30_1	.513
Q30_2	.582
Q30_3	.701
Q30_4	.564
Q30_5	.486
Q30_6	.536
Q30_7	.557
Q30_8	.584
Q30_9	.594
Q30_10	.547
Q30_11	.535
Q30_12	.591
Q30_13	.581
Q30_14	.663
Q30_15	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance
Item Means	3.910	3.659	4.103	.444	1.121	.018
Inter-Item Correlations	.604	.462	.768	.306	1.662	.004

Summary Item Statistics

	N of Items
Item Means	15
Inter-Item Correlations	15

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
58.66	254.667	15.958	15

Reliability

Notes

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	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.
Syntax		RELIABILITY /VARIABLES=Q31_1 Q31_2 Q31_3 Q31_4 Q31_5 Q31_6 Q31_7 Q31_8 Q31_9 Q31_10 /SCALE('Reading') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE CORR

		/SUMMARY=MEANS CORR.
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Scale: Reading

Case Processing Summary

		N	%
Cases	Valid	1982	100.0
	Excluded[a]	0	.0
	Total	1982	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.948	.948	10

Item Statistics

	Mean	Std. Deviation	N
Q31_1	4.06	1.358	1982
Q31_2	4.03	1.351	1982
Q31_3	3.79	1.308	1982
Q31_4	4.01	1.392	1982
Q31_5	3.67	1.271	1982
Q31_6	3.93	1.406	1982
Q31_7	3.71	1.306	1982
Q31_8	3.70	1.281	1982

Q31_9	3.67	1.369	1982
Q31_10	3.66	1.252	1982

Inter-Item Correlation Matrix

	Q31_1	Q31_2	Q31_3	Q31_4	Q31_5	Q31_6	Q31_7
Q31_1	1.000	.740	.677	.634	.617	.618	.609
Q31_2	.740	1.000	.697	.620	.607	.624	.616
Q31_3	.677	.697	1.000	.716	.704	.676	.705
Q31_4	.634	.620	.716	1.000	.698	.757	.679
Q31_5	.617	.607	.704	.698	1.000	.716	.743
Q31_6	.618	.624	.676	.757	.716	1.000	.748
Q31_7	.609	.616	.705	.679	.743	.748	1.000
Q31_8	.584	.544	.642	.619	.686	.676	.720
Q31_9	.526	.501	.567	.542	.600	.576	.610
Q31_10	.588	.568	.654	.620	.690	.645	.705

Inter-Item Correlation Matrix

	Q31_8	Q31_9	Q31_10
Q31_1	.584	.526	.588
Q31_2	.544	.501	.568
Q31_3	.642	.567	.654
Q31_4	.619	.542	.620
Q31_5	.686	.600	.690
Q31_6	.676	.576	.645
Q31_7	.720	.610	.705
Q31_8	1.000	.686	.686
Q31_9	.686	1.000	.675
Q31_10	.686	.675	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance
Item Means	3.824	3.657	4.062	.405	1.111	.027
Inter-Item Correlations	.647	.501	.757	.257	1.513	.004

Summary Item Statistics

	N of Items
Item Means	10
Inter-Item Correlations	10

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
38.24	120.422	10.974	10

Reliability

Notes

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	N of Rows in Working Data File	1982
	Matrix Input	
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.
Syntax		RELIABILITY /VARIABLES=Q32_1 Q32_2 Q32_3 Q32_4

		Q32_5 Q32_6 Q32_7 Q32_8 Q32_9 Q32_10 /SCALE('Speaking') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE CORR /SUMMARY=MEANS CORR.
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.01

Scale: Speaking

Case Processing Summary

		N	%
Cases	Valid	1982	100.0
	Excluded[a]	0	.0
	Total	1982	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.952	.951	10

Item Statistics

	Mean	Std. Deviation	N
Q32_1	4.12	1.441	1982
Q32_2	3.67	1.464	1982

Q32_3	3.83	1.398	1982
Q32_4	3.99	1.515	1982
Q32_5	3.99	1.455	1982
Q32_6	3.21	1.387	1982
Q32_7	3.66	1.370	1982
Q32_8	3.95	1.437	1982
Q32_9	4.01	1.507	1982
Q32_10	3.14	1.339	1982

Inter-Item Correlation Matrix

	Q32_1	Q32_2	Q32_3	Q32_4	Q32_5	Q32_6	Q32_7
Q32_1	1.000	.721	.702	.658	.734	.539	.604
Q32_2	.721	1.000	.725	.656	.717	.655	.641
Q32_3	.702	.725	1.000	.746	.791	.637	.665
Q32_4	.658	.656	.746	1.000	.817	.566	.691
Q32_5	.734	.717	.791	.817	1.000	.587	.698
Q32_6	.539	.655	.637	.566	.587	1.000	.652
Q32_7	.604	.641	.665	.691	.698	.652	1.000
Q32_8	.669	.641	.708	.743	.762	.574	.739
Q32_9	.668	.655	.732	.778	.806	.572	.693
Q32_10	.480	.564	.587	.504	.531	.677	.609

Inter-Item Correlation Matrix

	Q32_8	Q32_9	Q32_10
Q32_1	.669	.668	.480
Q32_2	.641	.655	.564
Q32_3	.708	.732	.587
Q32_4	.743	.778	.504
Q32_5	.762	.806	.531
Q32_6	.574	.572	.677
Q32_7	.739	.693	.609
Q32_8	1.000	.792	.541
Q32_9	.792	1.000	.537
Q32_10	.541	.537	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance

Item Means	3.757	3.140	4.124	.984	1.313	.115
Inter-Item Correlations	.661	.480	.817	.337	1.701	.007

Summary Item Statistics

	N of Items
Item Means	10
Inter-Item Correlations	10

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
37.57	142.857	11.952	10

Reliability

Notes

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	Matrix Input	
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.

	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.
Syntax		RELIABILITY /VARIABLES=Q33_1 Q33_2 Q33_3 Q33_4 Q33_5 Q33_6 Q33_7 Q33_8 Q33_9 Q33_10 /SCALE('Listening') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE CORR /SUMMARY=MEANS CORR.
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.01

Scale: Listening

Case Processing Summary

		N	%
Cases	Valid	1982	100.0
	Excluded[a]	0	.0
	Total	1982	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.956	.957	10

Item Statistics

	Mean	Std. Deviation	N
Q33_1	3.27	1.305	1982
Q33_2	3.24	1.286	1982
Q33_3	3.39	1.303	1982
Q33_4	3.37	1.310	1982
Q33_5	3.32	1.246	1982
Q33_6	3.68	1.428	1982
Q33_7	3.45	1.287	1982
Q33_8	3.36	1.272	1982
Q33_9	3.28	1.265	1982
Q33_10	3.43	1.355	1982

Inter-Item Correlation Matrix

	Q33_1	Q33_2	Q33_3	Q33_4	Q33_5	Q33_6	Q33_7
Q33_1	1.000	.832	.751	.713	.743	.596	.709
Q33_2	.832	1.000	.769	.729	.763	.612	.698
Q33_3	.751	.769	1.000	.732	.750	.590	.689
Q33_4	.713	.729	.732	1.000	.787	.590	.720
Q33_5	.743	.763	.750	.787	1.000	.615	.749
Q33_6	.596	.612	.590	.590	.615	1.000	.653
Q33_7	.709	.698	.689	.720	.749	.653	1.000
Q33_8	.720	.727	.700	.714	.767	.609	.796
Q33_9	.752	.748	.725	.737	.755	.602	.778
Q33_10	.573	.583	.560	.540	.593	.608	.604

Inter-Item Correlation Matrix

	Q33_8	Q33_9	Q33_10
Q33_1	.720	.752	.573
Q33_2	.727	.748	.583
Q33_3	.700	.725	.560
Q33_4	.714	.737	.540
Q33_5	.767	.755	.593
Q33_6	.609	.602	.608
Q33_7	.796	.778	.604
Q33_8	1.000	.804	.617

Q33_9	.804	1.000	.633
Q33_10	.617	.633	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance
Item Means	3.379	3.239	3.683	.443	1.137	.016
Inter-Item Correlations	.690	.540	.832	.292	1.541	.006

Summary Item Statistics

	N of Items
Item Means	10
Inter-Item Correlations	10

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
33.79	122.434	11.065	10

Reliability

Notes

Output Created		10-OCT-2025 10:41:03
Comments		
Input	Data	F:\Oxford Dissertation 2025\NVivo and stuff files4Travel\Christopher SPSS.1October.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>

	N of Rows in Working Data File	1982
	Matrix Input	
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.
Syntax		RELIABILITY /VARIABLES=Q45_1 Q45_2 Q45_3 Q45_4 /SCALE('Section B') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE CORR /SUMMARY=MEANS CORR.
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.01

Scale: Section B

Case Processing Summary

		N	%
Cases	Valid	1982	100.0
	Excluded[a]	0	.0
	Total	1982	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based	N of Items

	on Standardized Items	
.860	.861	4

Item Statistics

	Mean	Std. Deviation	N
Reading	3.93	1.331	1982
Writing	4.32	1.281	1982
Speaking	4.05	1.445	1982
Listening	3.61	1.400	1982

Inter-Item Correlation Matrix

	Reading	Writing	Speaking	Listening
Reading	1.000	.669	.567	.617
Writing	.669	1.000	.600	.544
Speaking	.567	.600	1.000	.652
Listening	.617	.544	.652	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance
Item Means	3.977	3.608	4.323	.715	1.198	.088
Inter-Item Correlations	.608	.544	.669	.125	1.231	.002

Summary Item Statistics

	N of Items
Item Means	4
Inter-Item Correlations	4

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
15.91	21.034	4.586	4

Appendix I: Normality tests (Kolmogorov-Smirnov)

Descriptives

Notes

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Comments		
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	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	1982
Missing Value Handling	Definition of Missing	User defined missing values are treated as missing.
	Cases Used	All non-missing data are used.
Syntax		DESCRIPTIVES VARIABLES=WritingMean ReadingMean SpeakingMean ListeningMean /SAVE /STATISTICS=MEAN STDDEV KURTOSIS SKEWNESS.
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.02
Variables Created or Modified	ZWritingMean	Zscore: Writing Skills
	ZReadingMean	Zscore: Reading Skills
	ZSpeakingMean	Zscore: Speaking Skills
	ZListeningMean	Zscore: Listening Skills

[DataSet1] F:\NVivo and stuff files4Travel\ChristopherSPSS.28Aug.sav

Descriptive Statistics

	N	Mean	Std. Deviation	Skewness		Kurtosis
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic
Writing Skills	1982	3.9104	1.06389	-.099	.055	-.201
Reading Skills	1982	3.8242	1.09737	-.001	.055	-.185
Speaking Skills	1982	3.7575	1.19523	.047	.055	-.338
Listening Skills	1982	3.3790	1.10650	.307	.055	.000
Valid N (listwise)	1982					

Descriptive Statistics

	Kurtosis
	Std. Error
Writing Skills	.110
Reading Skills	.110
Speaking Skills	.110
Listening Skills	.110
Valid N (listwise)	

Explore

Notes

Output Created		29-SEP-2025 16:03:13
Comments		
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	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	1982
Missing Value Handling	Definition of Missing	User-defined missing values for dependent variables are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any dependent variable or factor used.
Syntax		EXAMINE VARIABLES=ZWritingMean ZReadingMean ZSpeakingMean ZListeningMean /PLOT BOXPLOT HISTOGRAM NPPLOT /COMPARE GROUPS /STATISTICS DESCRIPTIVES /CINTERVAL 95 /MISSING LISTWISE /NOTOTAL.
Resources	Processor Time	00:00:05.95
	Elapsed Time	00:00:02.87

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Zscore: Writing Skills	1982	100.0%	0	0.0%	1982	100.0%
Zscore: Reading Skills	1982	100.0%	0	0.0%	1982	100.0%
Zscore: Speaking Skills	1982	100.0%	0	0.0%	1982	100.0%

Zscore: Listening Skills	1982	100.0%	0	0.0%	1982	100.0%

Descriptives

			Statistic	Std. Error
Zscore: Writing Skills	Mean		.0000000	.02246199
	95% Confidence Interval for Mean	Lower Bound	-.0440516	
		Upper Bound	.0440516	
	5% Trimmed Mean		.0039450	
	Median		.0841940	
	Variance		1.000	
	Std. Deviation		1.00000000	
	Minimum		-2.73566	
	Maximum		2.90405	
	Range		5.63970	
	Interquartile Range		1.37859	
	Skewness		-.099	.055
	Kurtosis		-.201	.110
Zscore: Reading Skills	Mean		.0000000	.02246199
	95% Confidence Interval for Mean	Lower Bound	-.0440516	
		Upper Bound	.0440516	
	5% Trimmed Mean		-.0046539	
	Median		.0691040	
	Variance		1.000	
	Std. Deviation		1.00000000	
	Minimum		-2.57358	
	Maximum		2.89405	
	Range		5.46763	
	Interquartile Range		1.45803	

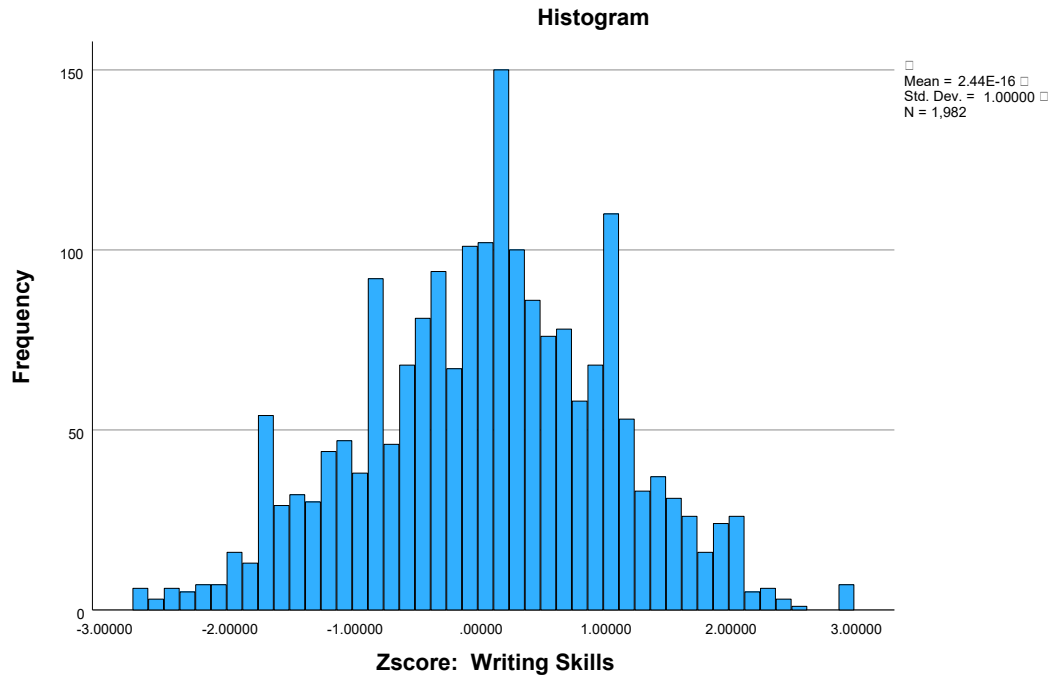
	Skewness		-.001	.055
	Kurtosis		-.185	.110
Zscore: Speaking Skills	Mean		.0000000	.02246199
	95% Confidence Interval for Mean	Lower Bound	-.0440516	
		Upper Bound	.0440516	
	5% Trimmed Mean		-.0046153	
	Median		.0355855	
	Variance		1.000	
	Std. Deviation		1.00000000	
	Minimum		-2.30706	
	Maximum		2.71290	
	Range		5.01996	
	Interquartile Range		1.33865	
	Skewness		.047	.055
	Kurtosis		-.338	.110
Zscore: Listening Skills	Mean		.0000000	.02246199
	95% Confidence Interval for Mean	Lower Bound	-.0440516	
		Upper Bound	.0440516	
	5% Trimmed Mean		-.0176210	
	Median		-.0714063	
	Variance		1.000	
	Std. Deviation		1.00000000	
	Minimum		-2.15003	
	Maximum		3.27247	
	Range		5.42250	
	Interquartile Range		1.35562	
	Skewness		.307	.055
	Kurtosis		.000	.110

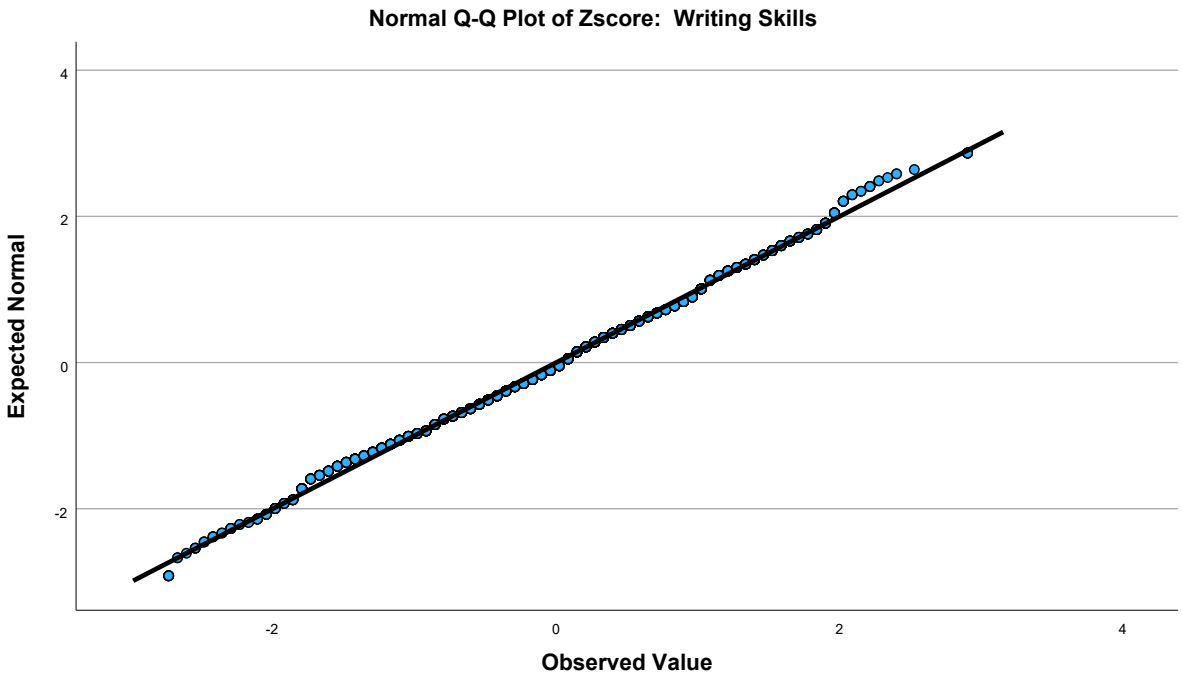
Tests of Normality

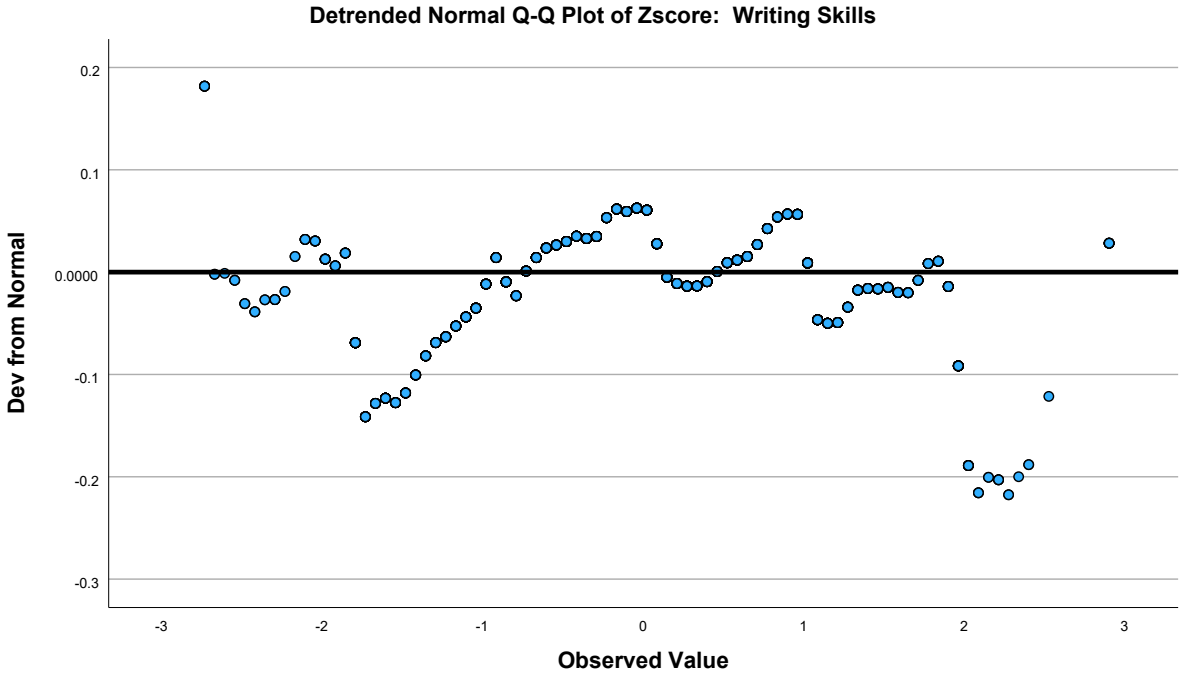
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Zscore: Writing Skills	.038	1982	<.001	.996	1982	<.001
Zscore: Reading Skills	.042	1982	<.001	.996	1982	<.001
Zscore: Speaking Skills	.036	1982	<.001	.994	1982	<.001
Zscore: Listening Skills	.057	1982	<.001	.989	1982	<.001

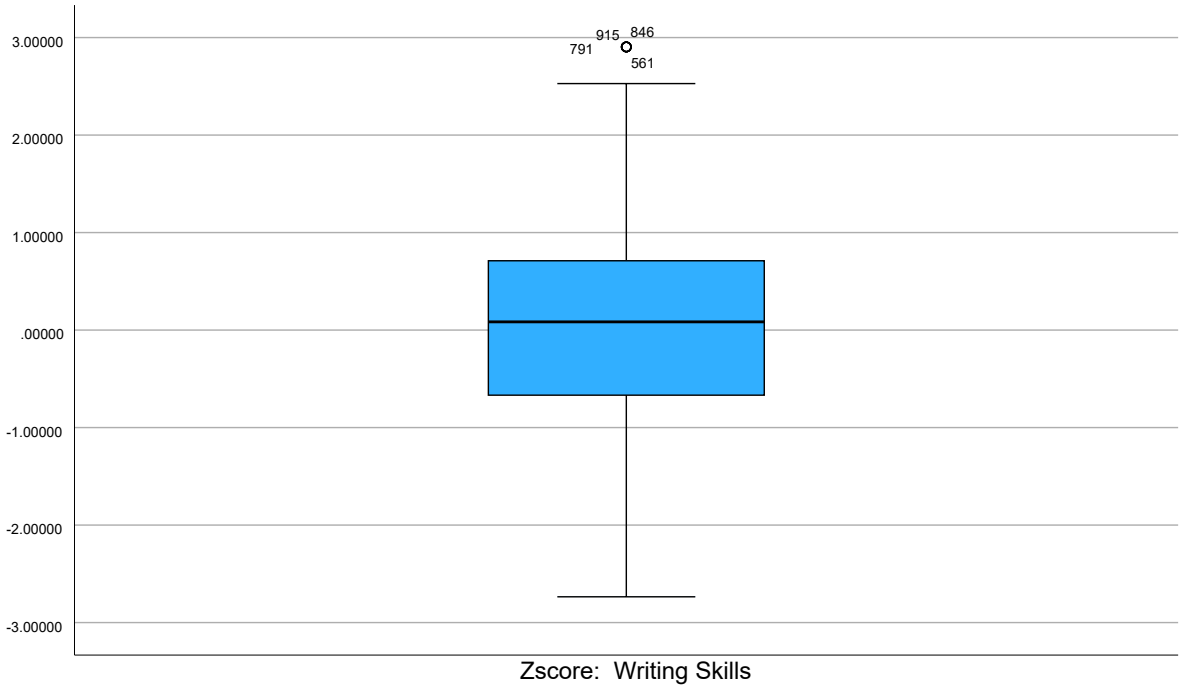
a. Lilliefors Significance Correction

Zscore: Writing Skills

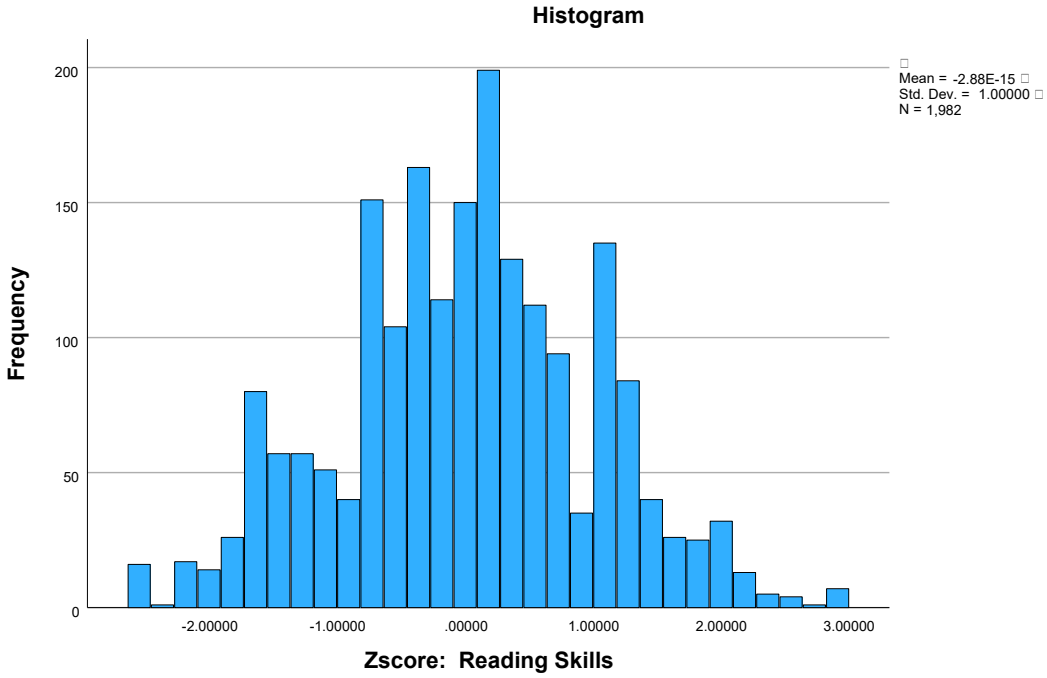


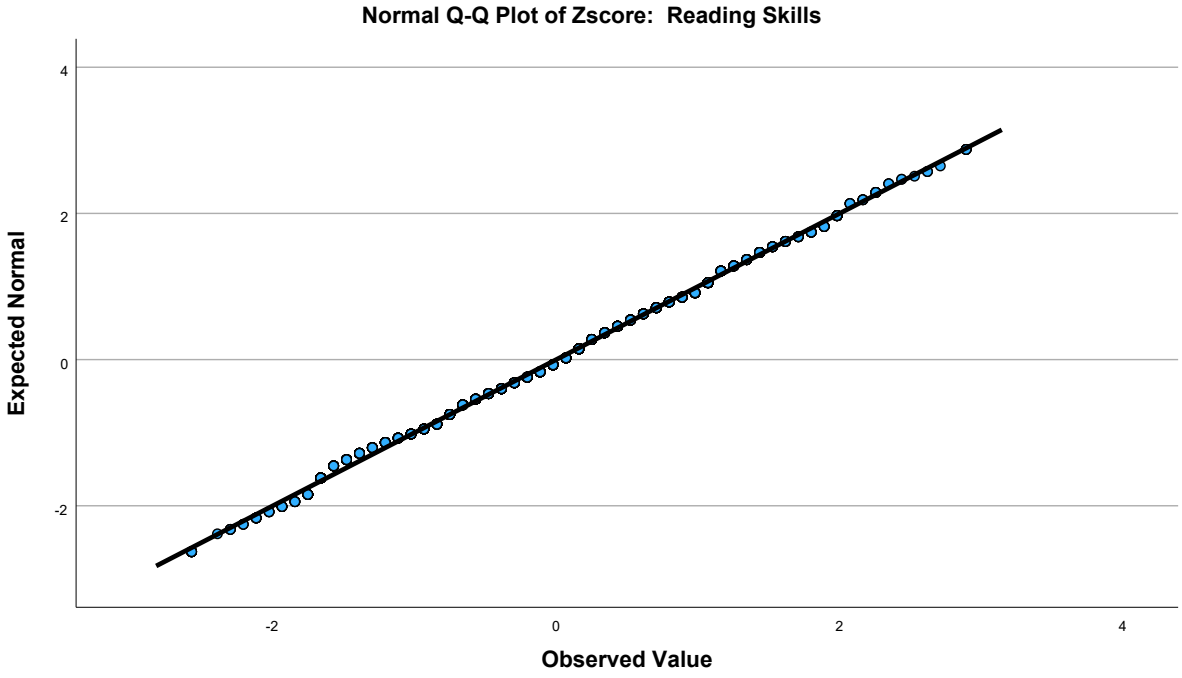

Normal Q-Q Plot of Zscore: Writing Skills
Expected Normal
Observed Value
4
2
0
-2
-2
0
2
4

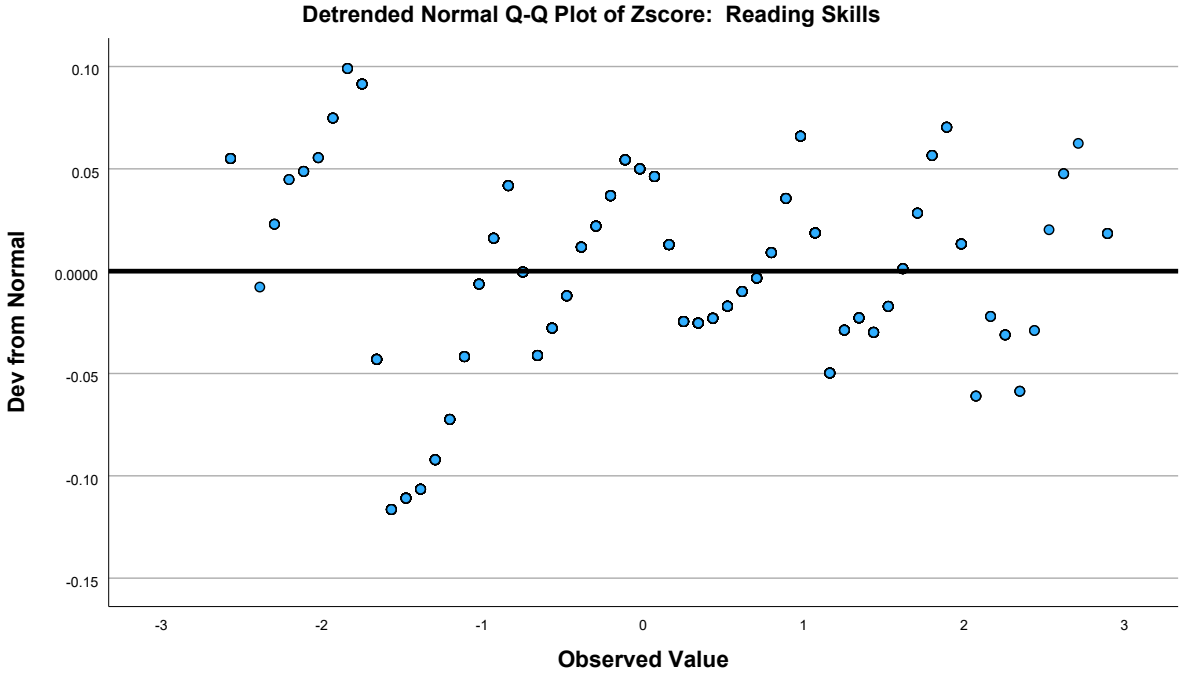

Detrended Normal Q-Q Plot of Zscore: Writing Skills
Dev from Normal
Observed Value
0.2
0.1
0.0000
-0.1
-0.2
-0.3
-3
-2
-1
0
1
2
3

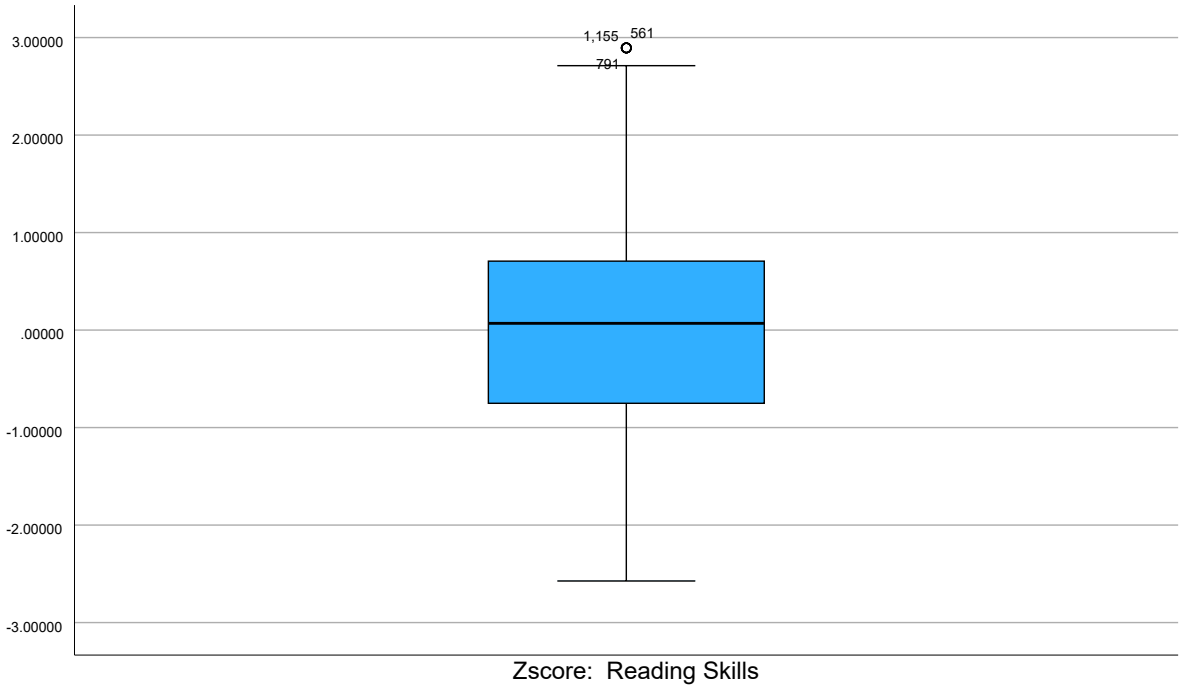


Zscore: Reading Skills

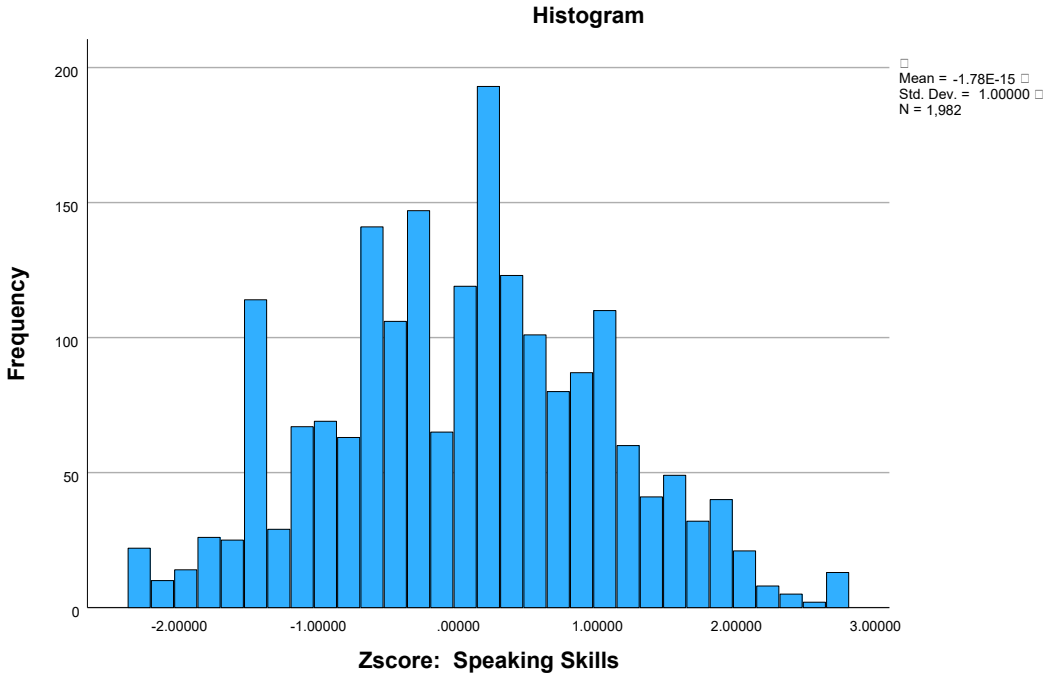


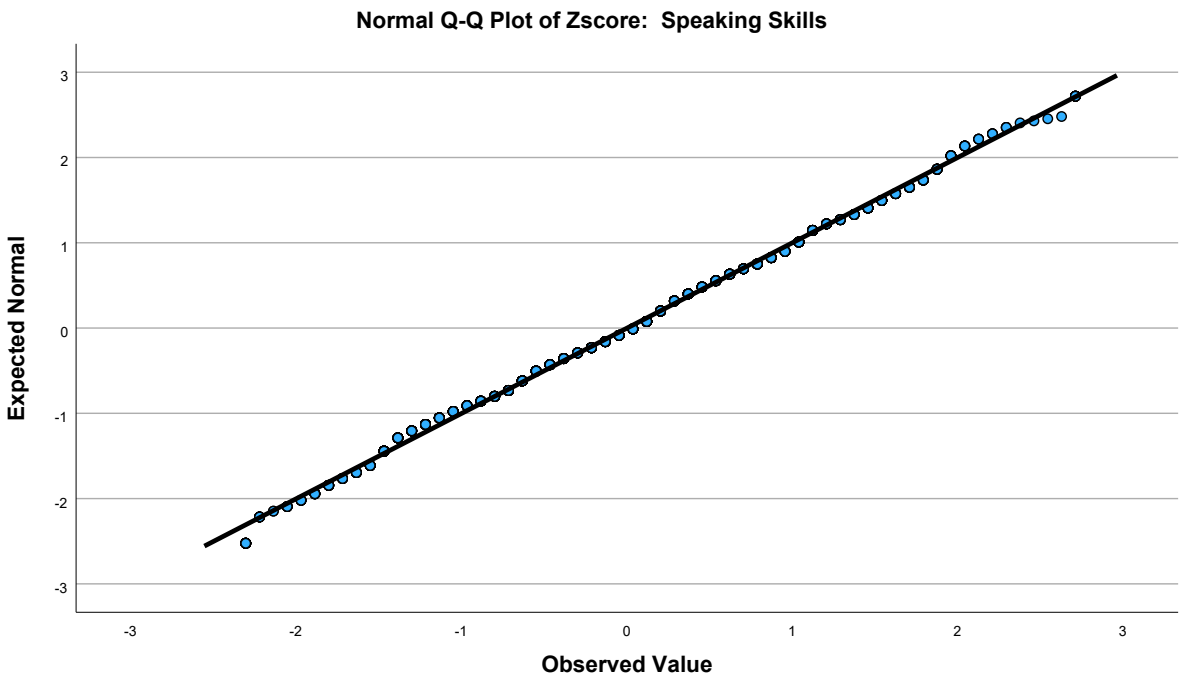

Normal Q-Q Plot of Zscore: Reading Skills
Expected Normal
4
2
0
-2
-2
0
2
4
Observed Value

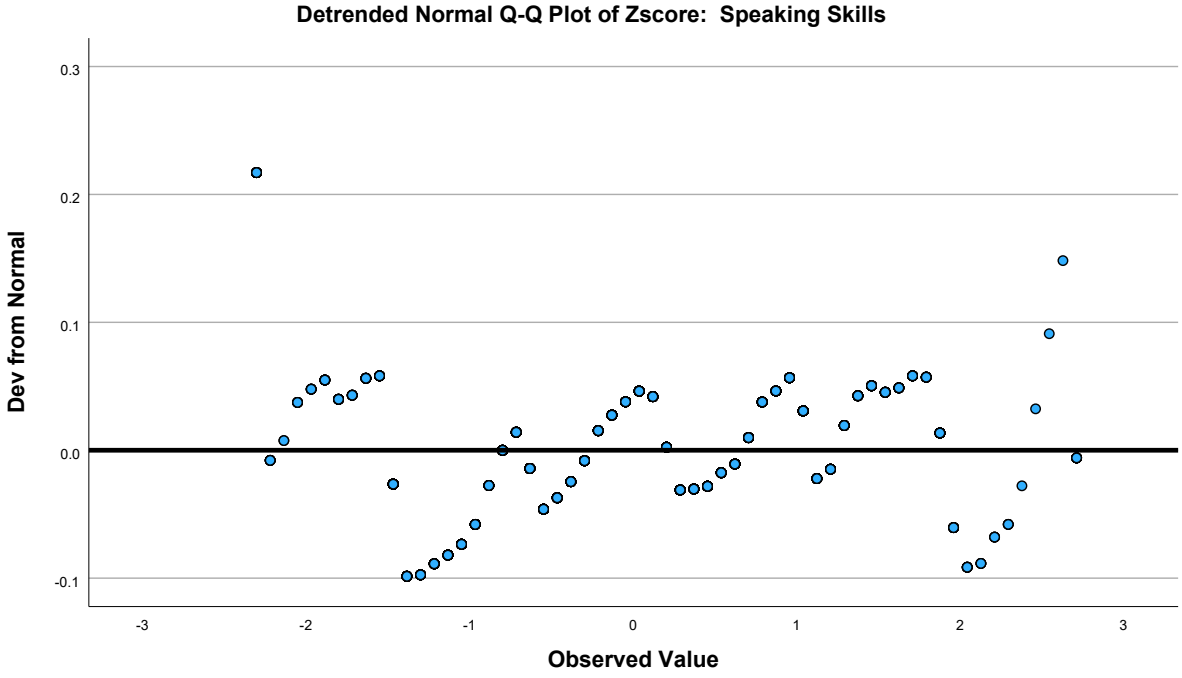

Detrended Normal Q-Q Plot of Zscore: Reading Skills
Dev from Normal
0.10
0.05
0.0000
-0.05
-0.10
-0.15
-3
-2
-1
0
1
2
3
Observed Value

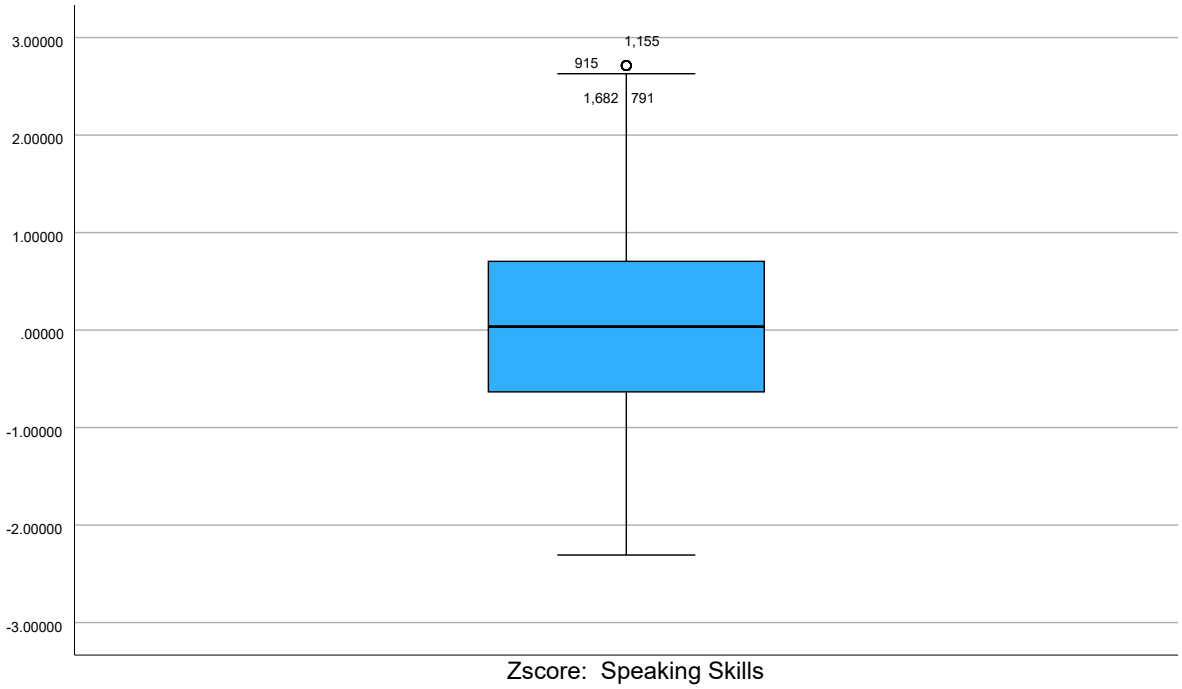


Zscore: Speaking Skills

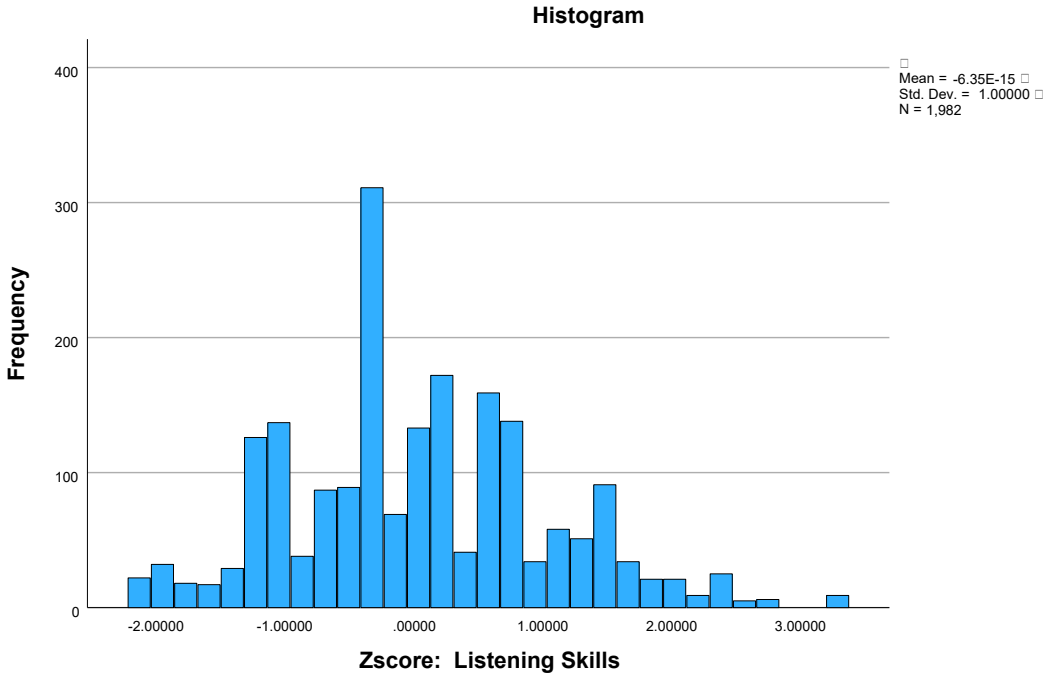


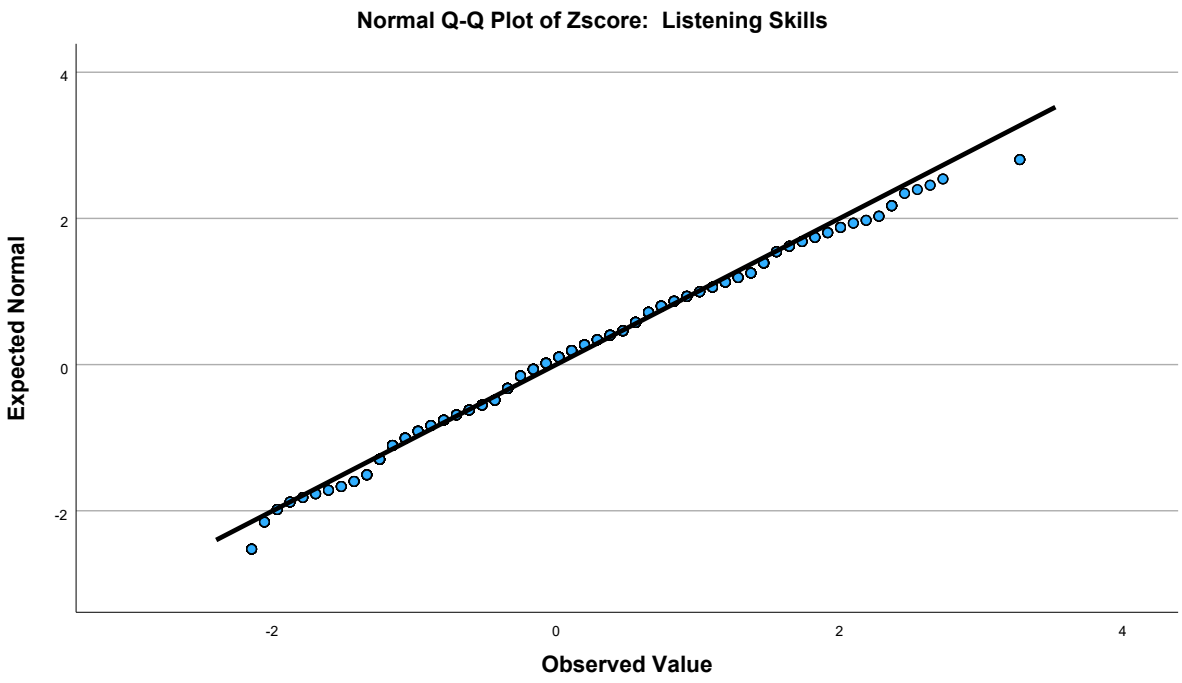

Normal Q-Q Plot of Zscore: Speaking Skills
Expected Normal
Observed Value
3
2
1
0
-1
-2
-3

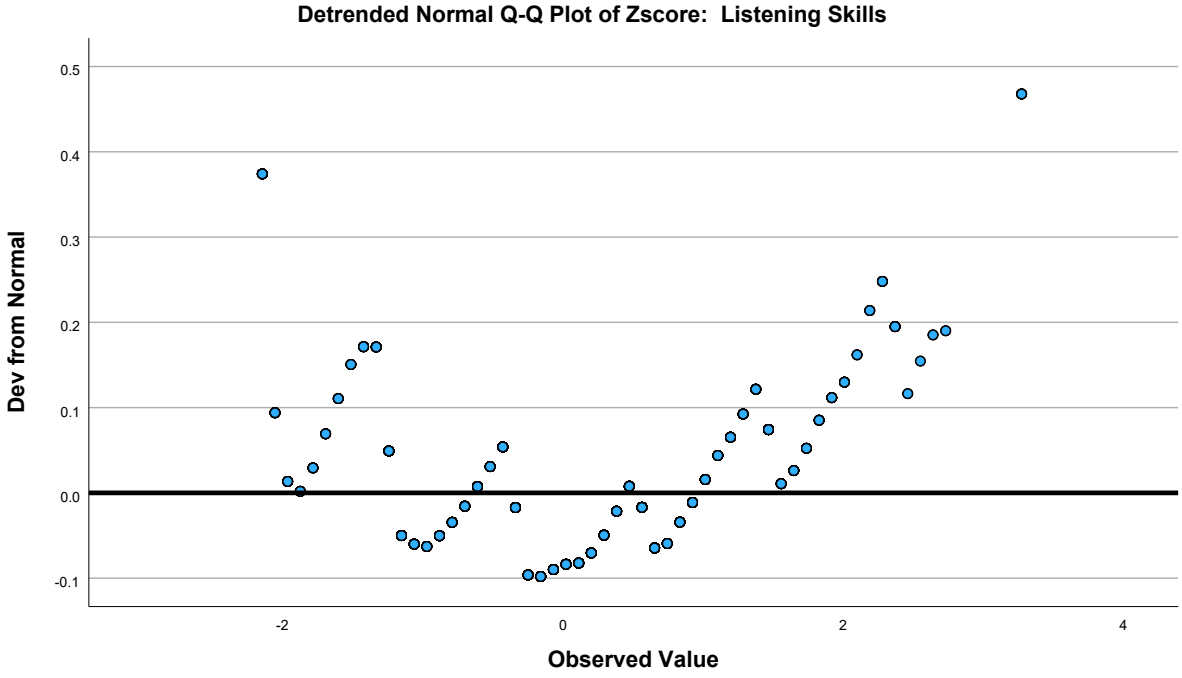

Detrended Normal Q-Q Plot of Zscore: Speaking Skills
Dev from Normal
Observed Value
0.3
0.2
0.1
0.0
-0.1
-3
-2
-1
0
1
2
3

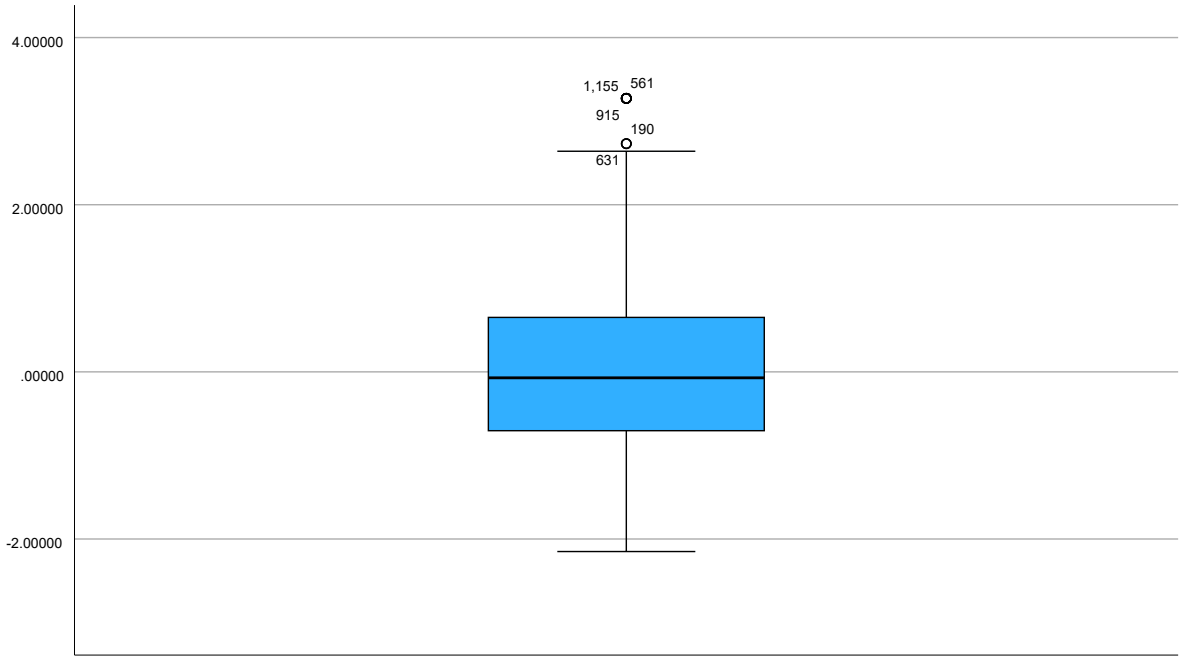


Zscore: Listening Skills




Normal Q-Q Plot of Zscore: Listening Skills
Expected Normal
Observed Value
4
2
0
-2
-2
0
2
4


Detrended Normal Q-Q Plot of Zscore: Listening Skills
Dev from Normal
Observed Value
0.5
0.4
0.3
0.2
0.1
0.0
-0.1
-2
0
2
4



Zscore: Listening Skills

Explore

Notes

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Comments		
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	Active Dataset	DataSet1
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	N of Rows in Working Data File	1982
Missing Value Handling	Definition of Missing	User-defined missing values for dependent variables are treated as missing.

	Cases Used	Statistics are based on cases with no missing values for any dependent variable or factor used.
Syntax		EXAMINE VARIABLES=WritingMean ReadingMean SpeakingMean ListeningMean /PLOT BOXPLOT HISTOGRAM NPPLOT /COMPARE GROUPS /STATISTICS DESCRIPTIVES /CINTERVAL 95 /MISSING LISTWISE /NOTOTAL.
Resources	Processor Time	00:00:03.20
	Elapsed Time	00:00:02.39

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Writing Skills	1982	100.0%	0	0.0%	1982	100.0%
Reading Skills	1982	100.0%	0	0.0%	1982	100.0%
Speaking Skills	1982	100.0%	0	0.0%	1982	100.0%
Listening Skills	1982	100.0%	0	0.0%	1982	100.0%

Descriptives

			Statistic	Std. Error
Writing Skills	Mean		3.9104	.02390
	95% Confidence Interval for Mean	Lower Bound	3.8636	
		Upper Bound	3.9573	
	5% Trimmed Mean		3.9146	

	Median		4.0000	
	Variance		1.132	
	Std. Deviation		1.06389	
	Minimum		1.00	
	Maximum		7.00	
	Range		6.00	
	Interquartile Range		1.47	
	Skewness		-.099	.055
	Kurtosis		-.201	.110
Reading Skills	Mean		3.8242	.02465
	95% Confidence Interval for Mean	Lower Bound	3.7758	
		Upper Bound	3.8725	
	5% Trimmed Mean		3.8191	
	Median		3.9000	
	Variance		1.204	
	Std. Deviation		1.09737	
	Minimum		1.00	
	Maximum		7.00	
	Range		6.00	
	Interquartile Range		1.60	
	Skewness		-.001	.055
	Kurtosis		-.185	.110
Speaking Skills	Mean		3.7575	.02685
	95% Confidence Interval for Mean	Lower Bound	3.7048	
		Upper Bound	3.8101	
	5% Trimmed Mean		3.7520	
	Median		3.8000	
	Variance		1.429	

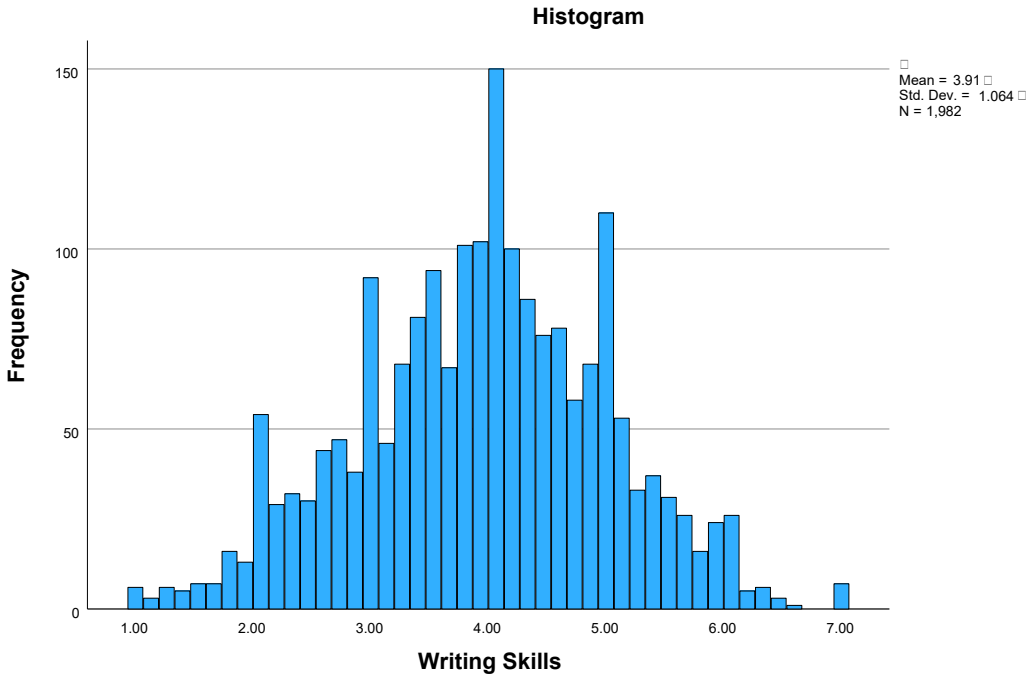
	Std. Deviation		1.19523	
	Minimum		1.00	
	Maximum		7.00	
	Range		6.00	
	Interquartile Range		1.60	
	Skewness		.047	.055
	Kurtosis		-.338	.110
Listening Skills	Mean		3.3790	.02485
	95% Confidence Interval for Mean	Lower Bound	3.3303	
		Upper Bound	3.4278	
	5% Trimmed Mean		3.3595	
	Median		3.3000	
	Variance		1.224	
	Std. Deviation		1.10650	
	Minimum		1.00	
	Maximum		7.00	
	Range		6.00	
	Interquartile Range		1.50	
	Skewness		.307	.055
	Kurtosis		.000	.110

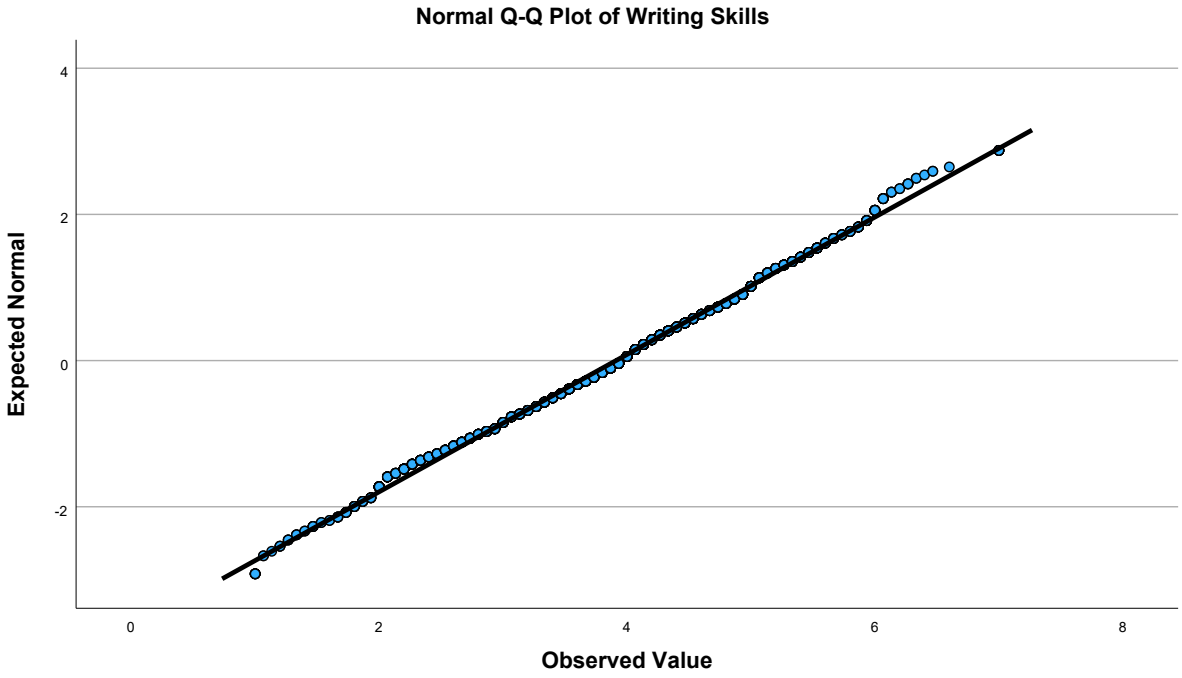
Tests of Normality

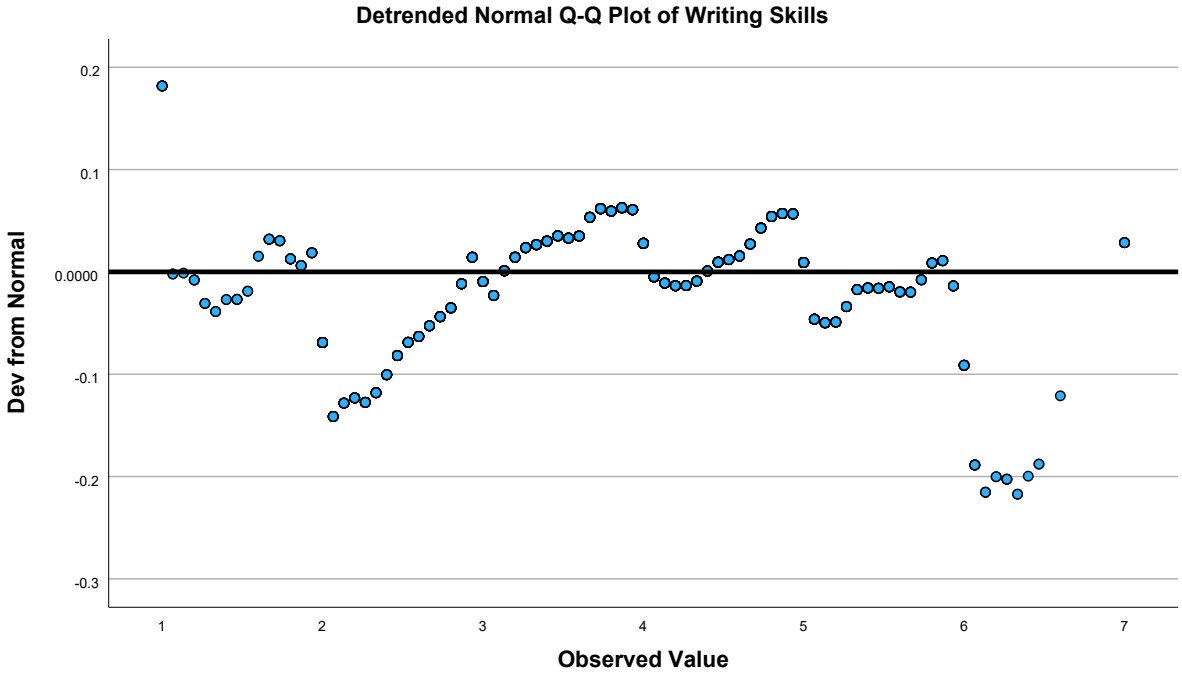
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Writing Skills	.038	1982	<.001	.996	1982	<.001
Reading Skills	.042	1982	<.001	.996	1982	<.001
Speaking Skills	.036	1982	<.001	.994	1982	<.001
Listening Skills	.057	1982	<.001	.989	1982	<.001

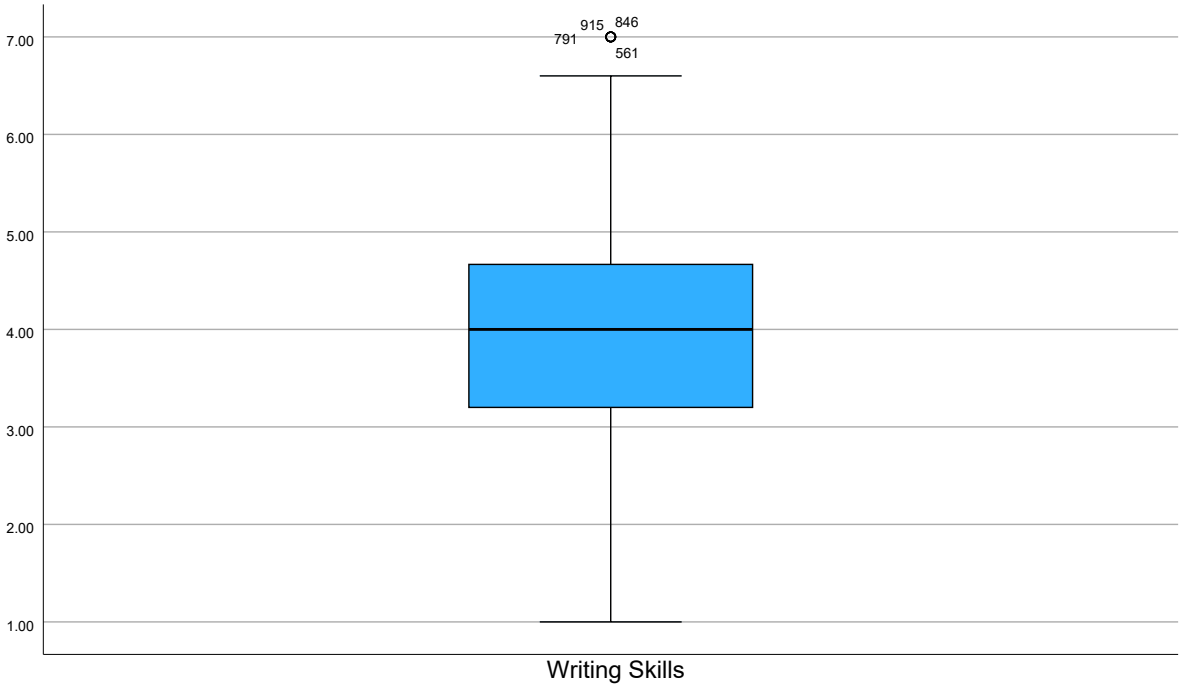
a. Lilliefors Significance Correction

Writing Skills

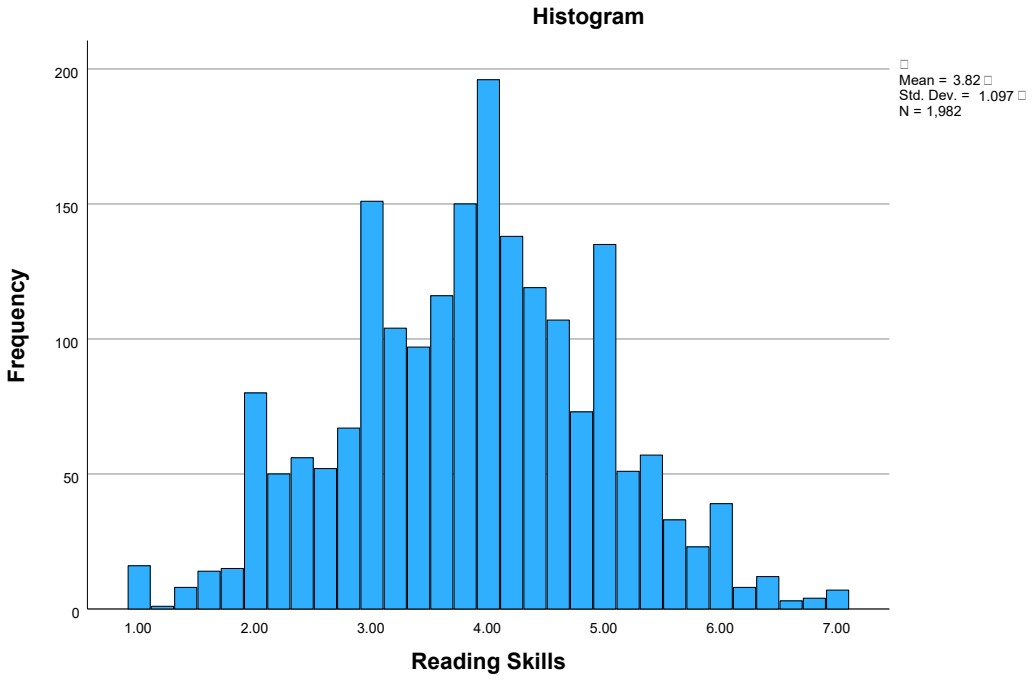


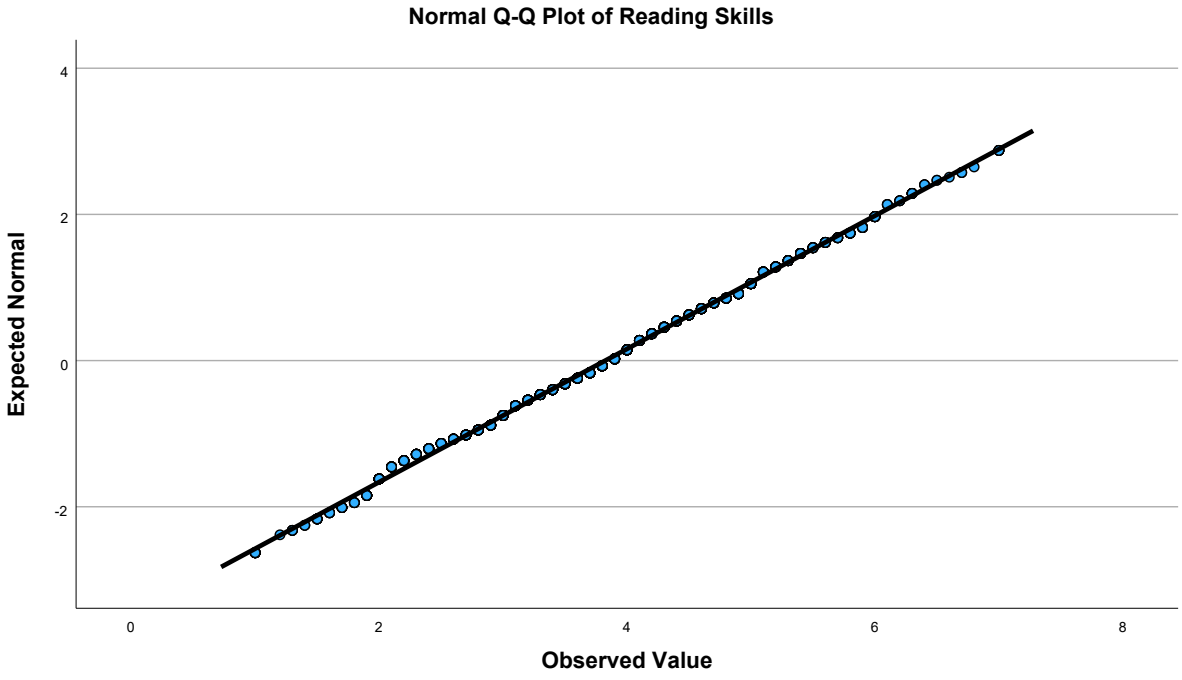


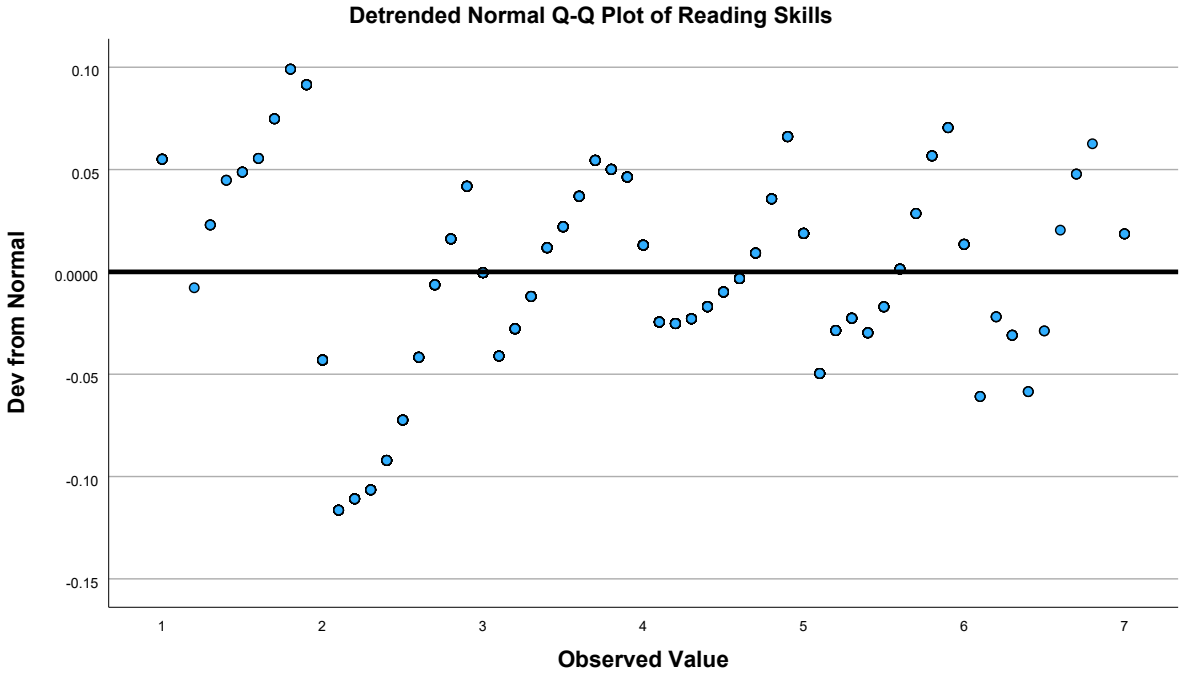

Detrended Normal Q-Q Plot of Writing Skills
Dev from Normal
0.2
0.1
0.0000
-0.1
-0.2
-0.3
1
2
3
4
5
6
7
Observed Value

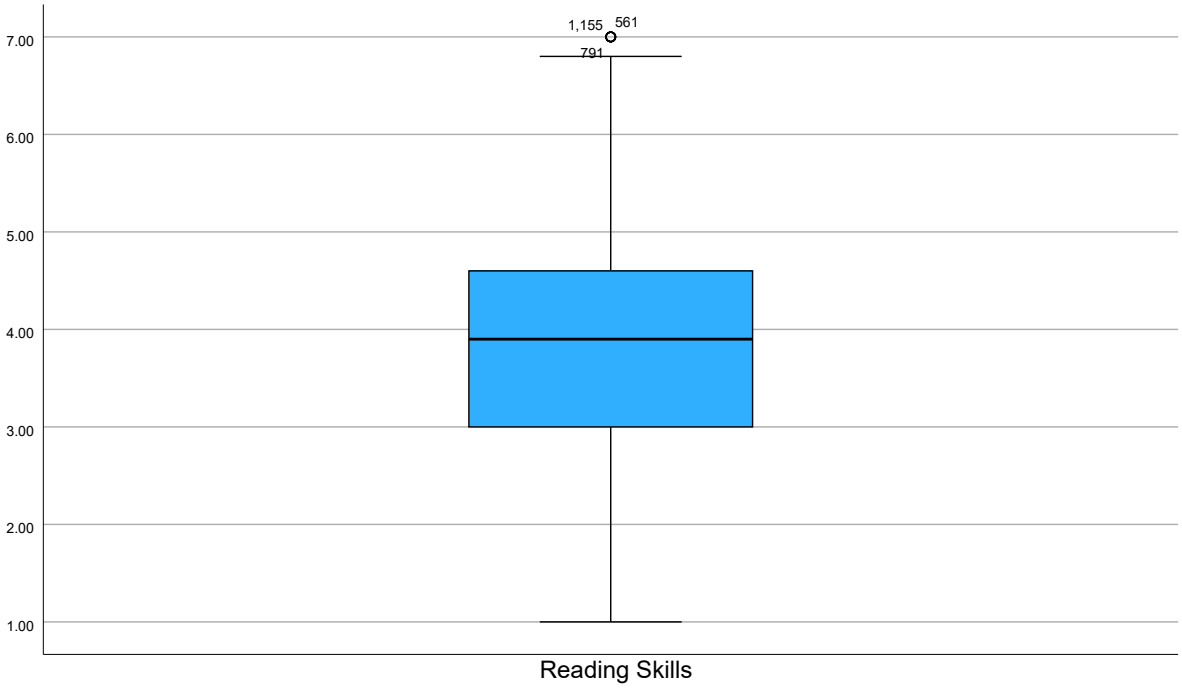

7.00
6.00
5.00
4.00
3.00
2.00
1.00
915
846
791
561
Writing Skills

Reading Skills

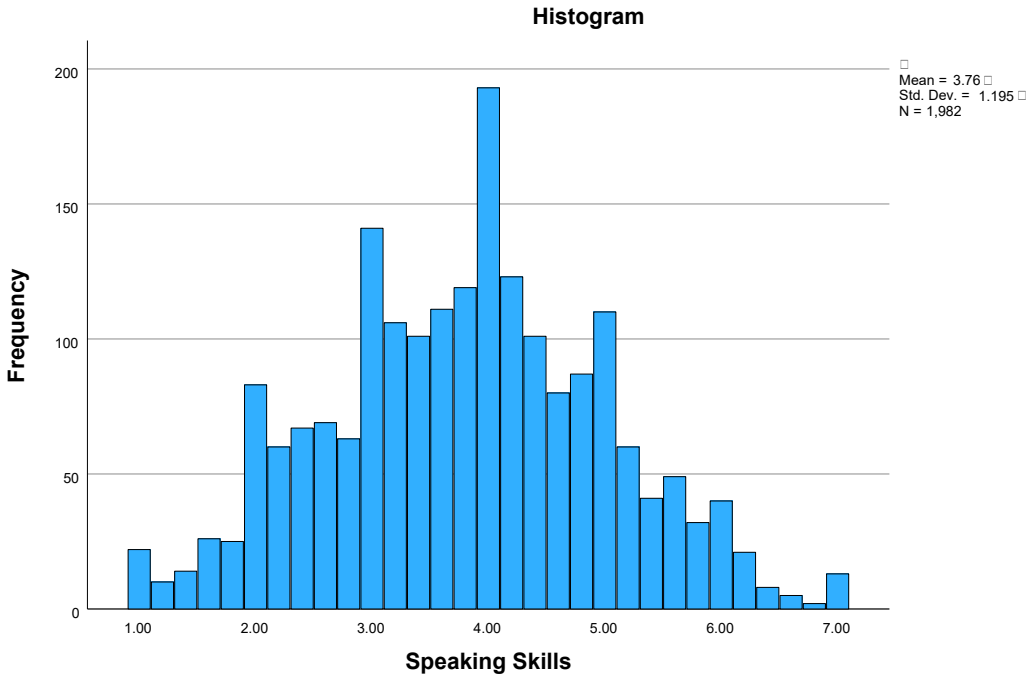


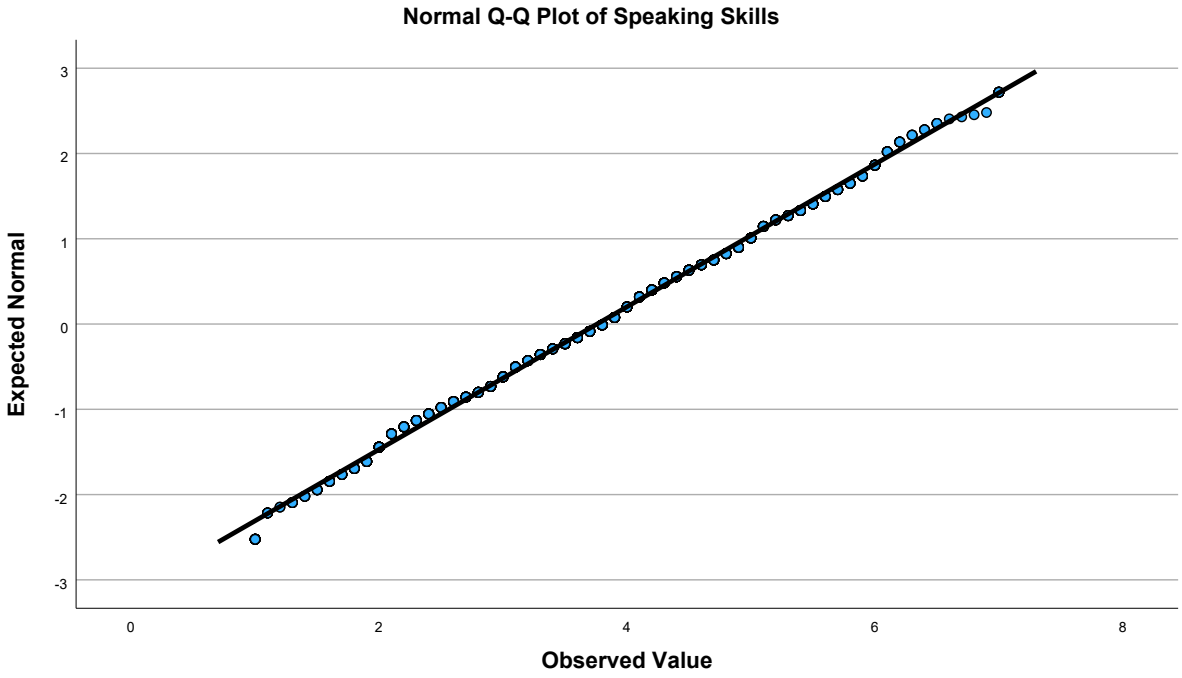


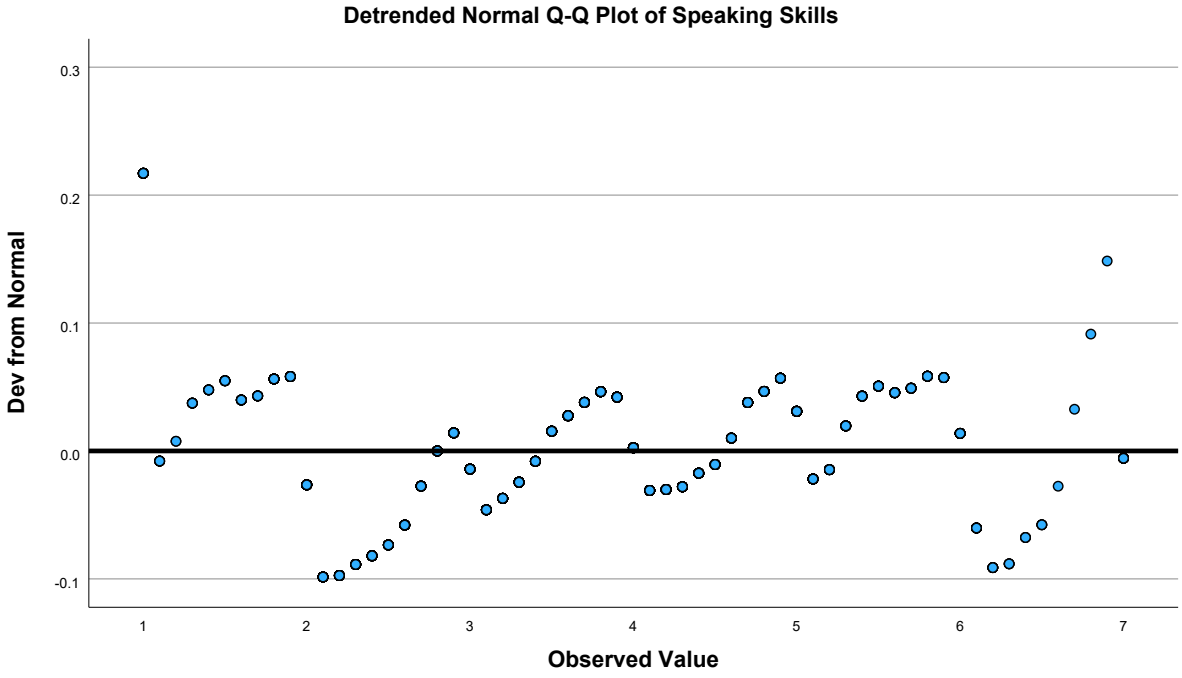

Detrended Normal Q-Q Plot of Reading Skills
Dev from Normal
0.10
0.05
0.0000
-0.05
-0.10
-0.15
1
2
3
4
5
6
7
Observed Value

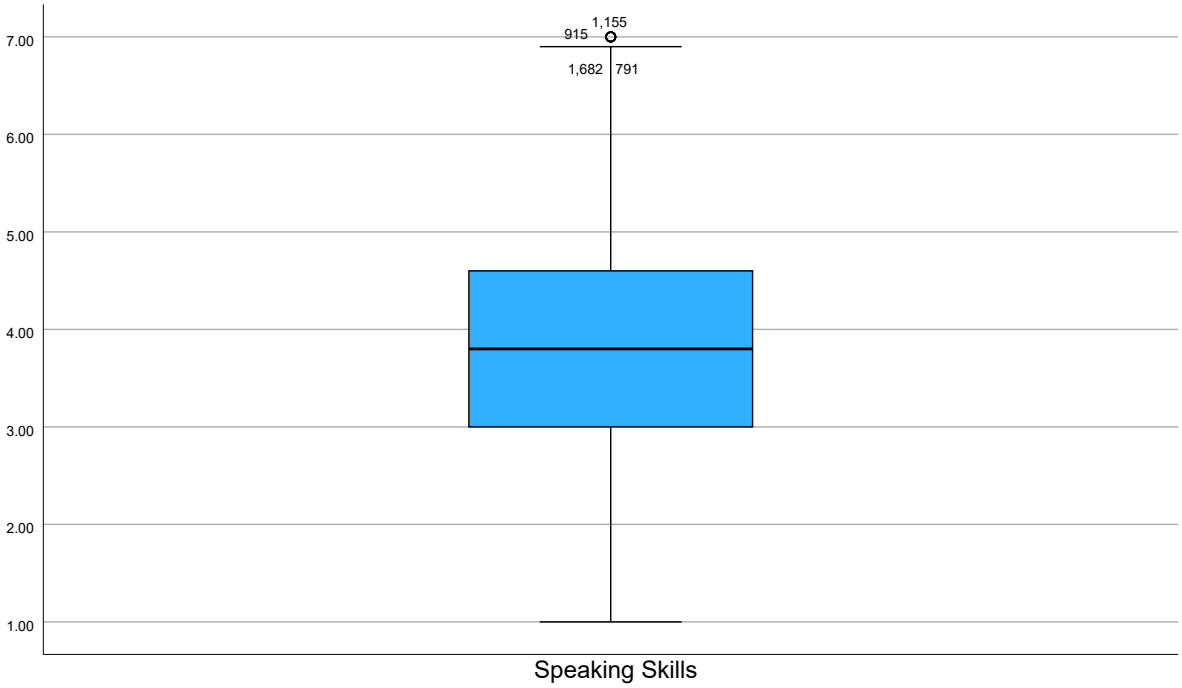

1,155
561
791
7.00
6.00
5.00
4.00
3.00
2.00
1.00
Reading Skills

Speaking Skills

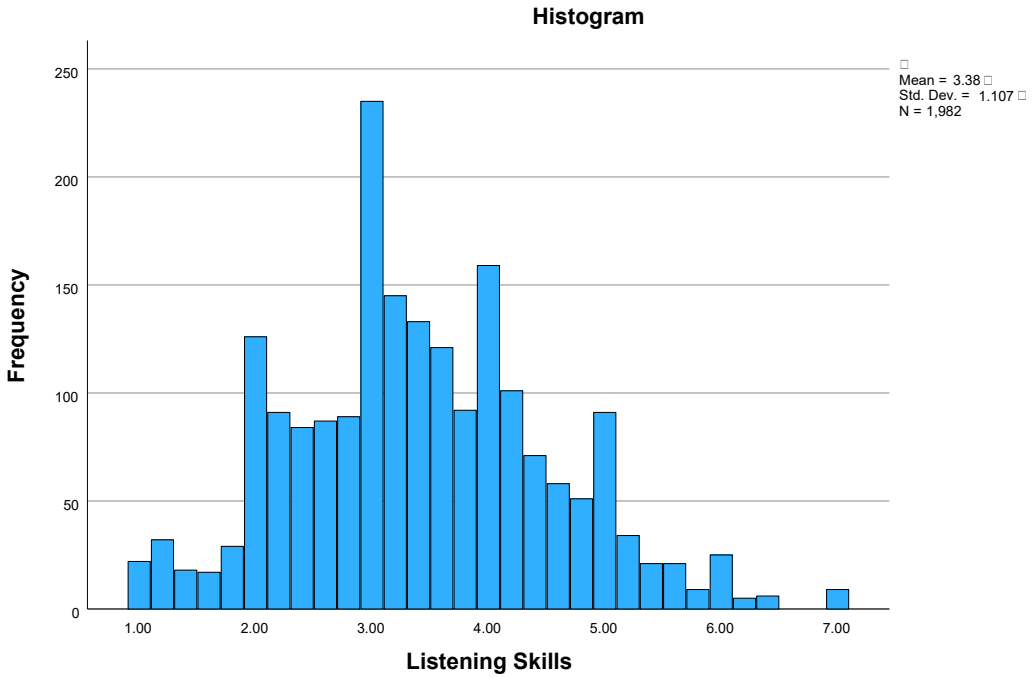


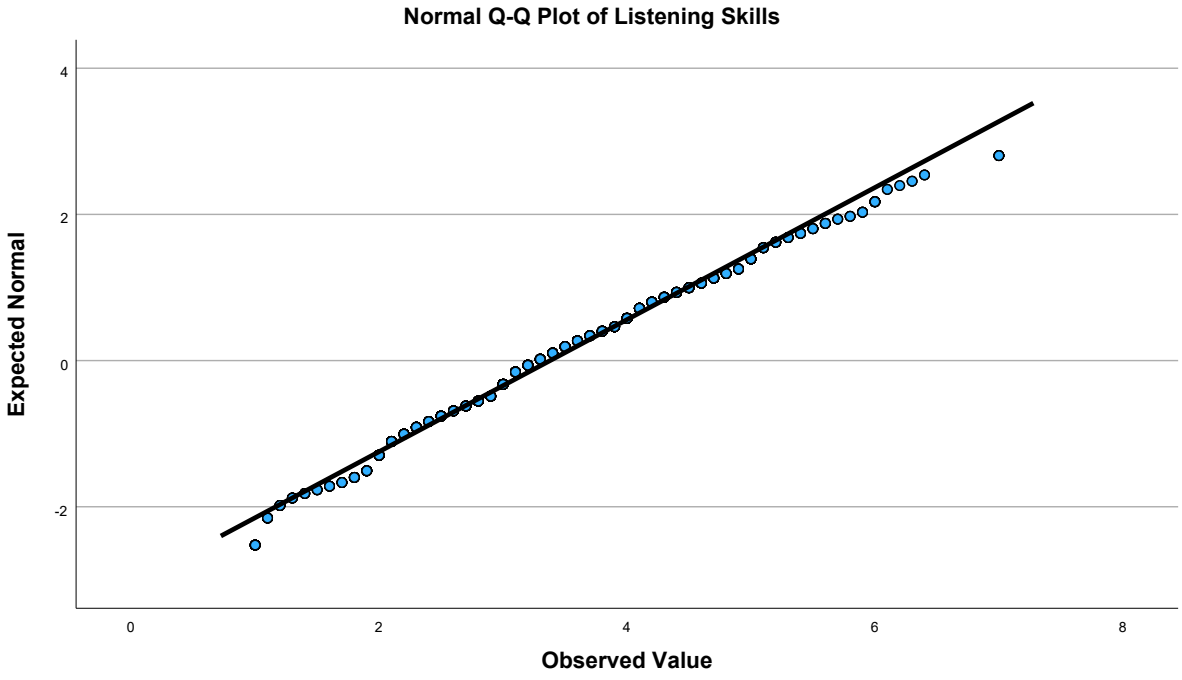


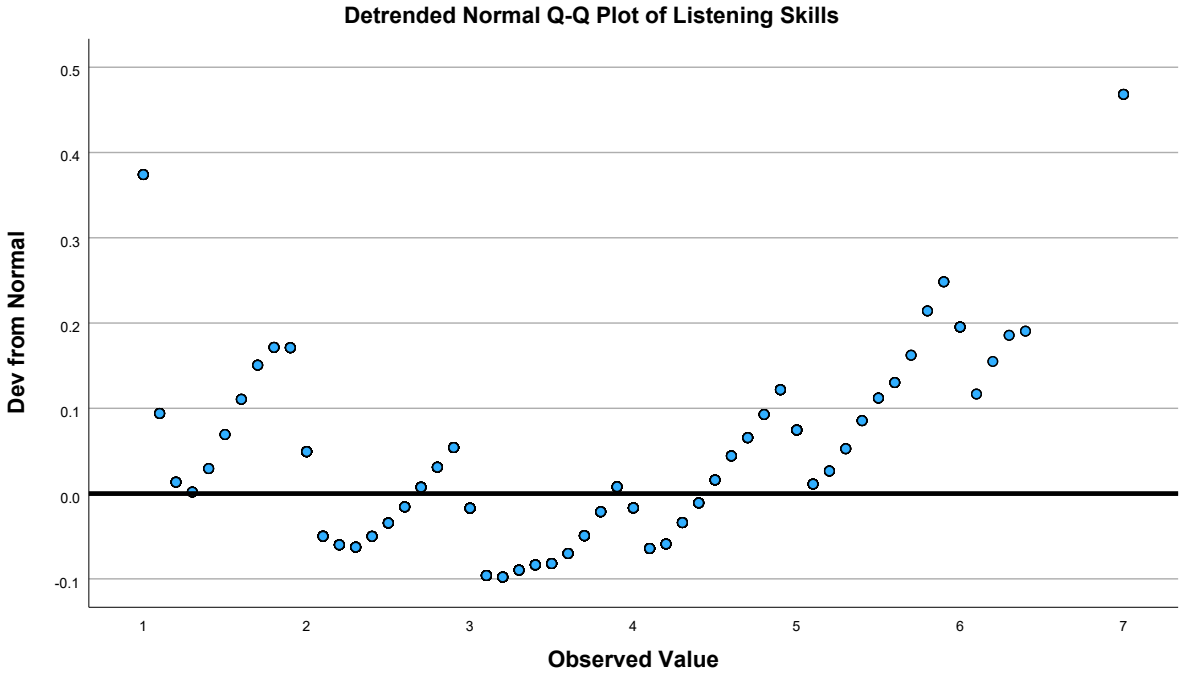

Detrended Normal Q-Q Plot of Speaking Skills
Dev from Normal
0.3
0.2
0.1
0.0
-0.1
1
2
3
4
5
6
7
Observed Value

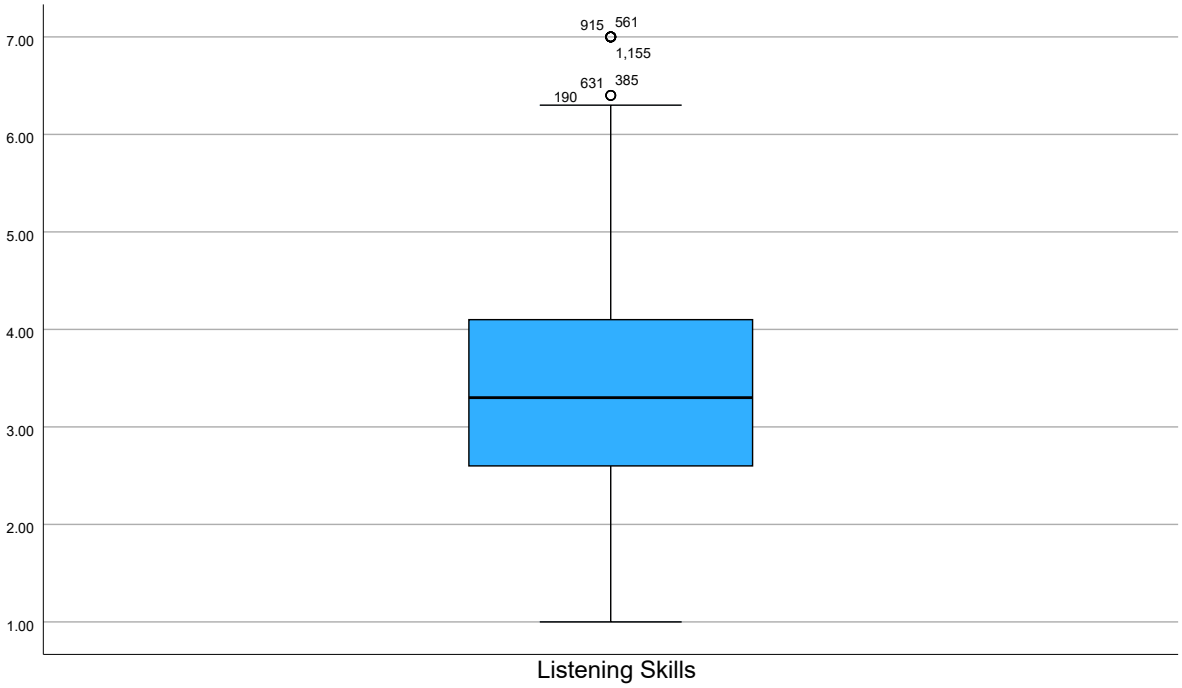

7.00
6.00
5.00
4.00
3.00
2.00
1.00
1,155
915
1,682
791
Speaking Skills

Listening Skills






Detrended Normal Q-Q Plot of Listening Skills
Dev from Normal
0.5
0.4
0.3
0.2
0.1
0.0
-0.1
1
2
3
4
5
6
7
Observed Value


915
561
1,155
631
385
190
7.00
6.00
5.00
4.00
3.00
2.00
1.00
Listening Skills

Explore

Notes

Output Created		29-SEP-2025 16:16:05
Comments		
Input	Data	F:\NVivo and stuff files4Travel\Christopher SPSS.28Aug.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	1982
Missing Value Handling	Definition of Missing	User-defined missing values for dependent variables are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any dependent variable or factor used.
Syntax		EXAMINE VARIABLES=WritingMean ReadingMean SpeakingMean ListeningMean /PLOT BOXPLOT HISTOGRAM NPPLOT /COMPARE GROUPS /STATISTICS DESCRIPTIVES /CINTERVAL 95 /MISSING LISTWISE /NOTOTAL.
Resources	Processor Time	00:00:02.84

Elapsed Time	00:00:02.47

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Writing Skills	1982	100.0%	0	0.0%	1982	100.0%
Reading Skills	1982	100.0%	0	0.0%	1982	100.0%
Speaking Skills	1982	100.0%	0	0.0%	1982	100.0%
Listening Skills	1982	100.0%	0	0.0%	1982	100.0%

Descriptives

			Statistic	Std. Error
Writing Skills	Mean		3.9104	.02390
	95% Confidence Interval for Mean	Lower Bound	3.8636	
		Upper Bound	3.9573	
	5% Trimmed Mean		3.9146	
	Median		4.0000	
	Variance		1.132	
	Std. Deviation		1.06389	
	Minimum		1.00	
	Maximum		7.00	
	Range		6.00	
	Interquartile Range		1.47	
	Skewness		-.099	.055
	Kurtosis		-.201	.110
Reading Skills	Mean		3.8242	.02465
	95% Confidence Interval for Mean	Lower Bound	3.7758	
		Upper Bound	3.8725	
	5% Trimmed Mean		3.8191	

	Median		3.9000	
	Variance		1.204	
	Std. Deviation		1.09737	
	Minimum		1.00	
	Maximum		7.00	
	Range		6.00	
	Interquartile Range		1.60	
	Skewness		-.001	.055
	Kurtosis		-.185	.110
Speaking Skills	Mean		3.7575	.02685
	95% Confidence Interval for Mean	Lower Bound	3.7048	
		Upper Bound	3.8101	
	5% Trimmed Mean		3.7520	
	Median		3.8000	
	Variance		1.429	
	Std. Deviation		1.19523	
	Minimum		1.00	
	Maximum		7.00	
	Range		6.00	
	Interquartile Range		1.60	
	Skewness		.047	.055
	Kurtosis		-.338	.110
Listening Skills	Mean		3.3790	.02485
	95% Confidence Interval for Mean	Lower Bound	3.3303	
		Upper Bound	3.4278	
	5% Trimmed Mean		3.3595	
	Median		3.3000	
	Variance		1.224	

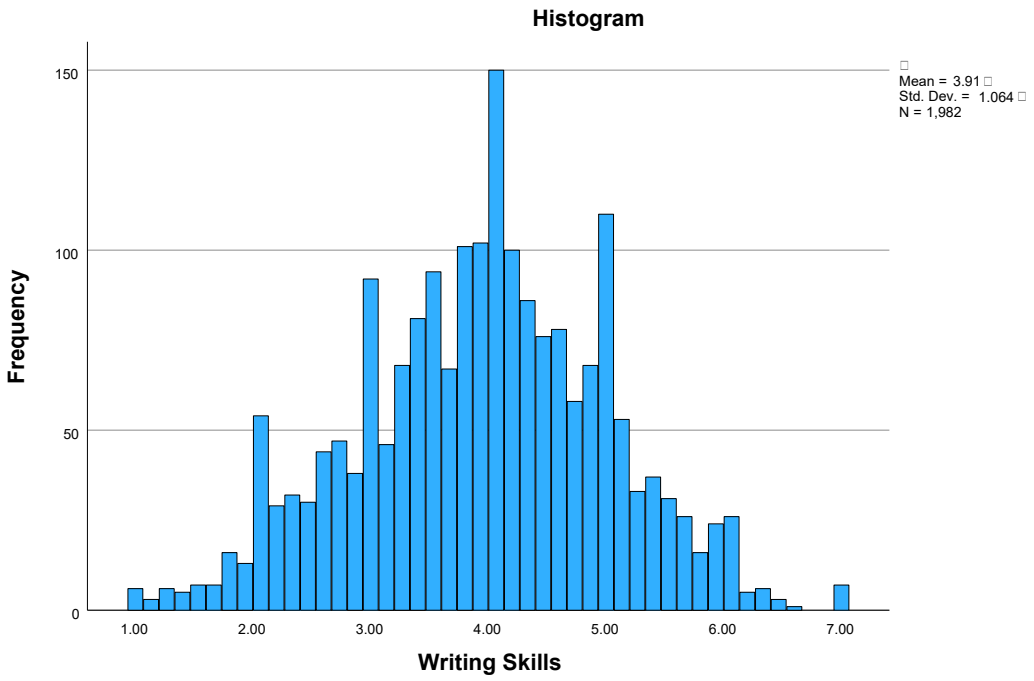
	Std. Deviation	1.10650	
	Minimum	1.00	
	Maximum	7.00	
	Range	6.00	
	Interquartile Range	1.50	
	Skewness	.307	.055
	Kurtosis	.000	.110

Tests of Normality

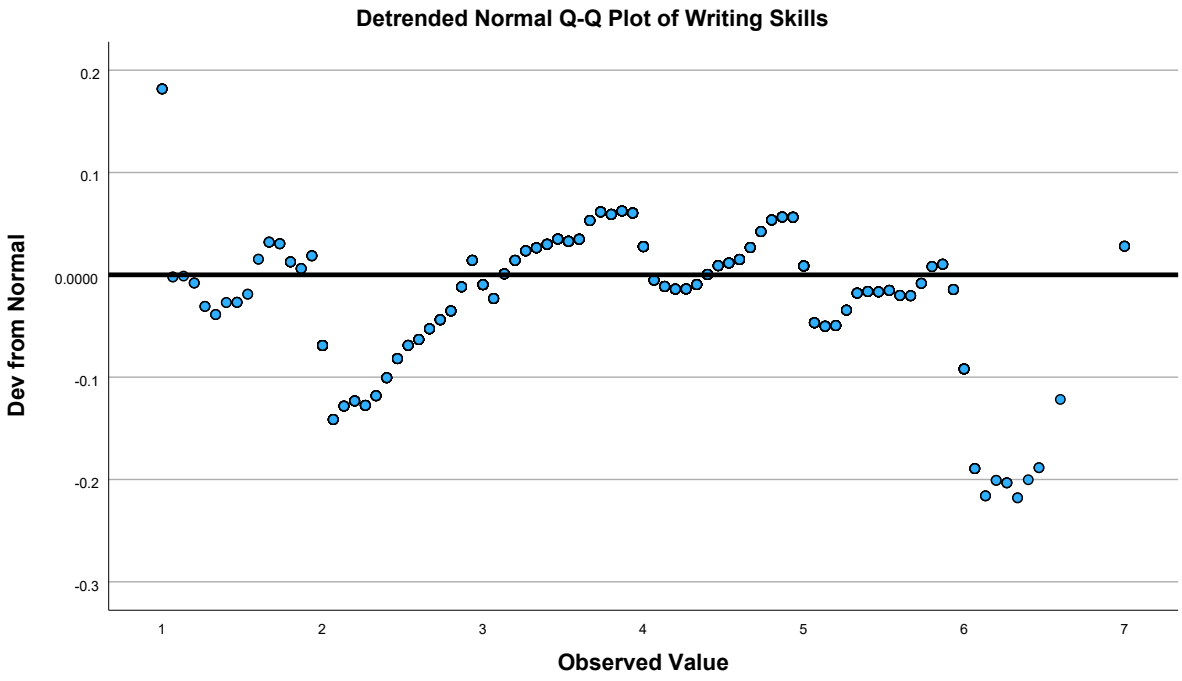
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Writing Skills	.038	1982	<.001	.996	1982	<.001
Reading Skills	.042	1982	<.001	.996	1982	<.001
Speaking Skills	.036	1982	<.001	.994	1982	<.001
Listening Skills	.057	1982	<.001	.989	1982	<.001

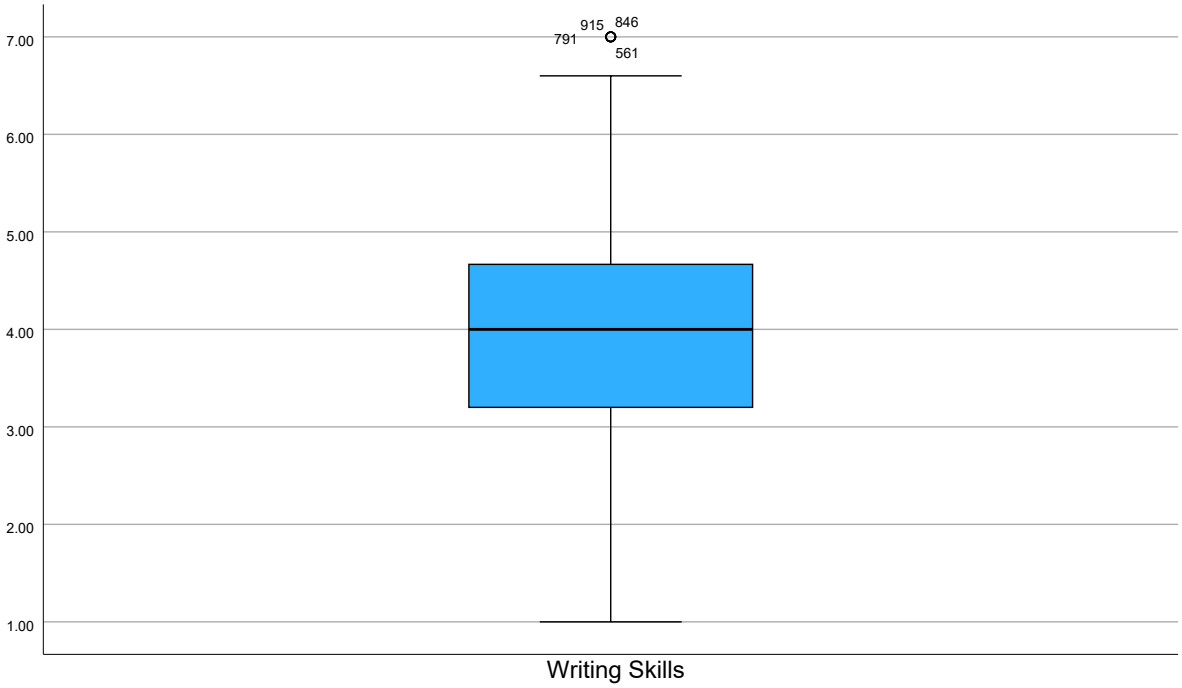
a. Lilliefors Significance Correction

Writing Skills

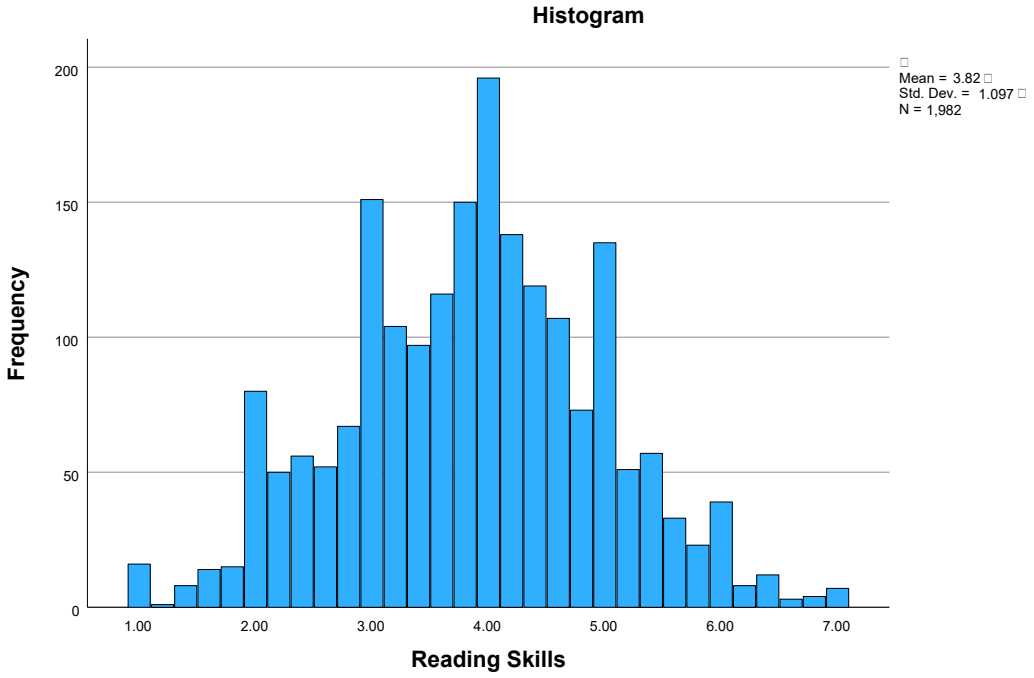

Histogram
Mean = 3.91
Std. Dev. = 1.064
N = 1,982
Frequency
150
100
50
0
1.00
2.00
3.00
4.00
5.00
6.00
7.00
Writing Skills

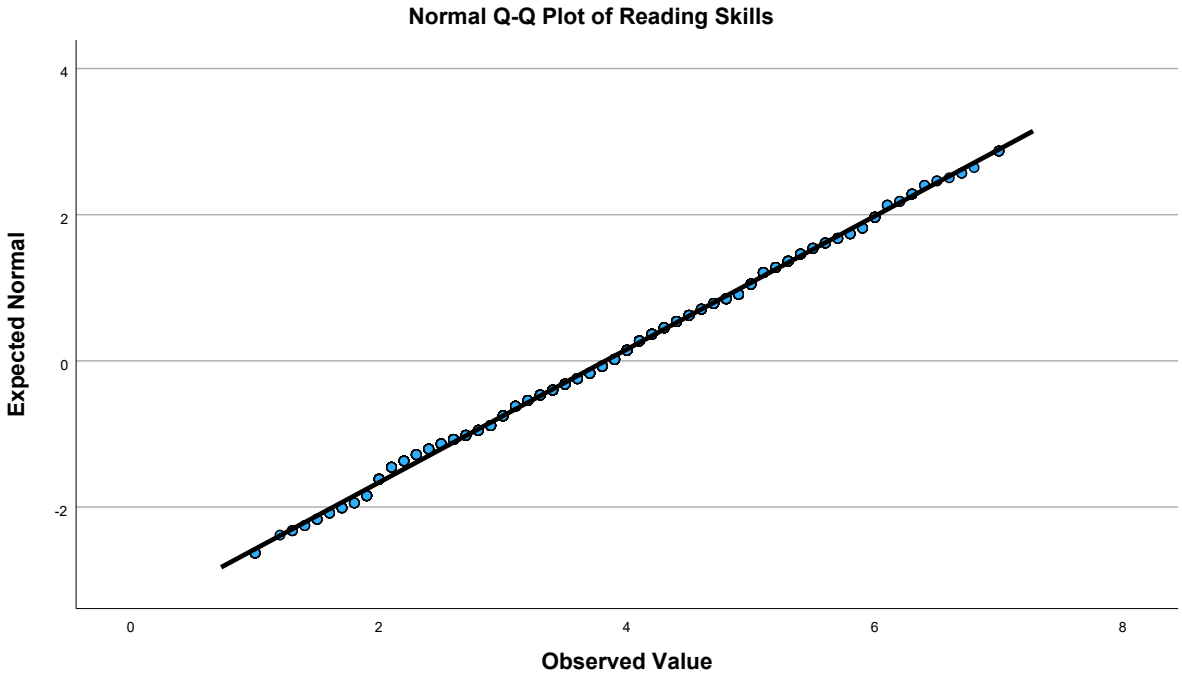

Normal Q-Q Plot of Writing Skills
Expected Normal
4
2
0
-2
0
2
4
6
8
Observed Value

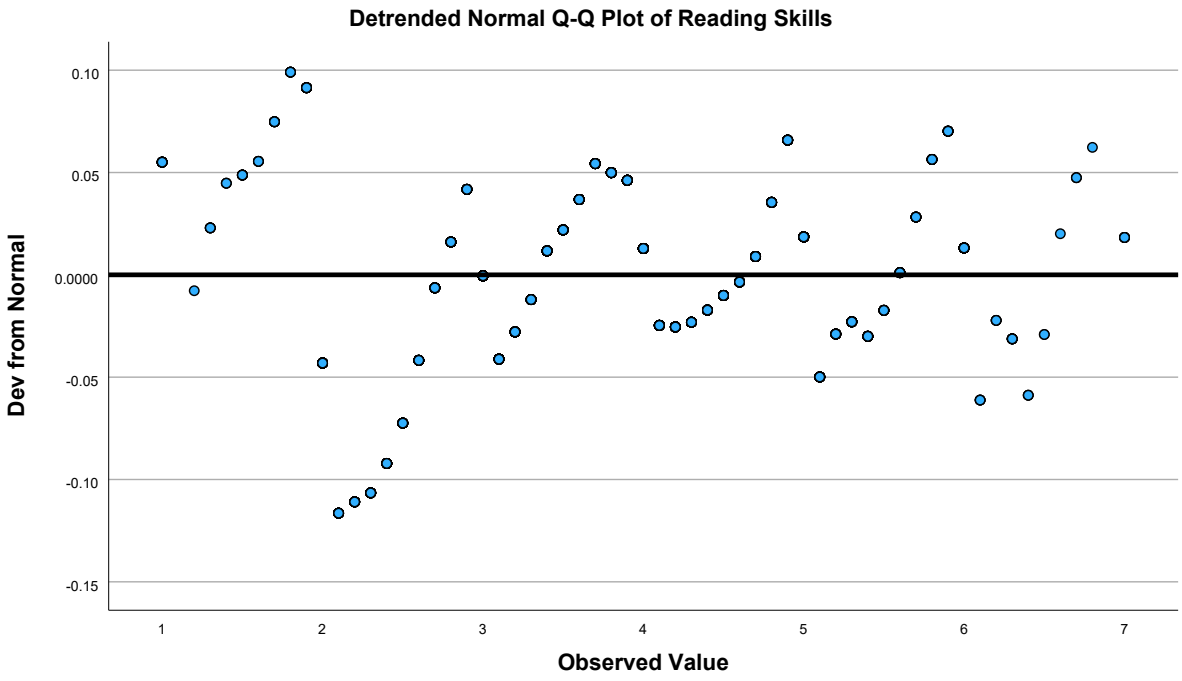


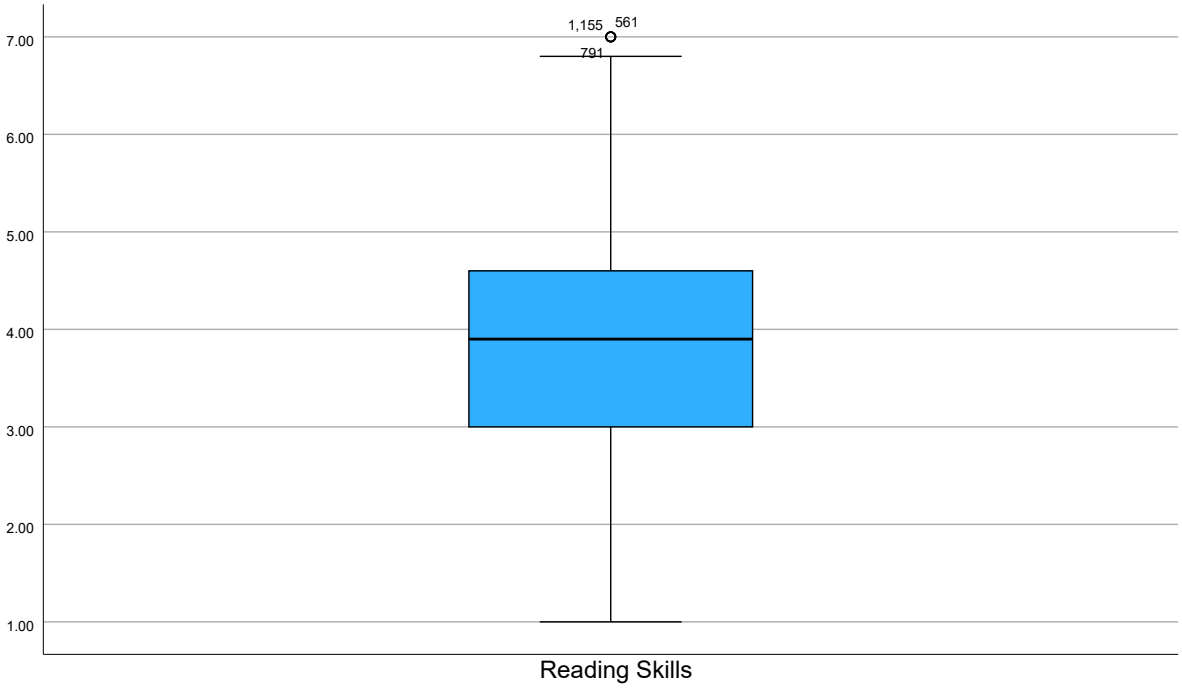


Reading Skills

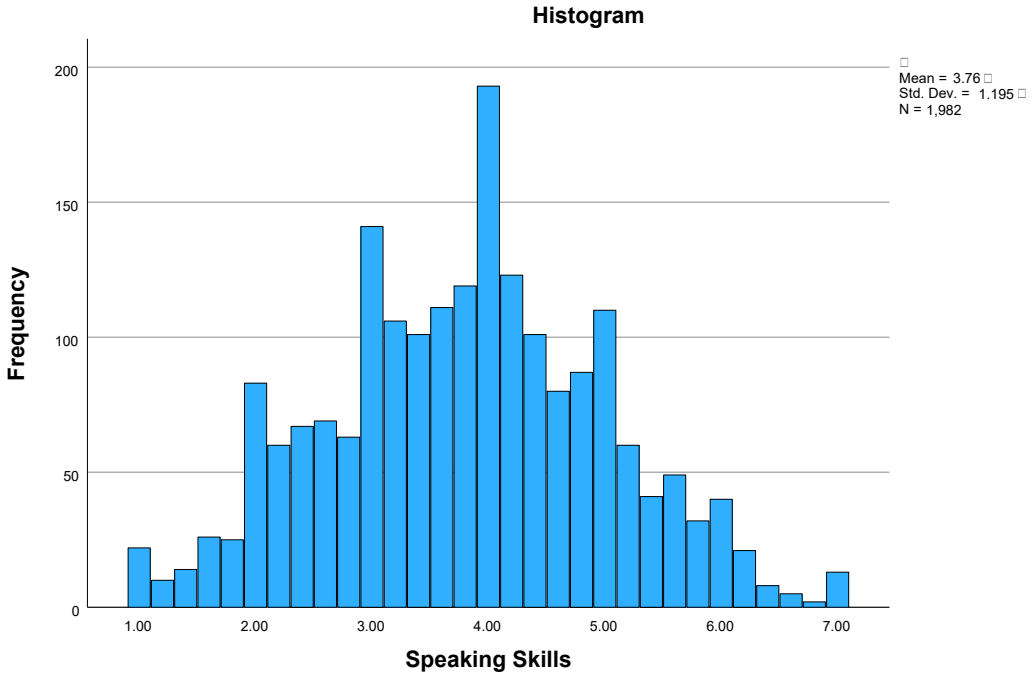

Histogram
Mean = 3.82
Std. Dev. = 1.097
N = 1,982
Frequency
200
150
100
50
0
1.00
2.00
3.00
4.00
5.00
6.00
7.00
Reading Skills

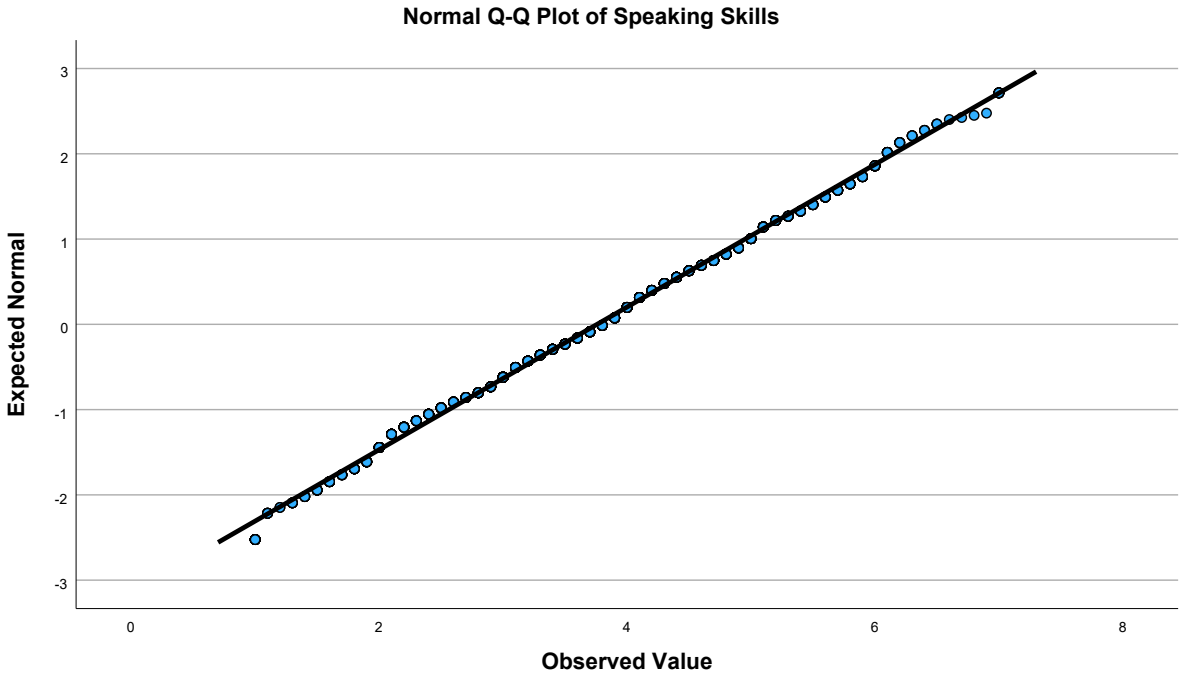

Normal Q-Q Plot of Reading Skills
Expected Normal
4
2
0
-2
0
2
4
6
8
Observed Value

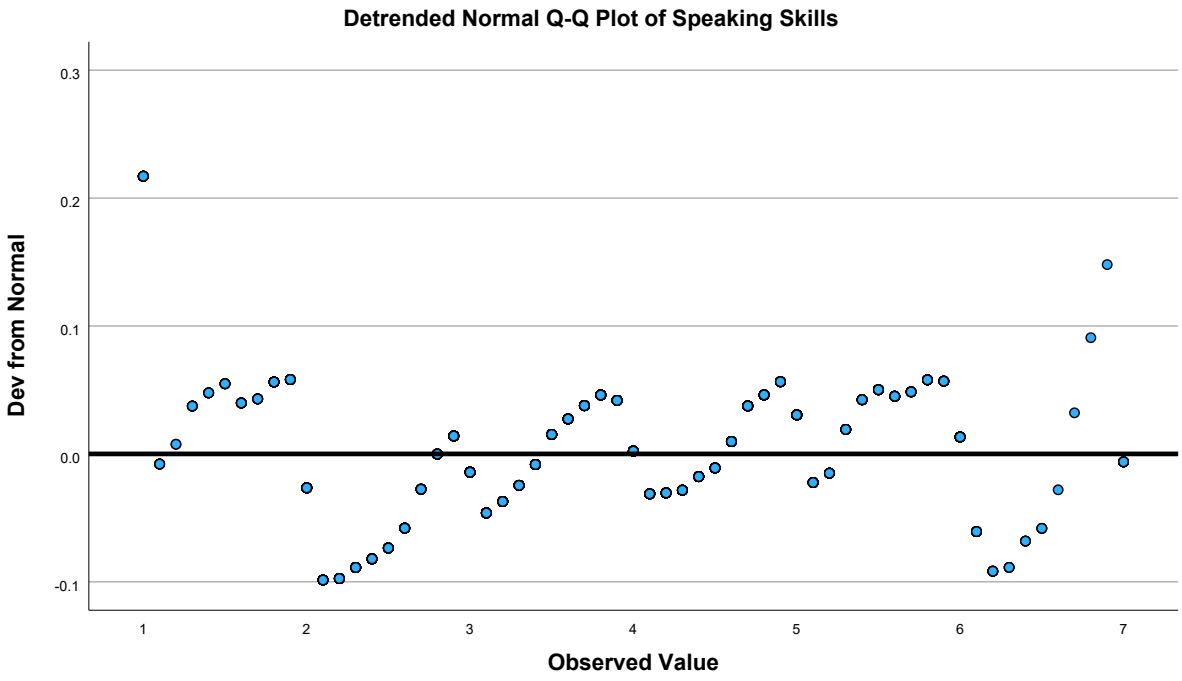


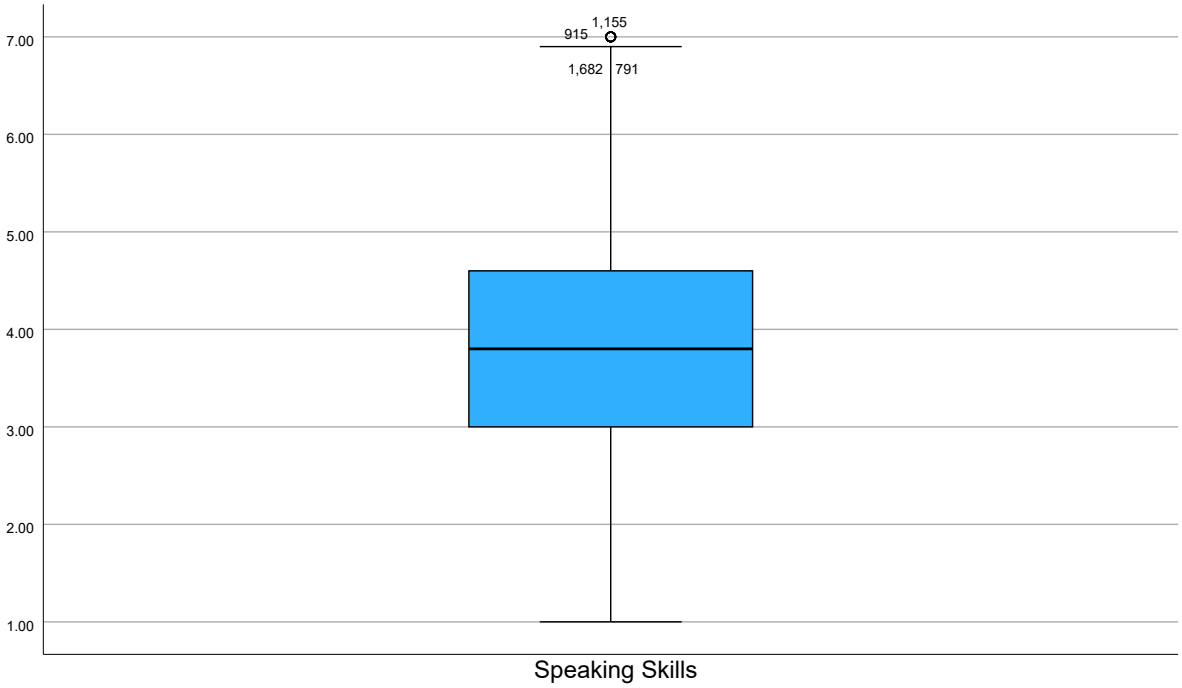


Speaking Skills

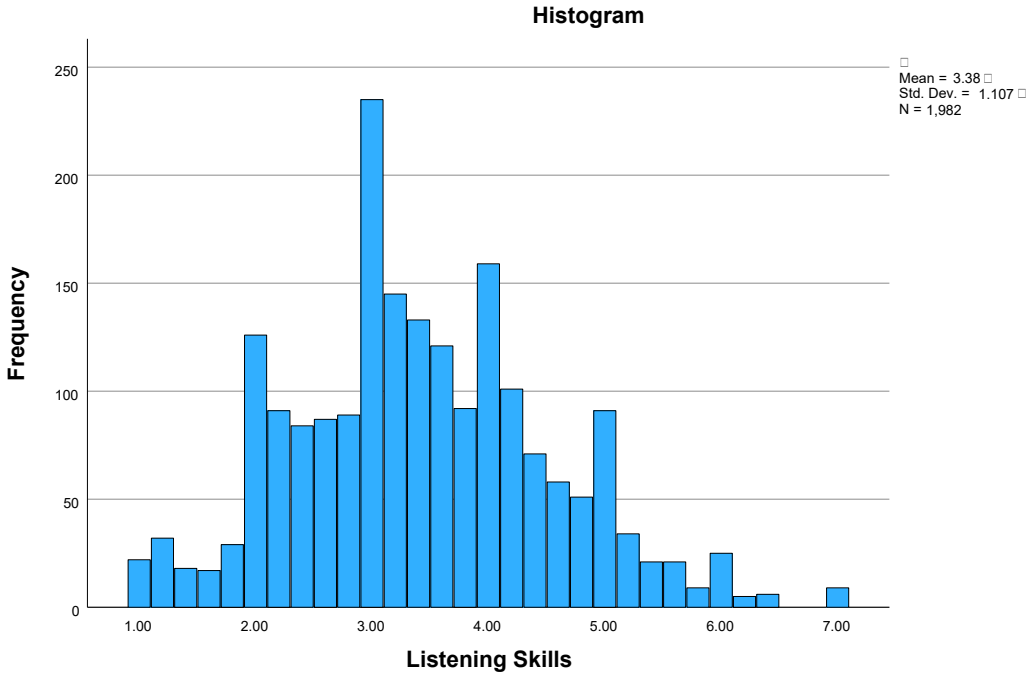

Histogram
Mean = 3.76
Std. Dev. = 1.195
N = 1,982
Frequency
200
150
100
50
0
1.00
2.00
3.00
4.00
5.00
6.00
7.00
Speaking Skills

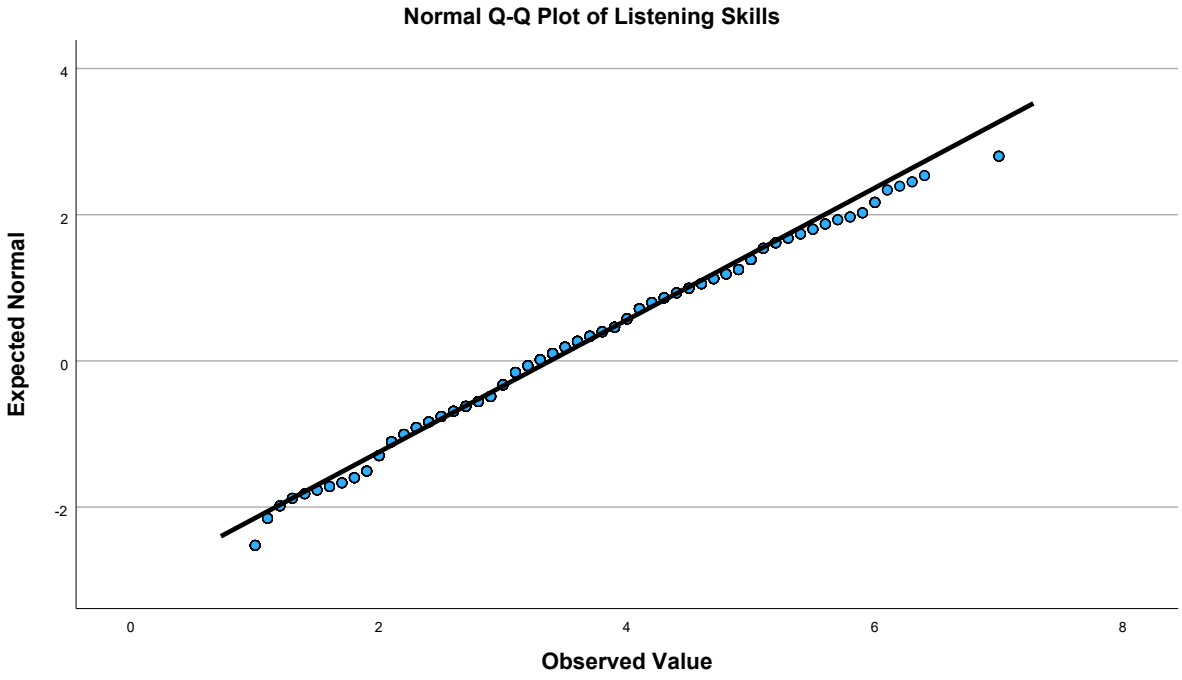

Normal Q-Q Plot of Speaking Skills
Expected Normal
3
2
1
0
-1
-2
-3
0
2
4
6
8
Observed Value

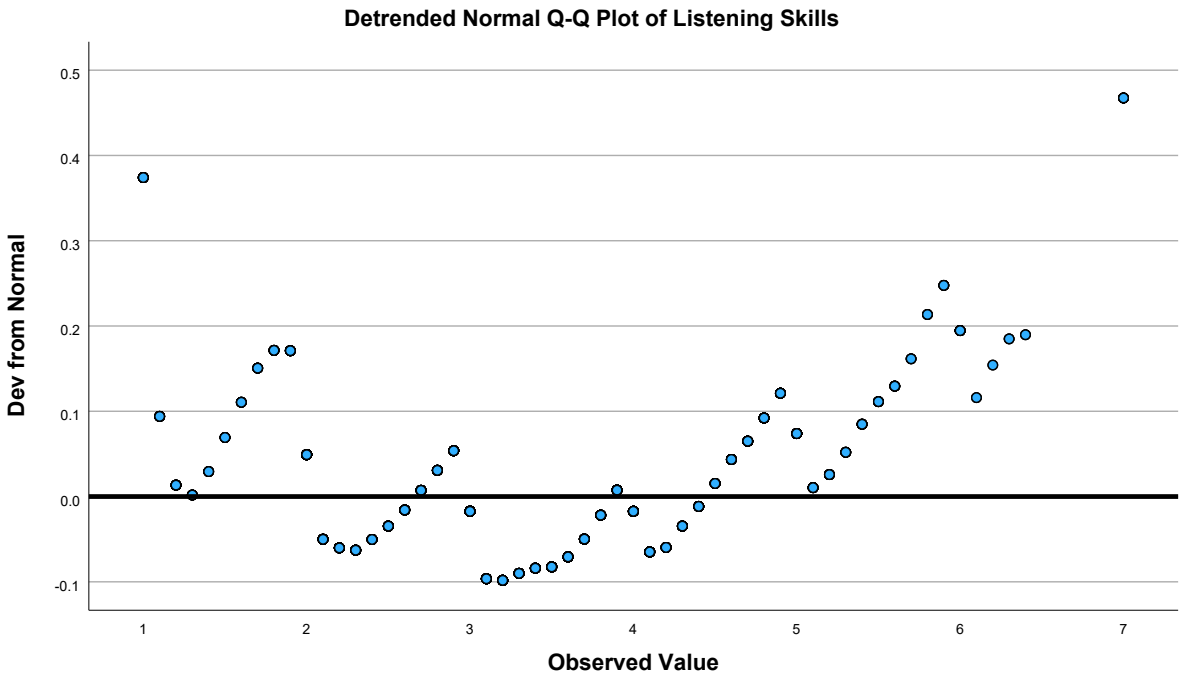


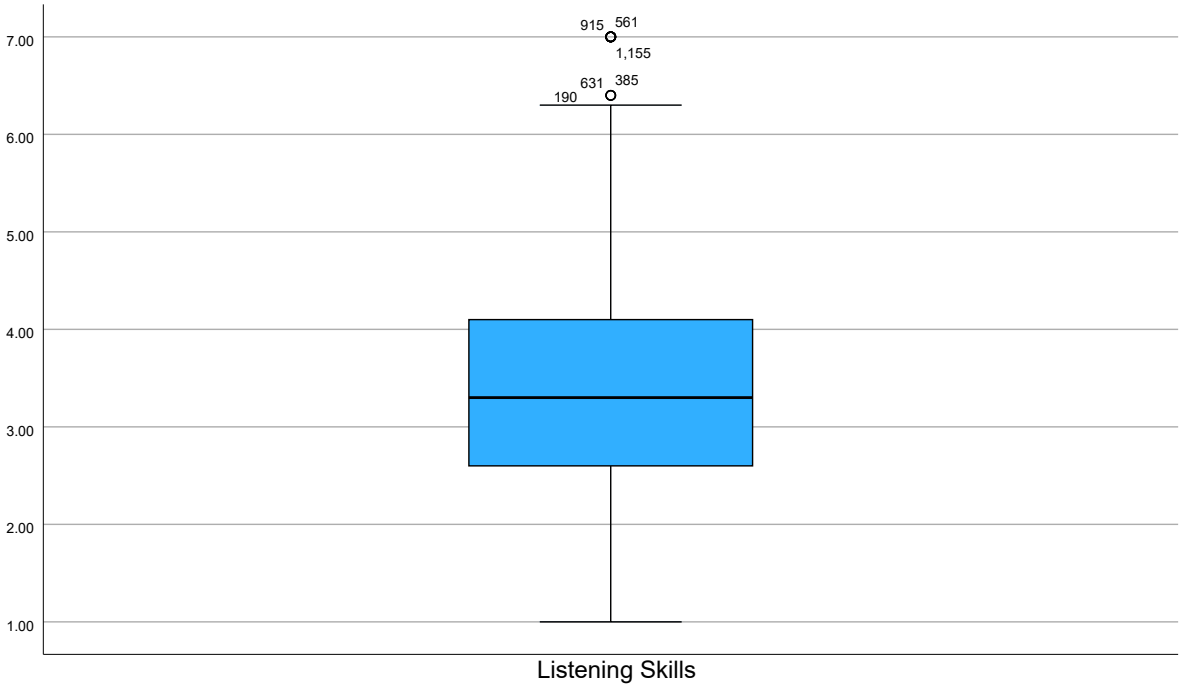


Listening Skills


Histogram
Mean = 3.38
Std. Dev. = 1.107
N = 1,982
Frequency
250
200
150
100
50
0
1.00
2.00
3.00
4.00
5.00
6.00
7.00
Listening Skills


Normal Q-Q Plot of Listening Skills
Expected Normal
4
2
0
-2
0
2
4
6
8
Observed Value


Detrended Normal Q-Q Plot of Listening Skills
Dev from Normal
0.5
0.4
0.3
0.2
0.1
0.0
-0.1
1
2
3
4
5
6
7
Observed Value


915
561
1,155
631
385
190
7.00
6.00
5.00
4.00
3.00
2.00
1.00
Listening Skills

Explore

Notes

Output Created		29-SEP-2025 16:56:51
Comments		
Input	Data	F:\NVivo and stuff files4Travel\Christopher SPSS.28Aug.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	1982
Missing Value Handling	Definition of Missing	User-defined missing values for dependent variables are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any dependent variable or factor used.
Syntax		EXAMINE VARIABLES=SectionBMean /PLOT BOXPLOT HISTOGRAM NPPLOT /COMPARE GROUPS /STATISTICS DESCRIPTIVES /CINTERVAL 95 /MISSING LISTWISE /NOTOTAL.
Resources	Processor Time	00:00:00.69
	Elapsed Time	00:00:00.61

Case Processing Summary

	Cases		
	Valid	Missing	Total

	N	Percent	N	Percent	N	Percent
SectionBMean	1982	100.0%	0	0.0%	1982	100.0%

Descriptives

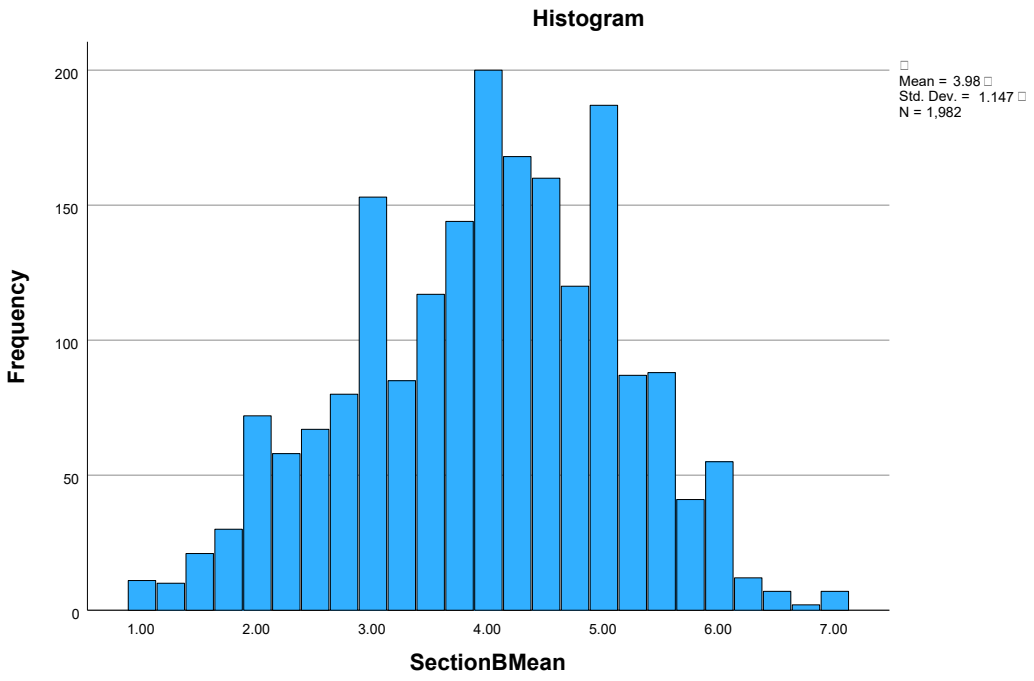
			Statistic	Std. Error
SectionBMean	Mean		3.9772	.02575
	95% Confidence Interval for Mean	Lower Bound	3.9267	
		Upper Bound	4.0277	
	5% Trimmed Mean		3.9889	
	Median		4.0000	
	Variance		1.315	
	Std. Deviation		1.14657	
	Minimum		1.00	
	Maximum		7.00	
	Range		6.00	
	Interquartile Range		1.75	
	Skewness		-.204	.055
	Kurtosis		-.418	.110

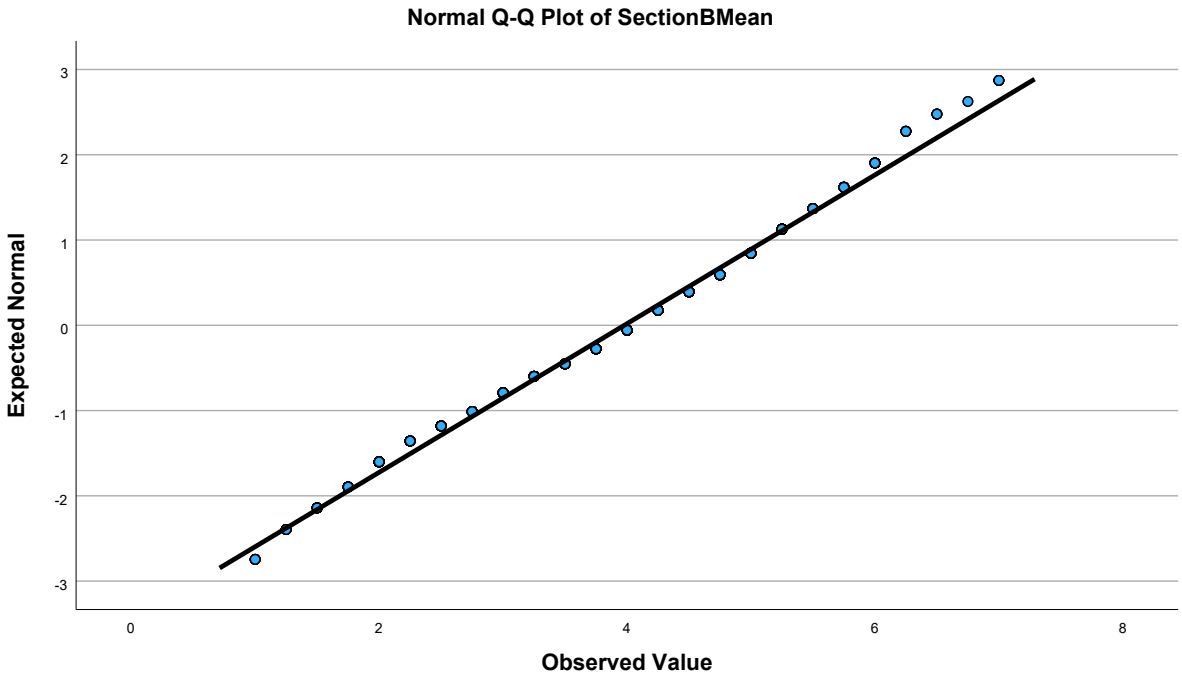
Tests of Normality

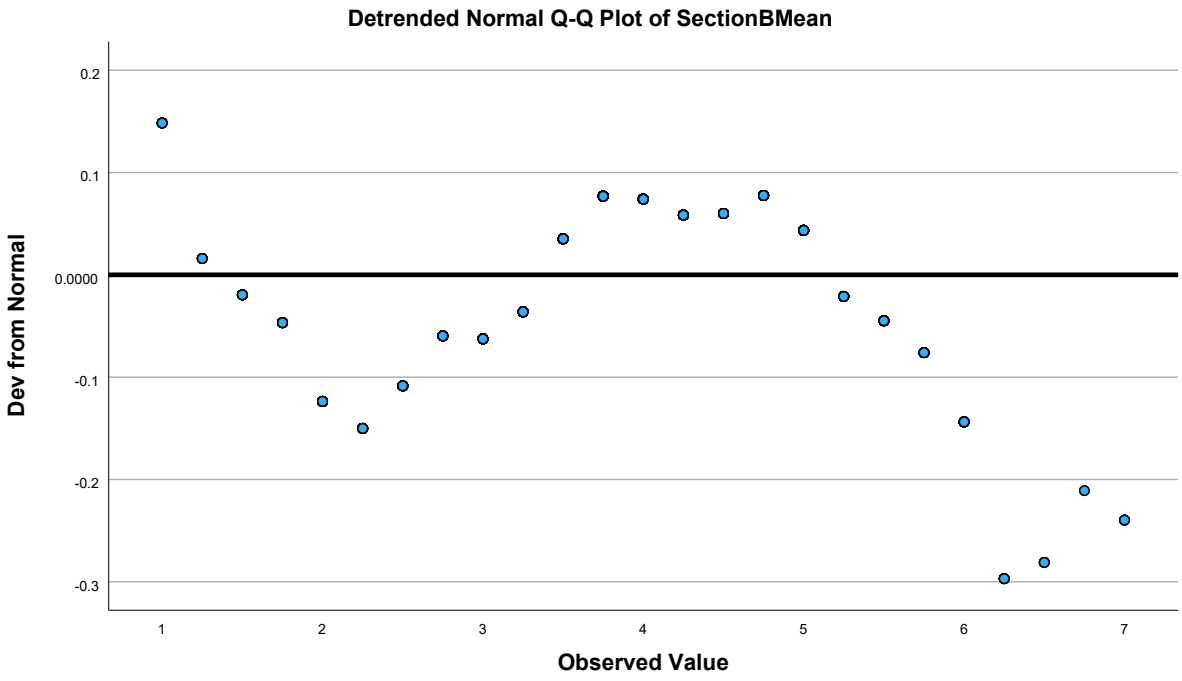
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SectionBMean	.080	1982	<.001	.987	1982	<.001

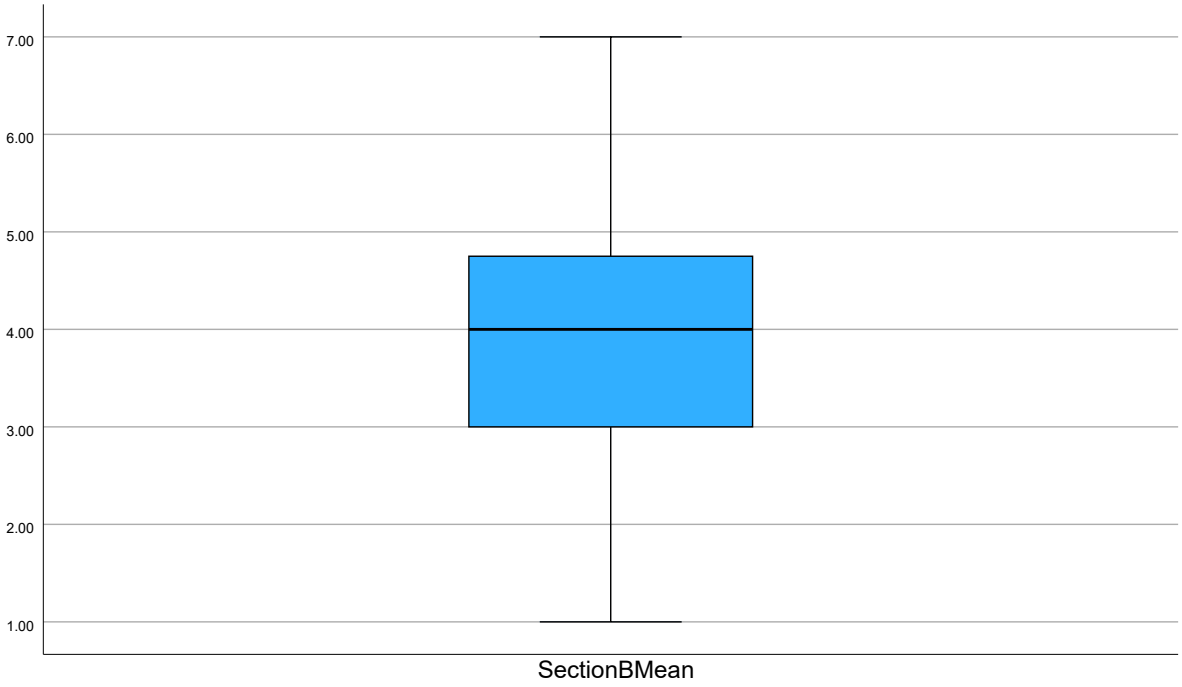
a. Lilliefors Significance Correction

SectionBMean


Histogram
Mean = 3.98
Std. Dev. = 1.147
N = 1,982
Frequency
200
150
100
50
0
1.00
2.00
3.00
4.00
5.00
6.00
7.00
SectionBMean


Normal Q-Q Plot of SectionBMean
Expected Normal
3
2
1
0
-1
-2
-3
0
2
4
6
8
Observed Value


Detrended Normal Q-Q Plot of SectionBMean
Dev from Normal
0.2
0.1
0.0000
-0.1
-0.2
-0.3
1
2
3
4
5
6
7
Observed Value


7.00
6.00
5.00
4.00
3.00
2.00
1.00
SectionBMean

Explore

Notes

Output Created		29-SEP-2025 16:58:34
Comments		
Input	Data	F:\NVivo and stuff files4Travel\Christopher SPSS.28Aug.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	1982
Missing Value Handling	Definition of Missing	User-defined missing values for dependent variables are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any dependent variable or factor used.
Syntax		EXAMINE VARIABLES=Q40_4 /PLOT BOXPLOT HISTOGRAM NPPLOT /COMPARE GROUPS /STATISTICS DESCRIPTIVES /CINTERVAL 95 /MISSING LISTWISE /NOTOTAL.
Resources	Processor Time	00:00:00.67
	Elapsed Time	00:00:00.58

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent

Language improvement	1955	98.6%	27	1.4%	1982	100.0%

Descriptives

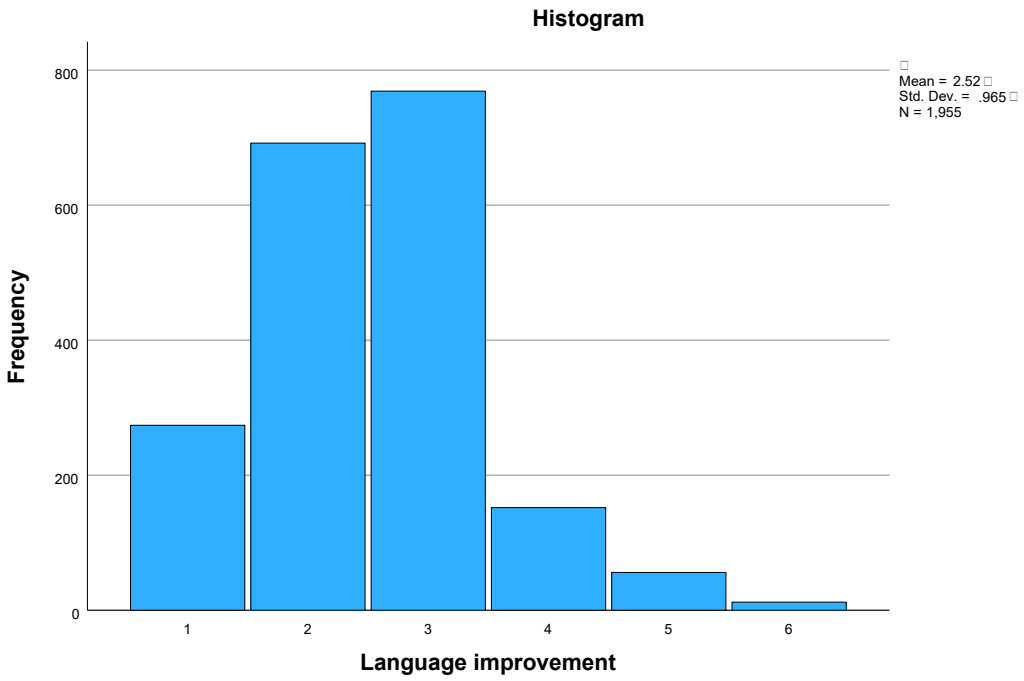
			Statistic	Std. Error
Language improvement	Mean		2.52	.022
	95% Confidence Interval for Mean	Lower Bound	2.48	
		Upper Bound	2.56	
	5% Trimmed Mean		2.48	
	Median		3.00	
	Variance		.931	
	Std. Deviation		.965	
	Minimum		1	
	Maximum		6	
	Range		5	
	Interquartile Range		1	
	Skewness		.503	.055
	Kurtosis		.643	.111

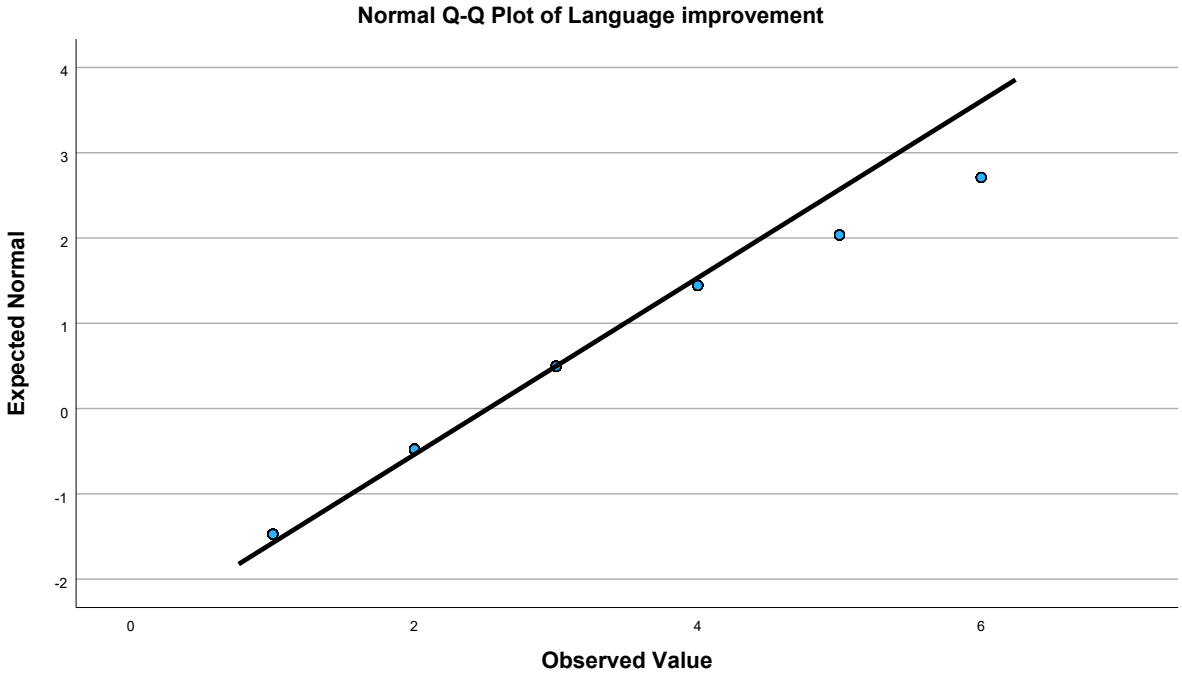
Tests of Normality

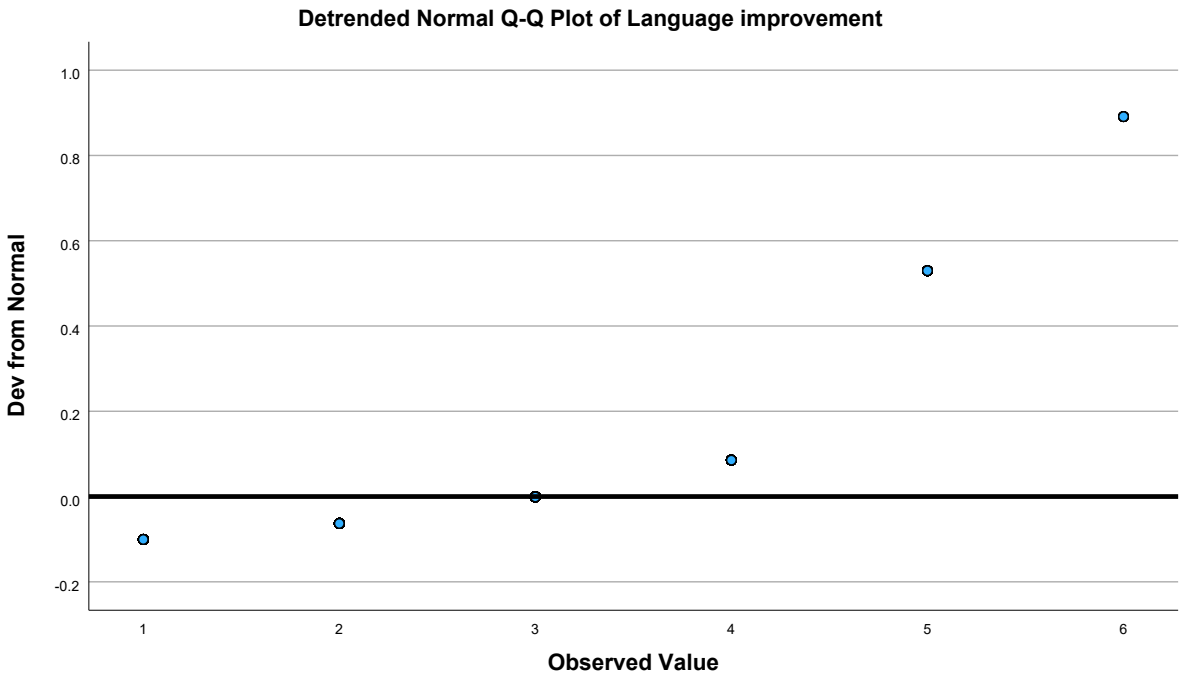
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Language improvement	.199	1955	<.001	.884	1955	<.001

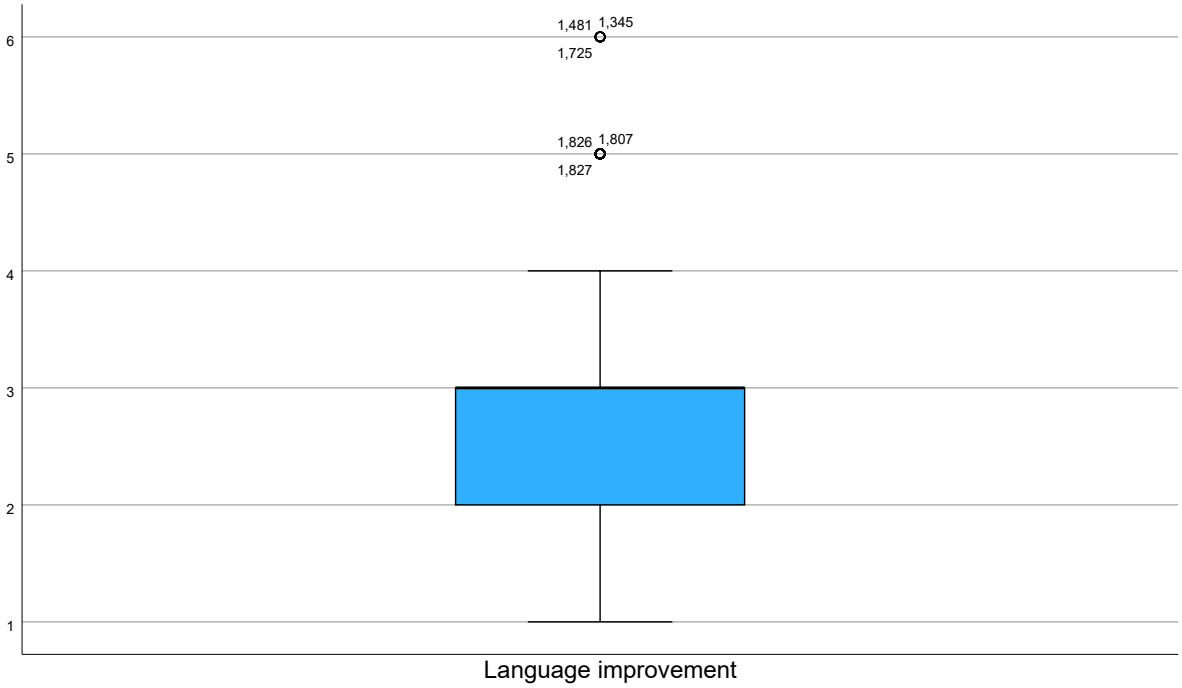
a. Lilliefors Significance Correction

Language improvement


Histogram
Mean = 2.52
Std. Dev. = .965
N = 1,955
Frequency
800
600
400
200
0
1
2
3
4
5
6
Language improvement


Normal Q-Q Plot of Language improvement
Expected Normal
4
3
2
1
0
-1
-2
0
2
4
6
Observed Value


Detrended Normal Q-Q Plot of Language improvement
Dev from Normal
1.0
0.8
0.6
0.4
0.2
0.0
-0.2
1
2
3
4
5
6
Observed Value


1,481
1,345
1,725
1,826
1,807
1,827
6
5
4
3
2
1
Language improvement

Explore

Notes

Output Created		29-SEP-2025 17:19:36
Comments		
Input	Data	F:\NVivo and stuff files4Travel\Christopher SPSS.28Aug.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	1982
Missing Value Handling	Definition of Missing	User-defined missing values for dependent variables are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any dependent variable or factor used.
Syntax		EXAMINE VARIABLES=ListeningMean /PLOT BOXPLOT HISTOGRAM NPPLOT /COMPARE GROUPS /STATISTICS DESCRIPTIVES /CINTERVAL 95 /MISSING LISTWISE /NOTOTAL.
Resources	Processor Time	00:00:00.67
	Elapsed Time	00:00:00.58

Case Processing Summary

	Cases		
	Valid	Missing	Total

	N	Percent	N	Percent	N	Percent
Listening Skills	1982	100.0%	0	0.0%	1982	100.0%

Descriptives

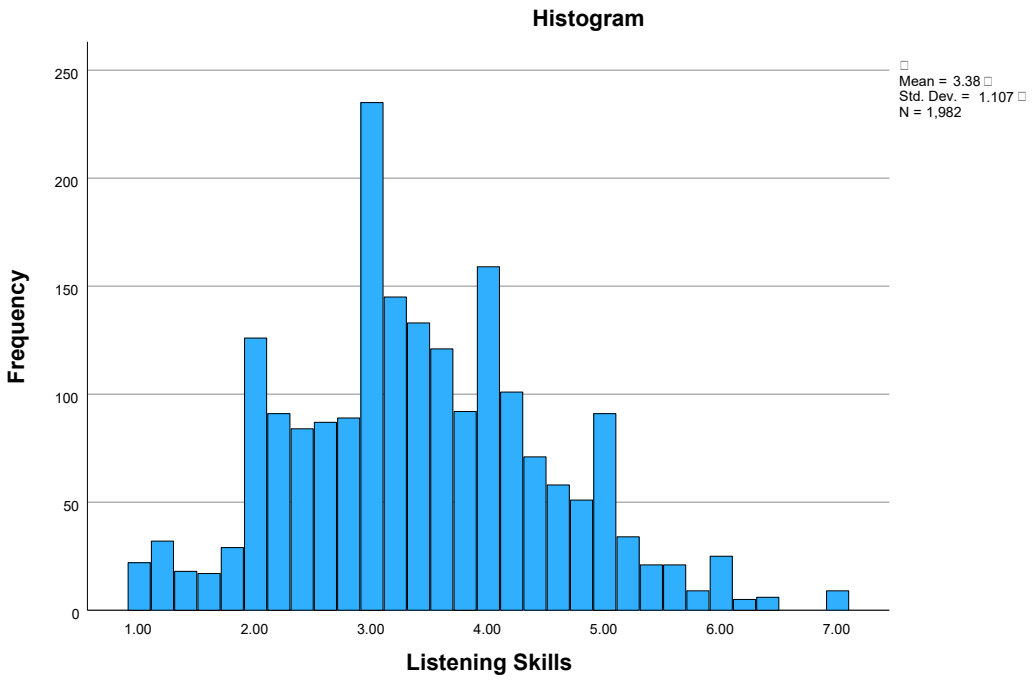
			Statistic	Std. Error
Listening Skills	Mean		3.3790	.02485
	95% Confidence Interval for Mean	Lower Bound	3.3303	
		Upper Bound	3.4278	
	5% Trimmed Mean		3.3595	
	Median		3.3000	
	Variance		1.224	
	Std. Deviation		1.10650	
	Minimum		1.00	
	Maximum		7.00	
	Range		6.00	
	Interquartile Range		1.50	
	Skewness		.307	.055
	Kurtosis		.000	.110

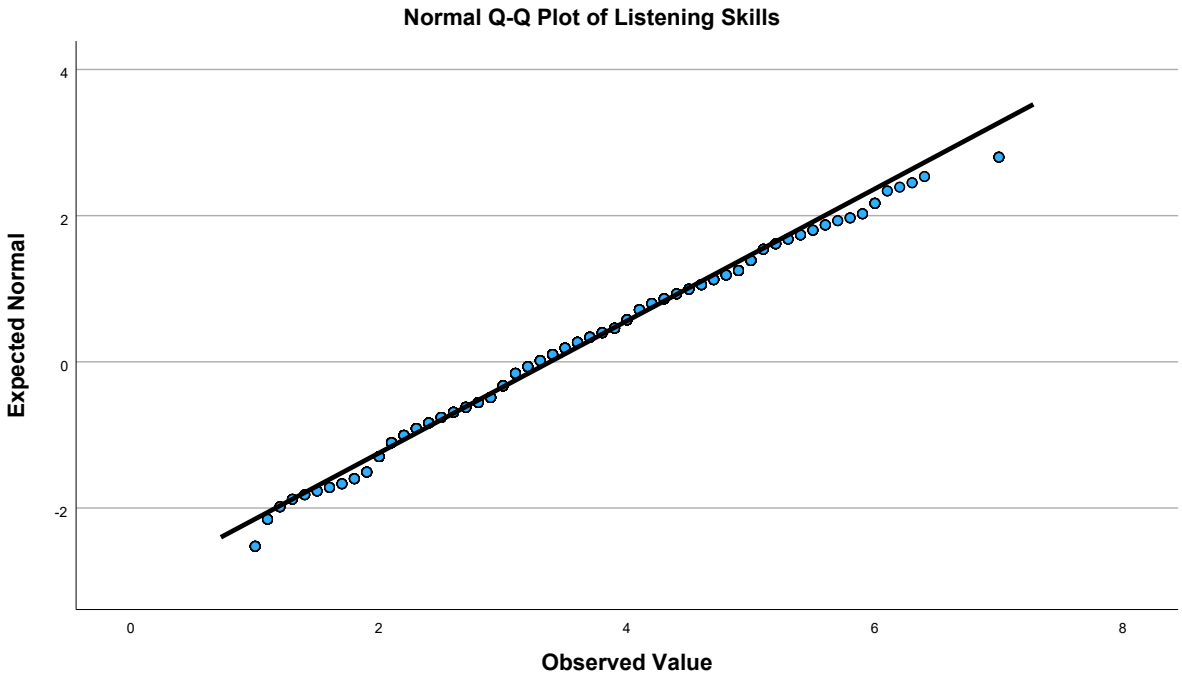
Tests of Normality

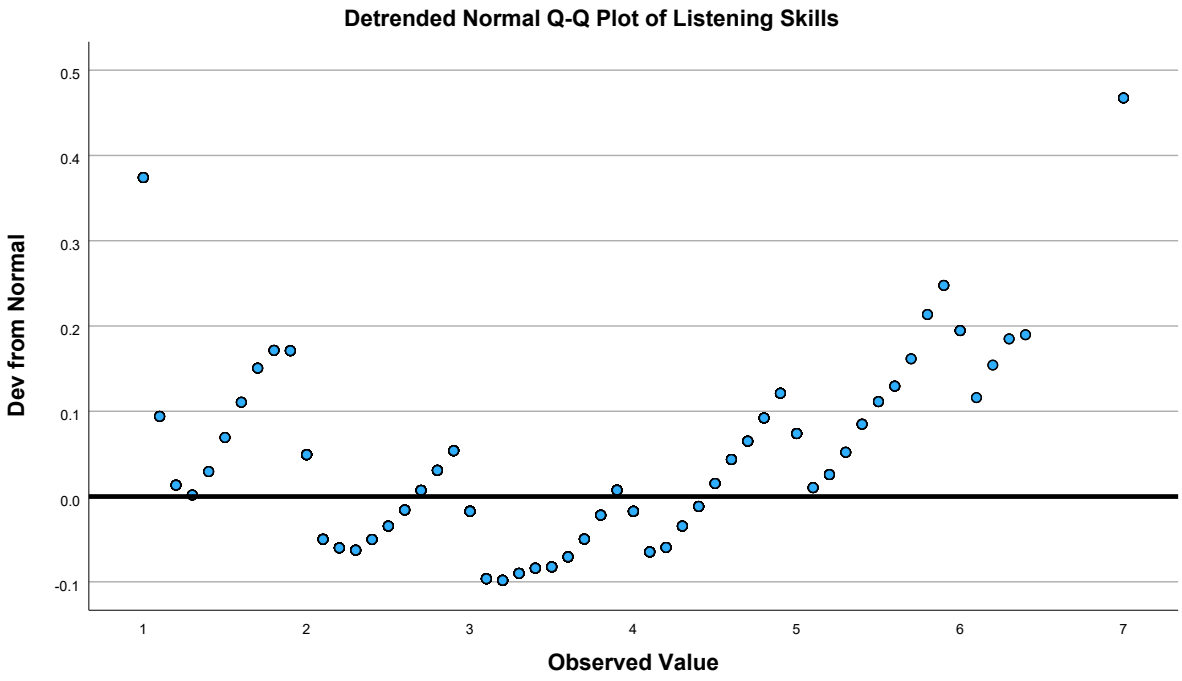
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Listening Skills	.057	1982	<.001	.989	1982	<.001

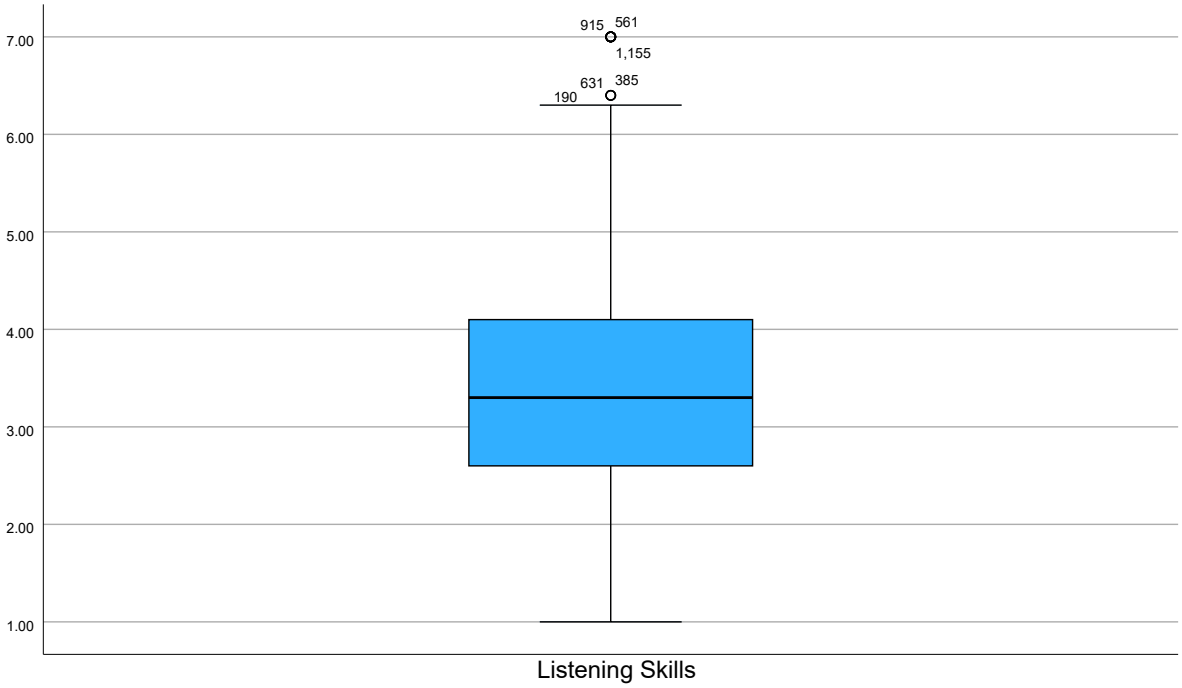
a. Lilliefors Significance Correction

Listening Skills


Histogram
Mean = 3.38
Std. Dev. = 1.107
N = 1,982
Frequency
250
200
150
100
50
0
1.00
2.00
3.00
4.00
5.00
6.00
7.00
Listening Skills


Normal Q-Q Plot of Listening Skills
Expected Normal
4
2
0
-2
0
2
4
6
8
Observed Value


Detrended Normal Q-Q Plot of Listening Skills
Dev from Normal
0.5
0.4
0.3
0.2
0.1
0.0
-0.1
1
2
3
4
5
6
7
Observed Value


915
561
1,155
631
385
190
7.00
6.00
5.00
4.00
3.00
2.00
1.00
Listening Skills

Appendix J: One-way ANOVA tests

Reliability

Notes

Output Created		10-OCT-2025 10:36:35
Comments		
Input	Data	F:\Oxford Dissertation 2025\NVivo and stuff files4Travel\Christopher SPSS.1October.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	1982
	Matrix Input	
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.
Syntax		RELIABILITY /VARIABLES=Q30_1 Q30_2 Q30_3 Q30_4 Q30_5 Q30_6 Q30_7 Q30_8 Q30_9 Q30_10 Q30_11 Q30_12 Q30_13 Q30_14 Q30_15 /SCALE('Writing') ALL /MODEL=ALPHA /STATISTICS=DESCRIP

		TIVE SCALE CORR /SUMMARY=MEANS CORR.
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.01

Scale: Writing

Case Processing Summary

		N	%
Cases	Valid	1982	100.0
	Excluded[a]	0	.0
	Total	1982	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.958	.958	15

Item Statistics

	Mean	Std. Deviation	N
Q30_1	3.96	1.256	1982
Q30_2	4.10	1.395	1982
Q30_3	3.92	1.309	1982
Q30_4	4.06	1.382	1982
Q30_5	3.78	1.435	1982
Q30_6	3.87	1.345	1982
Q30_7	3.86	1.355	1982

Q30_8	3.92	1.318	1982
Q30_9	3.97	1.350	1982
Q30_10	3.89	1.319	1982
Q30_11	3.66	1.329	1982
Q30_12	4.07	1.323	1982
Q30_13	3.66	1.306	1982
Q30_14	4.01	1.329	1982
Q30_15	3.92	1.355	1982

Inter-Item Correlation Matrix

	Q30_1	Q30_2	Q30_3	Q30_4	Q30_5	Q30_6	Q30_7
Q30_1	1.000	.631	.613	.608	.507	.574	.610
Q30_2	.631	1.000	.676	.603	.466	.543	.598
Q30_3	.613	.676	1.000	.640	.524	.586	.609
Q30_4	.608	.603	.640	1.000	.650	.638	.586
Q30_5	.507	.466	.524	.650	1.000	.714	.562
Q30_6	.574	.543	.586	.638	.714	1.000	.705
Q30_7	.610	.598	.609	.586	.562	.705	1.000
Q30_8	.592	.617	.629	.586	.520	.643	.745
Q30_9	.583	.695	.655	.588	.467	.596	.672
Q30_10	.594	.585	.605	.579	.516	.636	.658
Q30_11	.566	.559	.559	.537	.487	.557	.613
Q30_12	.644	.641	.627	.561	.477	.590	.643
Q30_13	.548	.564	.581	.555	.483	.554	.626
Q30_14	.557	.647	.626	.559	.462	.534	.613
Q30_15	.513	.582	.701	.564	.486	.536	.557

Inter-Item Correlation Matrix

	Q30_8	Q30_9	Q30_10	Q30_11	Q30_12	Q30_13	Q30_14
Q30_1	.592	.583	.594	.566	.644	.548	.557
Q30_2	.617	.695	.585	.559	.641	.564	.647
Q30_3	.629	.655	.605	.559	.627	.581	.626
Q30_4	.586	.588	.579	.537	.561	.555	.559
Q30_5	.520	.467	.516	.487	.477	.483	.462
Q30_6	.643	.596	.636	.557	.590	.554	.534
Q30_7	.745	.672	.658	.613	.643	.626	.613
Q30_8	1.000	.768	.710	.649	.674	.648	.662
Q30_9	.768	1.000	.723	.647	.705	.653	.688

Q30_10	.710	.723	1.000	.626	.687	.622	.617
Q30_11	.649	.647	.626	1.000	.646	.742	.616
Q30_12	.674	.705	.687	.646	1.000	.667	.664
Q30_13	.648	.653	.622	.742	.667	1.000	.646
Q30_14	.662	.688	.617	.616	.664	.646	1.000
Q30_15	.584	.594	.547	.535	.591	.581	.663

Inter-Item Correlation Matrix

	Q30_15
Q30_1	.513
Q30_2	.582
Q30_3	.701
Q30_4	.564
Q30_5	.486
Q30_6	.536
Q30_7	.557
Q30_8	.584
Q30_9	.594
Q30_10	.547
Q30_11	.535
Q30_12	.591
Q30_13	.581
Q30_14	.663
Q30_15	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance
Item Means	3.910	3.659	4.103	.444	1.121	.018
Inter-Item Correlations	.604	.462	.768	.306	1.662	.004

Summary Item Statistics

	N of Items
Item Means	15

Inter-Item Correlations	15

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
58.66	254.667	15.958	15

Reliability

Notes

Output Created		10-OCT-2025 10:38:20
Comments		
Input	Data	F:\Oxford Dissertation 2025\NVivo and stuff files4Travel\Christopher SPSS.1October.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	1982
	Matrix Input	
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.
Syntax		RELIABILITY /VARIABLES=Q31_1 Q31_2 Q31_3 Q31_4 Q31_5 Q31_6 Q31_7 Q31_8 Q31_9 Q31_10 /SCALE('Reading') ALL

		/MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE CORR /SUMMARY=MEANS CORR.
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.01

Scale: Reading

Case Processing Summary

		N	%
Cases	Valid	1982	100.0
	Excluded[a]	0	.0
	Total	1982	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.948	.948	10

Item Statistics

	Mean	Std. Deviation	N
Q31_1	4.06	1.358	1982
Q31_2	4.03	1.351	1982
Q31_3	3.79	1.308	1982
Q31_4	4.01	1.392	1982
Q31_5	3.67	1.271	1982

Q31_6	3.93	1.406	1982
Q31_7	3.71	1.306	1982
Q31_8	3.70	1.281	1982
Q31_9	3.67	1.369	1982
Q31_10	3.66	1.252	1982

Inter-Item Correlation Matrix

	Q31_1	Q31_2	Q31_3	Q31_4	Q31_5	Q31_6	Q31_7
Q31_1	1.000	.740	.677	.634	.617	.618	.609
Q31_2	.740	1.000	.697	.620	.607	.624	.616
Q31_3	.677	.697	1.000	.716	.704	.676	.705
Q31_4	.634	.620	.716	1.000	.698	.757	.679
Q31_5	.617	.607	.704	.698	1.000	.716	.743
Q31_6	.618	.624	.676	.757	.716	1.000	.748
Q31_7	.609	.616	.705	.679	.743	.748	1.000
Q31_8	.584	.544	.642	.619	.686	.676	.720
Q31_9	.526	.501	.567	.542	.600	.576	.610
Q31_10	.588	.568	.654	.620	.690	.645	.705

Inter-Item Correlation Matrix

	Q31_8	Q31_9	Q31_10
Q31_1	.584	.526	.588
Q31_2	.544	.501	.568
Q31_3	.642	.567	.654
Q31_4	.619	.542	.620
Q31_5	.686	.600	.690
Q31_6	.676	.576	.645
Q31_7	.720	.610	.705
Q31_8	1.000	.686	.686
Q31_9	.686	1.000	.675
Q31_10	.686	.675	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance
Item Means	3.824	3.657	4.062	.405	1.111	.027
Inter-Item Correlations	.647	.501	.757	.257	1.513	.004

Summary Item Statistics

	N of Items
Item Means	10
Inter-Item Correlations	10

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
38.24	120.422	10.974	10

Reliability

Notes

Output Created		10-OCT-2025 10:38:57
Comments		
Input	Data	F:\Oxford Dissertation 2025\NVivo and stuff files4Travel\Christopher SPSS.1October.sav
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	Split File	<none>
	N of Rows in Working Data File	1982
	Matrix Input	
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.

Syntax		RELIABILITY /VARIABLES=Q32_1 Q32_2 Q32_3 Q32_4 Q32_5 Q32_6 Q32_7 Q32_8 Q32_9 Q32_10 /SCALE('Speaking') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE CORR /SUMMARY=MEANS CORR.
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.01

Scale: Speaking

Case Processing Summary

		N	%
Cases	Valid	1982	100.0
	Excluded[a]	0	.0
	Total	1982	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.952	.951	10

Item Statistics

	Mean	Std. Deviation	N

Q32_1	4.12	1.441	1982
Q32_2	3.67	1.464	1982
Q32_3	3.83	1.398	1982
Q32_4	3.99	1.515	1982
Q32_5	3.99	1.455	1982
Q32_6	3.21	1.387	1982
Q32_7	3.66	1.370	1982
Q32_8	3.95	1.437	1982
Q32_9	4.01	1.507	1982
Q32_10	3.14	1.339	1982

Inter-Item Correlation Matrix

	Q32_1	Q32_2	Q32_3	Q32_4	Q32_5	Q32_6	Q32_7
Q32_1	1.000	.721	.702	.658	.734	.539	.604
Q32_2	.721	1.000	.725	.656	.717	.655	.641
Q32_3	.702	.725	1.000	.746	.791	.637	.665
Q32_4	.658	.656	.746	1.000	.817	.566	.691
Q32_5	.734	.717	.791	.817	1.000	.587	.698
Q32_6	.539	.655	.637	.566	.587	1.000	.652
Q32_7	.604	.641	.665	.691	.698	.652	1.000
Q32_8	.669	.641	.708	.743	.762	.574	.739
Q32_9	.668	.655	.732	.778	.806	.572	.693
Q32_10	.480	.564	.587	.504	.531	.677	.609

Inter-Item Correlation Matrix

	Q32_8	Q32_9	Q32_10
Q32_1	.669	.668	.480
Q32_2	.641	.655	.564
Q32_3	.708	.732	.587
Q32_4	.743	.778	.504
Q32_5	.762	.806	.531
Q32_6	.574	.572	.677
Q32_7	.739	.693	.609
Q32_8	1.000	.792	.541
Q32_9	.792	1.000	.537
Q32_10	.541	.537	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance
Item Means	3.757	3.140	4.124	.984	1.313	.115
Inter-Item Correlations	.661	.480	.817	.337	1.701	.007

Summary Item Statistics

	N of Items
Item Means	10
Inter-Item Correlations	10

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
37.57	142.857	11.952	10

Reliability

Notes

Output Created		10-OCT-2025 10:39:39
Comments		
Input	Data	F:\Oxford Dissertation 2025\NVivo and stuff files4Travel\Christopher SPSS.1October.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	1982
	Matrix Input	

Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.
Syntax		RELIABILITY /VARIABLES=Q33_1 Q33_2 Q33_3 Q33_4 Q33_5 Q33_6 Q33_7 Q33_8 Q33_9 Q33_10 /SCALE('Listening') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE CORR /SUMMARY=MEANS CORR.
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.01

Scale: Listening

Case Processing Summary

		N	%
Cases	Valid	1982	100.0
	Excluded[a]	0	.0
	Total	1982	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on	N of Items

	Standardized Items	
.956	.957	10

Item Statistics

	Mean	Std. Deviation	N
Q33_1	3.27	1.305	1982
Q33_2	3.24	1.286	1982
Q33_3	3.39	1.303	1982
Q33_4	3.37	1.310	1982
Q33_5	3.32	1.246	1982
Q33_6	3.68	1.428	1982
Q33_7	3.45	1.287	1982
Q33_8	3.36	1.272	1982
Q33_9	3.28	1.265	1982
Q33_10	3.43	1.355	1982

Inter-Item Correlation Matrix

	Q33_1	Q33_2	Q33_3	Q33_4	Q33_5	Q33_6	Q33_7
Q33_1	1.000	.832	.751	.713	.743	.596	.709
Q33_2	.832	1.000	.769	.729	.763	.612	.698
Q33_3	.751	.769	1.000	.732	.750	.590	.689
Q33_4	.713	.729	.732	1.000	.787	.590	.720
Q33_5	.743	.763	.750	.787	1.000	.615	.749
Q33_6	.596	.612	.590	.590	.615	1.000	.653
Q33_7	.709	.698	.689	.720	.749	.653	1.000
Q33_8	.720	.727	.700	.714	.767	.609	.796
Q33_9	.752	.748	.725	.737	.755	.602	.778
Q33_10	.573	.583	.560	.540	.593	.608	.604

Inter-Item Correlation Matrix

	Q33_8	Q33_9	Q33_10
Q33_1	.720	.752	.573
Q33_2	.727	.748	.583
Q33_3	.700	.725	.560
Q33_4	.714	.737	.540
Q33_5	.767	.755	.593

Q33_6	.609	.602	.608
Q33_7	.796	.778	.604
Q33_8	1.000	.804	.617
Q33_9	.804	1.000	.633
Q33_10	.617	.633	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance
Item Means	3.379	3.239	3.683	.443	1.137	.016
Inter-Item Correlations	.690	.540	.832	.292	1.541	.006

Summary Item Statistics

	N of Items
Item Means	10
Inter-Item Correlations	10

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
33.79	122.434	11.065	10

Appendix K: Independent samples *t* - tests

T-Test Gender

Notes

Output Created		28-SEP-2025 13:50:08
Comments		
Input	Data	C:\Users\clshepa\Desktop\ChristopherSPSS.27Aug.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	1982
Missing Value Handling	Definition of Missing	User defined missing values are treated as missing.
	Cases Used	Statistics for each analysis are based on the cases with no missing or out-of-range data for any variable in the analysis.
Syntax		T-TEST GROUPS=Q13(1 2) /MISSING=ANALYSIS /VARIABLES=WritingMean ReadingMean SpeakingMean ListeningMean /ES DISPLAY(TRUE) /CRITERIA=CI(.95).
Resources	Processor Time	00:00:00.03
	Elapsed Time	00:00:00.03

[DataSet1] C:\Users\clshepa\Desktop\ChristopherSPSS.27Aug.sav

Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Writing Skills	Female	1123	3.9078	1.05691	.03154
	Male	820	3.8947	1.08045	.03773
Reading Skills	Female	1123	3.8291	1.10210	.03289
	Male	820	3.8010	1.09481	.03823
Speaking Skills	Female	1123	3.7651	1.18500	.03536
	Male	820	3.7366	1.21211	.04233
Listening Skills	Female	1123	3.2904	1.08905	.03250
	Male	820	3.4772	1.11669	.03900

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
Writing Skills	Equal variances assumed	.130	.718	.267	1941
	Equal variances not assumed			.266	1742.410
Reading Skills	Equal variances assumed	.118	.731	.557	1941
	Equal variances not assumed			.558	1771.468
Speaking Skills	Equal variances assumed	.398	.528	.519	1941
	Equal variances not assumed			.517	1741.791
Listening Skills	Equal variances assumed	.353	.553	-3.695	1941
	Equal variances not assumed			-3.680	1739.257

Independent Samples Test

		t-test for Equality of Means		
		Significance		
		One-Sided p	Two-Sided p	Mean Difference
Writing Skills	Equal variances assumed	.395	.789	.01309
	Equal variances not assumed	.395	.790	.01309
Reading Skills	Equal variances assumed	.289	.577	.02814
	Equal variances not assumed	.288	.577	.02814
Speaking Skills	Equal variances assumed	.302	.604	.02851
	Equal variances not assumed	.303	.605	.02851
Listening Skills	Equal variances assumed	<.001	<.001	-.18681
	Equal variances not assumed	<.001	<.001	-.18681

Independent Samples Test

		t-test for Equality of Means		
			95% Confidence Interval of the Difference	
		Std. Error Difference	Lower	Upper
Writing Skills	Equal variances assumed	.04901	-.08302	.10920
	Equal variances not assumed	.04918	-.08336	.10954
Reading Skills	Equal variances assumed	.05048	-.07086	.12715
	Equal variances not assumed	.05043	-.07077	.12705
Speaking Skills	Equal variances assumed	.05496	-.07928	.13630
	Equal variances not assumed	.05516	-.07967	.13669

Listening Skills	Equal variances assumed	.05056	-.28598	-.08765
	Equal variances not assumed	.05076	-.28637	-.08725

Independent Samples Effect Sizes

		Standardizer[a]	Point Estimate	95% Confidence Interval	
				Lower	Upper
Writing Skills	Cohen's d	1.06691	.012	-.078	.102
	Hedges' correction	1.06732	.012	-.078	.102
	Glass's delta	1.08045	.012	-.078	.102
Reading Skills	Cohen's d	1.09903	.026	-.064	.116
	Hedges' correction	1.09946	.026	-.064	.116
	Glass's delta	1.09481	.026	-.064	.116
Speaking Skills	Cohen's d	1.19651	.024	-.066	.114
	Hedges' correction	1.19697	.024	-.066	.114
	Glass's delta	1.21211	.024	-.067	.114
Listening Skills	Cohen's d	1.10079	-.170	-.260	-.079
	Hedges' correction	1.10122	-.170	-.260	-.079
	Glass's delta	1.11669	-.167	-.258	-.077

a. The denominator used in estimating the effect sizes.
Cohen's d uses the pooled standard deviation.
Hedges' correction uses the pooled standard deviation, plus a correction factor.
Glass's delta uses the sample standard deviation of the control (i.e., the second) group.

Frequencies

Notes

Output Created	28-SEP-2025 14:32:39
Comments	

Input	Data	C:\Users\clshepa\Desktop\ChristopherSPSS.27Aug.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	1982
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data.
Syntax		FREQUENCIES VARIABLES=Q45_1 Q45_2 Q45_3 Q45_4 /STATISTICS=MEAN MEDIAN MODE /BARCHART FREQ /ORDER=ANALYSIS.
Resources	Processor Time	00:00:03.62
	Elapsed Time	00:00:01.01

Statistics

		Reading	Writing	Speaking	Listening
N	Valid	1982	1982	1982	1982
	Missing	0	0	0	0
Mean		3.93	4.32	4.05	3.61
Median		4.00	5.00	4.00	3.00
Mode		5	5	5	3

Frequency Table

Reading

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	51	2.6	2.6	2.6
	2	257	13.0	13.0	15.5
	3	503	25.4	25.4	40.9
	4	358	18.1	18.1	59.0
	5	622	31.4	31.4	90.4
	6	162	8.2	8.2	98.5
	7	29	1.5	1.5	100.0
	Total	1982	100.0	100.0	

Writing

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	20	1.0	1.0	1.0
	2	160	8.1	8.1	9.1
	3	394	19.9	19.9	29.0
	4	361	18.2	18.2	47.2
	5	726	36.6	36.6	83.8
	6	274	13.8	13.8	97.6
	7	47	2.4	2.4	100.0
	Total	1982	100.0	100.0	

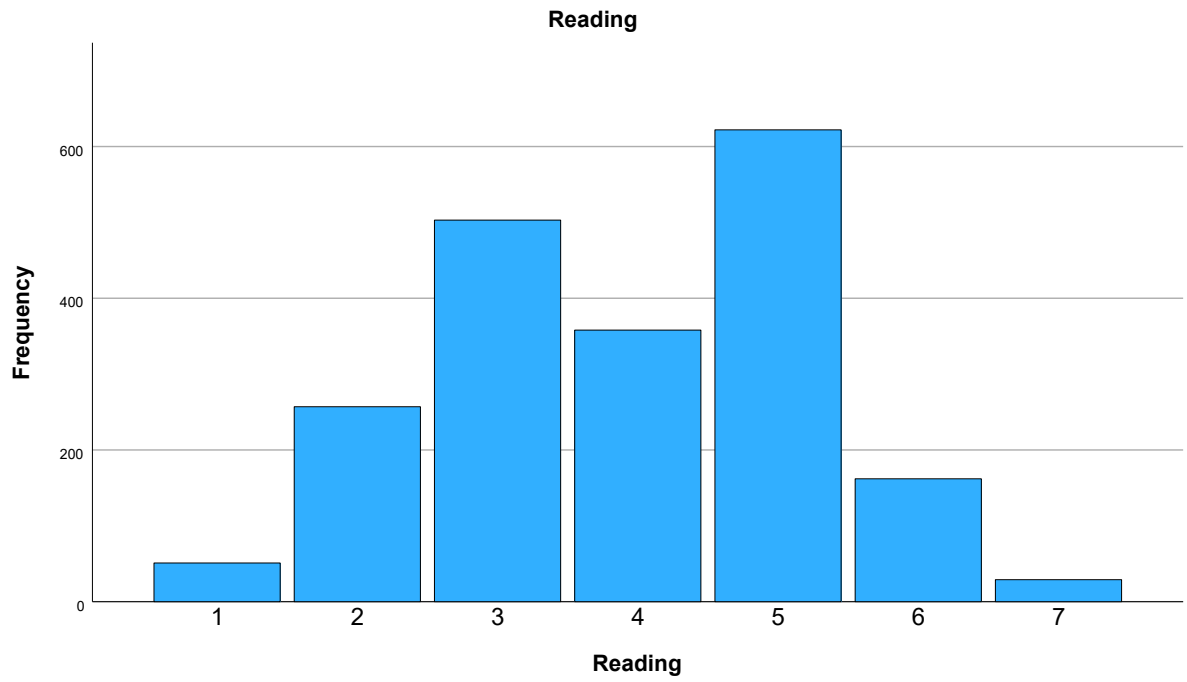
Speaking

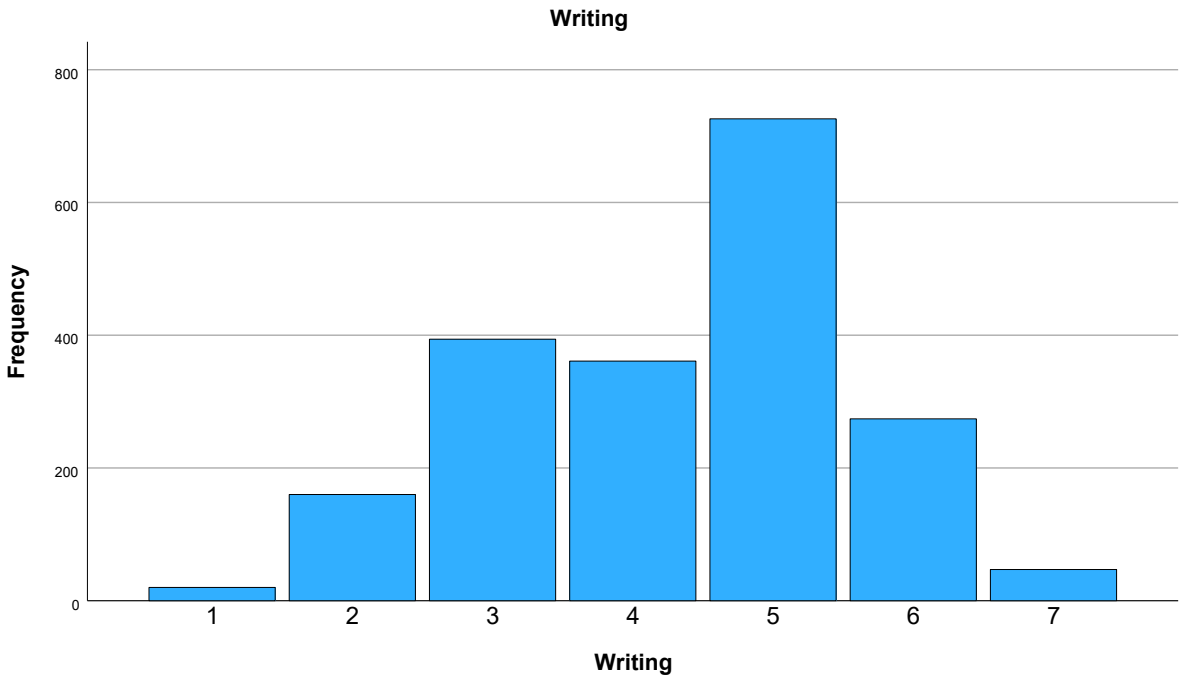
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	67	3.4	3.4	3.4
	2	237	12.0	12.0	15.3
	3	460	23.2	23.2	38.5
	4	378	19.1	19.1	57.6
	5	519	26.2	26.2	83.8
	6	256	12.9	12.9	96.7
	7	65	3.3	3.3	100.0
	Total	1982	100.0	100.0	

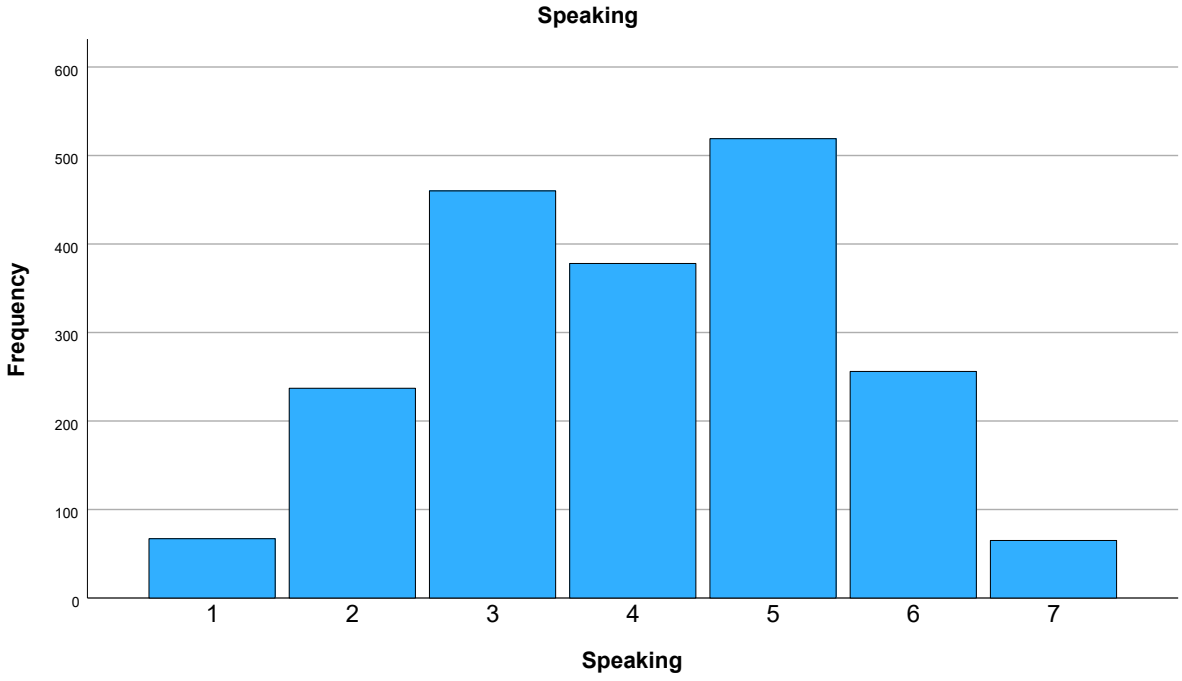
Listening

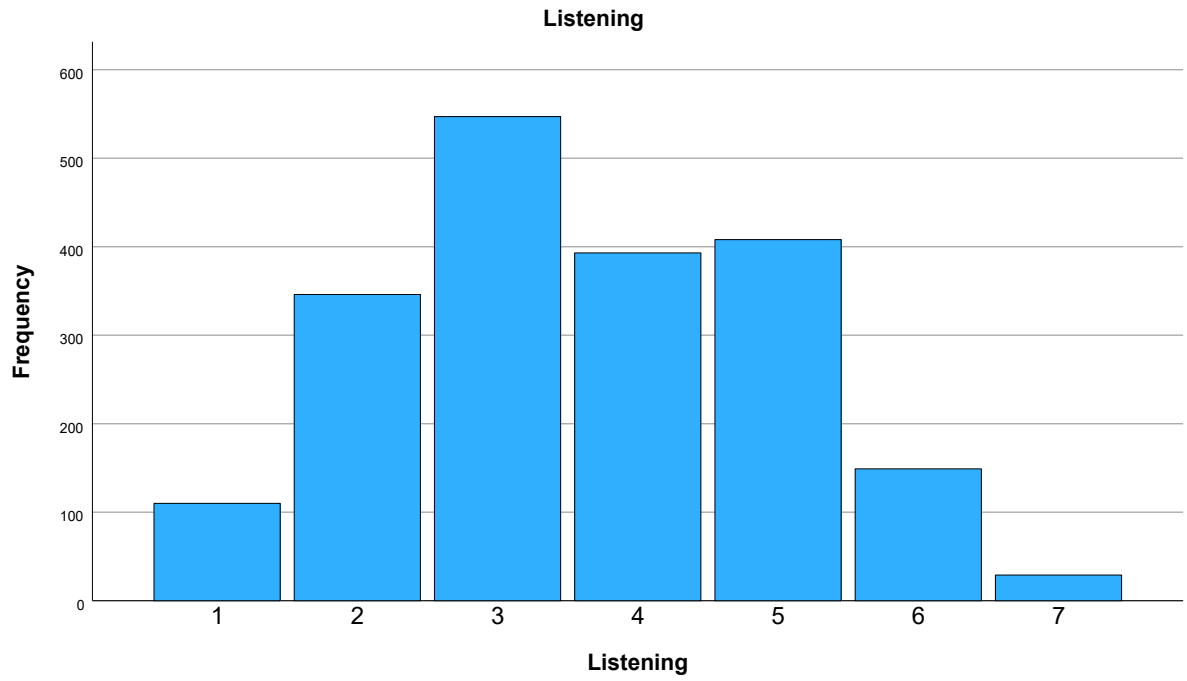
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	110	5.5	5.5	5.5
	2	346	17.5	17.5	23.0
	3	547	27.6	27.6	50.6
	4	393	19.8	19.8	70.4
	5	408	20.6	20.6	91.0
	6	149	7.5	7.5	98.5
	7	29	1.5	1.5	100.0
	Total	1982	100.0	100.0	

Bar Chart




Writing
800
600
400
200
0
Frequency
1
2
3
4
5
6
7
Writing


Speaking
600
500
400
300
200
100
0
Frequency
1
2
3
4
5
6
7
Speaking



Frequencies

Notes

Output Created		28-SEP-2025 14:52:19
Comments		
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	Active Dataset	DataSet1
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	Split File	<none>
	N of Rows in Working Data File	1982
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.

	Cases Used	Statistics are based on all cases with valid data.
Syntax		FREQUENCIES VARIABLES=Q45_1 Q45_2 Q45_3 Q45_4 /STATISTICS=MEAN MEDIAN /BARCHART FREQ /ORDER=ANALYSIS.
Resources	Processor Time	00:00:00.97
	Elapsed Time	00:00:00.55

Statistics

		Reading	Writing	Speaking	Listening
N	Valid	1982	1982	1982	1982
	Missing	0	0	0	0
Mean		3.93	4.32	4.05	3.61
Median		4.00	5.00	4.00	3.00

Frequency Table

Reading

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	51	2.6	2.6	2.6
	2	257	13.0	13.0	15.5
	3	503	25.4	25.4	40.9
	4	358	18.1	18.1	59.0
	5	622	31.4	31.4	90.4
	6	162	8.2	8.2	98.5
	7	29	1.5	1.5	100.0
	Total	1982	100.0	100.0	

Writing

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	20	1.0	1.0	1.0
	2	160	8.1	8.1	9.1
	3	394	19.9	19.9	29.0
	4	361	18.2	18.2	47.2
	5	726	36.6	36.6	83.8
	6	274	13.8	13.8	97.6
	7	47	2.4	2.4	100.0
	Total	1982	100.0	100.0	

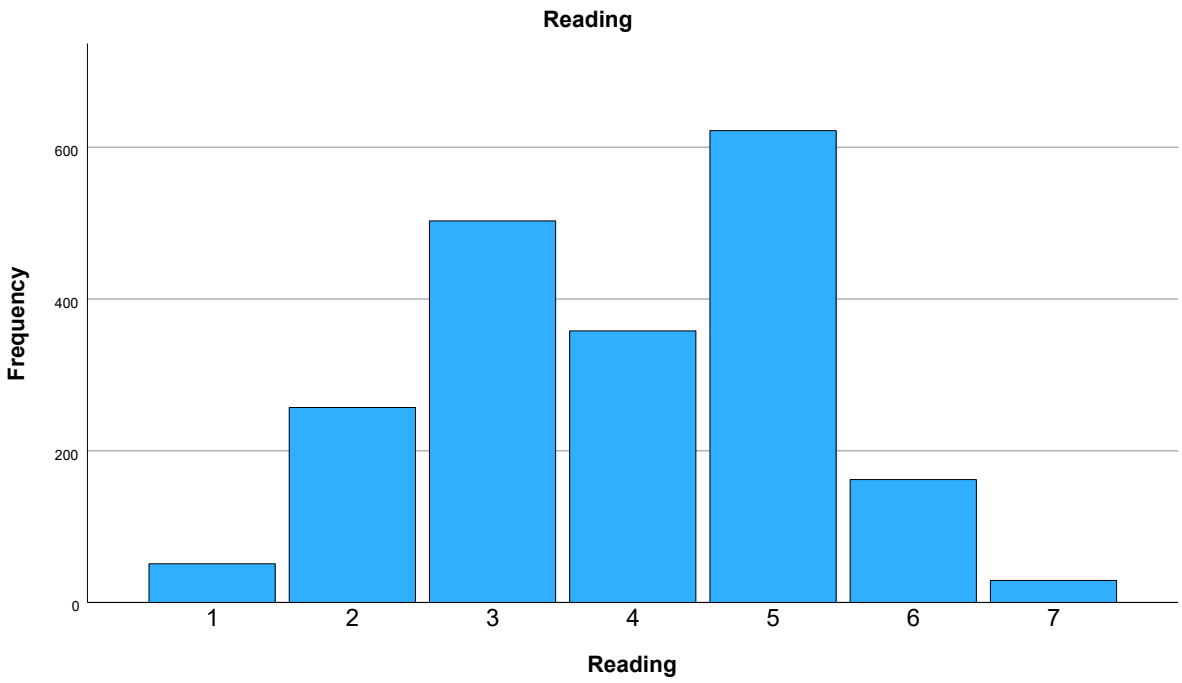
Speaking

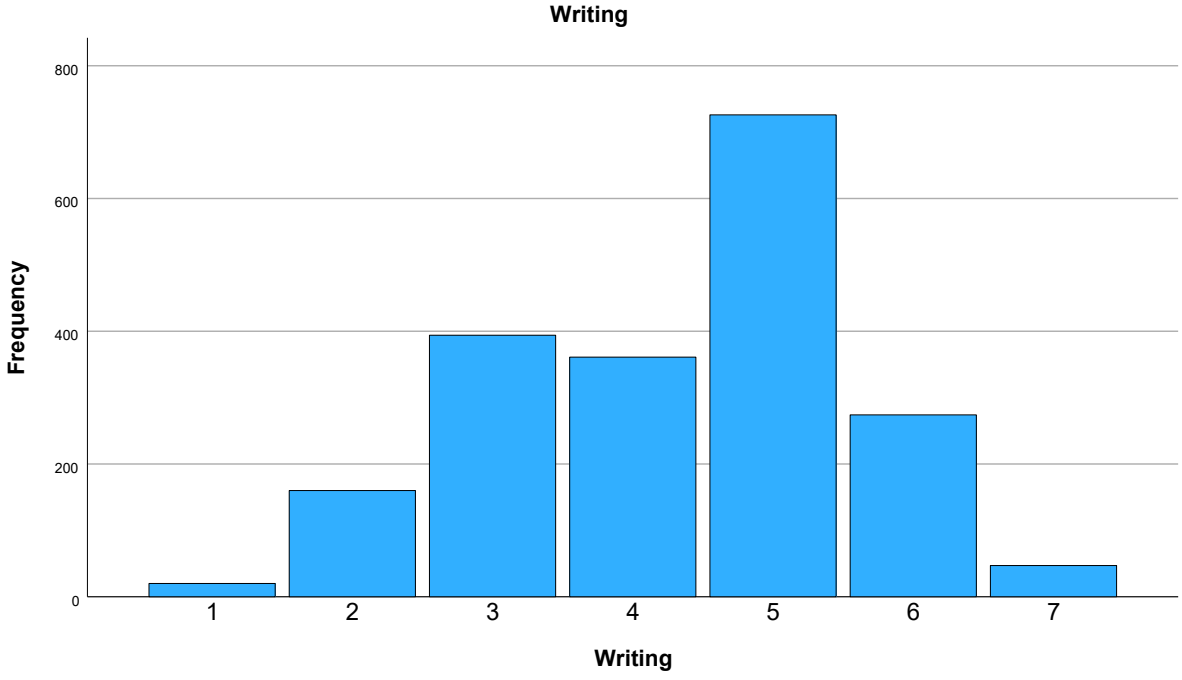
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	67	3.4	3.4	3.4
	2	237	12.0	12.0	15.3
	3	460	23.2	23.2	38.5
	4	378	19.1	19.1	57.6
	5	519	26.2	26.2	83.8
	6	256	12.9	12.9	96.7
	7	65	3.3	3.3	100.0
	Total	1982	100.0	100.0	

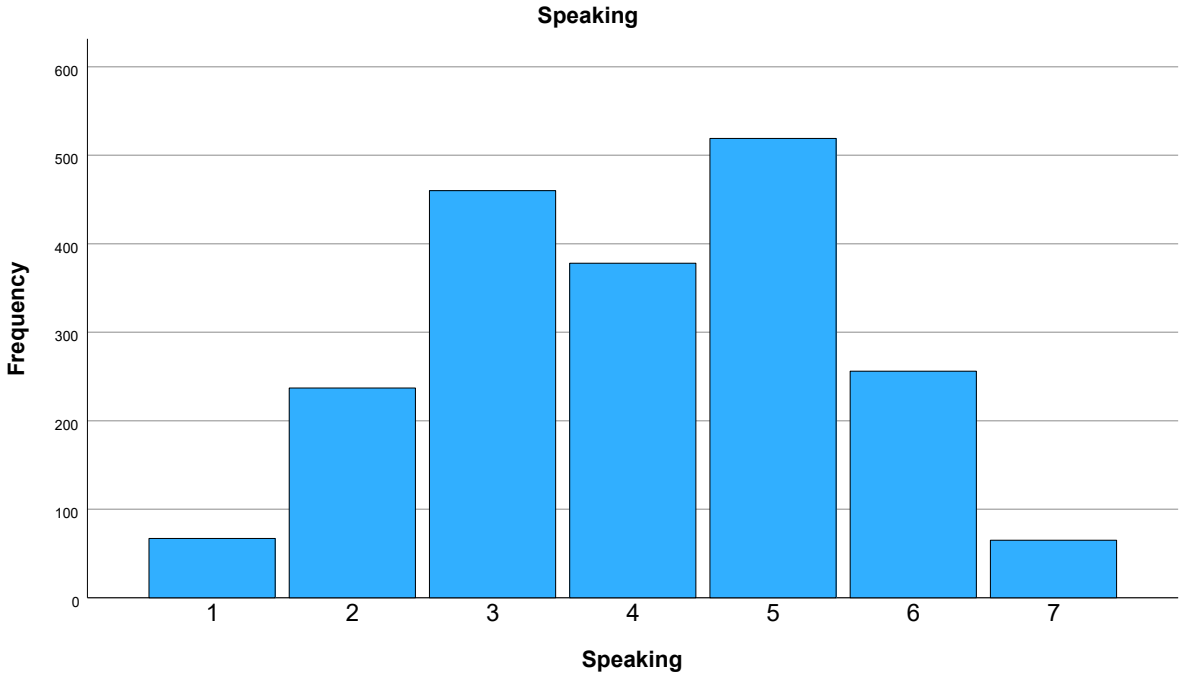
Listening

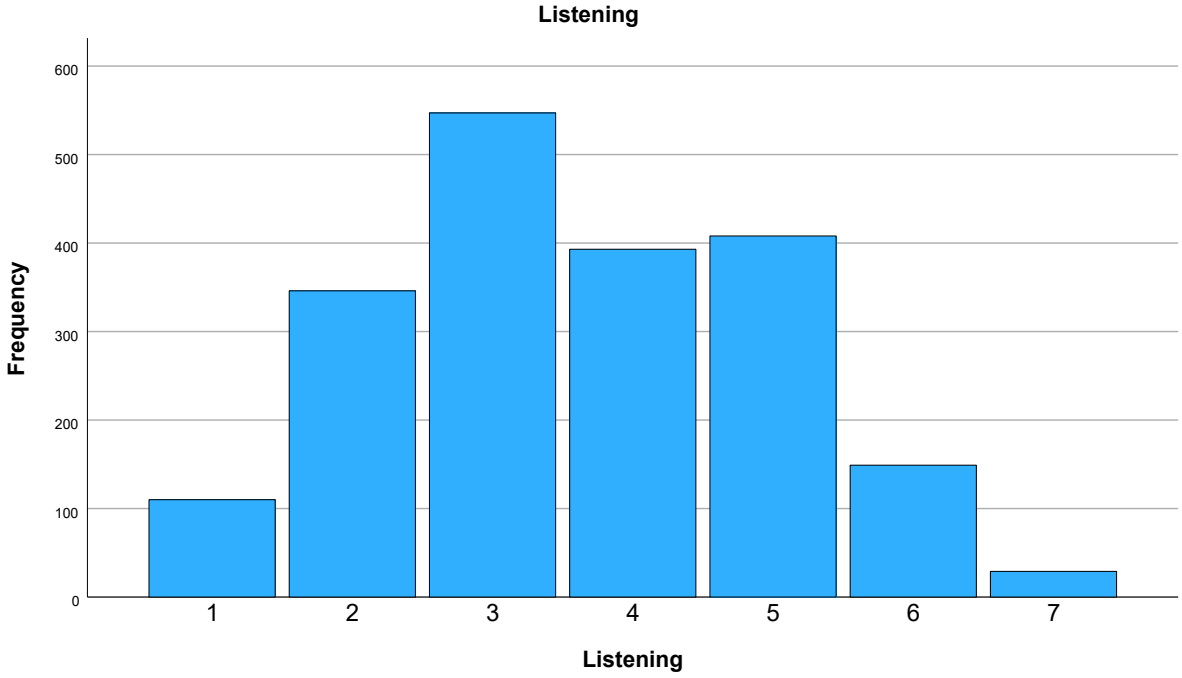
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	110	5.5	5.5	5.5
	2	346	17.5	17.5	23.0
	3	547	27.6	27.6	50.6
	4	393	19.8	19.8	70.4
	5	408	20.6	20.6	91.0
	6	149	7.5	7.5	98.5
	7	29	1.5	1.5	100.0
	Total	1982	100.0	100.0	

Bar Chart


Reading
Frequency
600
400
200
0
1
2
3
4
5
6
7
Reading


Writing
Frequency
800
600
400
200
0
1
2
3
4
5
6
7
Writing


Speaking
Frequency
600
500
400
300
200
100
0
1
2
3
4
5
6
7
Speaking


Listening
Frequency
600
500
400
300
200
100
0
1
2
3
4
5
6
7
Listening

Frequencies

Notes

Output Created		28-SEP-2025 15:01:42
Comments		
Input	Data	C:\Users\clshepa\Desktop\ChristopherSPSS.27Aug.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	1982
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data.
Syntax		FREQUENCIES VARIABLES=WritingMean ReadingMean SpeakingMean ListeningMean /STATISTICS=MEAN MEDIAN /BARCHART FREQ /ORDER=ANALYSIS.
Resources	Processor Time	00:00:00.89
	Elapsed Time	00:00:00.53

Statistics

		Writing Skills	Reading Skills	Speaking Skills	Listening Skills
N	Valid	1982	1982	1982	1982
	Missing	0	0	0	0

Mean	3.9104	3.8242	3.7575	3.3790
Median	4.0000	3.9000	3.8000	3.3000

Frequency Table

Writing Skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	6	.3	.3	.3
	1.07	2	.1	.1	.4
	1.13	1	.1	.1	.5
	1.20	3	.2	.2	.6
	1.27	3	.2	.2	.8
	1.33	3	.2	.2	.9
	1.40	2	.1	.1	1.0
	1.47	5	.3	.3	1.3
	1.53	2	.1	.1	1.4
	1.60	2	.1	.1	1.5
	1.67	5	.3	.3	1.7
	1.73	6	.3	.3	2.0
	1.80	10	.5	.5	2.5
	1.87	6	.3	.3	2.8
	1.93	7	.4	.4	3.2
	2.00	40	2.0	2.0	5.2
	2.07	14	.7	.7	5.9
	2.13	9	.5	.5	6.4
	2.20	20	1.0	1.0	7.4
	2.27	17	.9	.9	8.2
	2.33	15	.8	.8	9.0
	2.40	14	.7	.7	9.7
	2.47	16	.8	.8	10.5
	2.53	20	1.0	1.0	11.5
	2.60	24	1.2	1.2	12.7
	2.67	19	1.0	1.0	13.7
	2.73	28	1.4	1.4	15.1
	2.80	22	1.1	1.1	16.2

	2.87	16	.8	.8	17.0
	2.93	21	1.1	1.1	18.1
	3.00	71	3.6	3.6	21.6
	3.07	16	.8	.8	22.5
	3.13	30	1.5	1.5	24.0
	3.20	31	1.6	1.6	25.5
	3.27	37	1.9	1.9	27.4
	3.33	42	2.1	2.1	29.5
	3.40	39	2.0	2.0	31.5
	3.47	42	2.1	2.1	33.6
	3.53	52	2.6	2.6	36.2
	3.60	38	1.9	1.9	38.1
	3.67	29	1.5	1.5	39.6
	3.73	54	2.7	2.7	42.3
	3.80	47	2.4	2.4	44.7
	3.87	46	2.3	2.3	47.0
	3.93	56	2.8	2.8	49.8
	4.00	95	4.8	4.8	54.6
	4.07	55	2.8	2.8	57.4
	4.13	52	2.6	2.6	60.0
	4.20	48	2.4	2.4	62.5
	4.27	46	2.3	2.3	64.8
	4.33	40	2.0	2.0	66.8
	4.40	36	1.8	1.8	68.6
	4.47	40	2.0	2.0	70.6
	4.53	42	2.1	2.1	72.8
	4.60	36	1.8	1.8	74.6
	4.67	29	1.5	1.5	76.0
	4.73	29	1.5	1.5	77.5
	4.80	32	1.6	1.6	79.1
	4.87	36	1.8	1.8	80.9
	4.93	32	1.6	1.6	82.5
	5.00	78	3.9	3.9	86.5
	5.07	27	1.4	1.4	87.8
	5.13	26	1.3	1.3	89.2
	5.20	20	1.0	1.0	90.2
	5.27	13	.7	.7	90.8
	5.33	17	.9	.9	91.7
	5.40	20	1.0	1.0	92.7

	5.47	15	.8	.8	93.4
	5.53	16	.8	.8	94.2
	5.60	15	.8	.8	95.0
	5.67	11	.6	.6	95.6
	5.73	8	.4	.4	96.0
	5.80	8	.4	.4	96.4
	5.87	11	.6	.6	96.9
	5.93	13	.7	.7	97.6
	6.00	18	.9	.9	98.5
	6.07	8	.4	.4	98.9
	6.13	3	.2	.2	99.0
	6.20	2	.1	.1	99.1
	6.27	4	.2	.2	99.3
	6.33	2	.1	.1	99.4
	6.40	1	.1	.1	99.5
	6.47	2	.1	.1	99.6
	6.60	1	.1	.1	99.6
	7.00	7	.4	.4	100.0
	Total	1982	100.0	100.0	

Reading Skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	16	.8	.8	.8
	1.20	1	.1	.1	.9
	1.30	5	.3	.3	1.1
	1.40	3	.2	.2	1.3
	1.50	9	.5	.5	1.7
	1.60	5	.3	.3	2.0
	1.70	9	.5	.5	2.4
	1.80	6	.3	.3	2.7
	1.90	20	1.0	1.0	3.7
	2.00	60	3.0	3.0	6.8
	2.10	20	1.0	1.0	7.8
	2.20	30	1.5	1.5	9.3
	2.30	27	1.4	1.4	10.6
	2.40	29	1.5	1.5	12.1
	2.50	28	1.4	1.4	13.5

	2.60	24	1.2	1.2	14.7
	2.70	27	1.4	1.4	16.1
	2.80	40	2.0	2.0	18.1
	2.90	28	1.4	1.4	19.5
	3.00	123	6.2	6.2	25.7
	3.10	42	2.1	2.1	27.9
	3.20	62	3.1	3.1	31.0
	3.30	43	2.2	2.2	33.1
	3.40	54	2.7	2.7	35.9
	3.50	66	3.3	3.3	39.2
	3.60	50	2.5	2.5	41.7
	3.70	64	3.2	3.2	45.0
	3.80	86	4.3	4.3	49.3
	3.90	64	3.2	3.2	52.5
	4.00	132	6.7	6.7	59.2
	4.10	67	3.4	3.4	62.6
	4.20	71	3.6	3.6	66.1
	4.30	58	2.9	2.9	69.1
	4.40	61	3.1	3.1	72.1
	4.50	51	2.6	2.6	74.7
	4.60	56	2.8	2.8	77.5
	4.70	38	1.9	1.9	79.5
	4.80	35	1.8	1.8	81.2
	4.90	30	1.5	1.5	82.7
	5.00	105	5.3	5.3	88.0
	5.10	28	1.4	1.4	89.5
	5.20	23	1.2	1.2	90.6
	5.30	33	1.7	1.7	92.3
	5.40	24	1.2	1.2	93.5
	5.50	16	.8	.8	94.3
	5.60	17	.9	.9	95.2
	5.70	9	.5	.5	95.6
	5.80	14	.7	.7	96.3
	5.90	11	.6	.6	96.9
	6.00	28	1.4	1.4	98.3
	6.10	4	.2	.2	98.5
	6.20	4	.2	.2	98.7
	6.30	9	.5	.5	99.1
	6.40	3	.2	.2	99.3

	6.50	2	.1	.1	99.4
	6.60	1	.1	.1	99.4
	6.70	3	.2	.2	99.6
	6.80	1	.1	.1	99.6
	7.00	7	.4	.4	100.0
	Total	1982	100.0	100.0	

Speaking Skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	22	1.1	1.1	1.1
	1.10	8	.4	.4	1.5
	1.20	2	.1	.1	1.6
	1.30	7	.4	.4	2.0
	1.40	7	.4	.4	2.3
	1.50	10	.5	.5	2.8
	1.60	16	.8	.8	3.6
	1.70	9	.5	.5	4.1
	1.80	16	.8	.8	4.9
	1.90	17	.9	.9	5.8
	2.00	66	3.3	3.3	9.1
	2.10	31	1.6	1.6	10.6
	2.20	29	1.5	1.5	12.1
	2.30	31	1.6	1.6	13.7
	2.40	36	1.8	1.8	15.5
	2.50	35	1.8	1.8	17.3
	2.60	34	1.7	1.7	19.0
	2.70	23	1.2	1.2	20.1
	2.80	40	2.0	2.0	22.1
	2.90	42	2.1	2.1	24.3
	3.00	99	5.0	5.0	29.3
	3.10	57	2.9	2.9	32.1
	3.20	49	2.5	2.5	34.6
	3.30	55	2.8	2.8	37.4
	3.40	46	2.3	2.3	39.7
	3.50	46	2.3	2.3	42.0
	3.60	65	3.3	3.3	45.3
	3.70	50	2.5	2.5	47.8

	3.80	69	3.5	3.5	51.3
	3.90	70	3.5	3.5	54.8
	4.00	123	6.2	6.2	61.0
	4.10	56	2.8	2.8	63.9
	4.20	67	3.4	3.4	67.3
	4.30	50	2.5	2.5	69.8
	4.40	51	2.6	2.6	72.4
	4.50	51	2.6	2.6	74.9
	4.60	29	1.5	1.5	76.4
	4.70	39	2.0	2.0	78.4
	4.80	48	2.4	2.4	80.8
	4.90	32	1.6	1.6	82.4
	5.00	78	3.9	3.9	86.3
	5.10	43	2.2	2.2	88.5
	5.20	17	.9	.9	89.4
	5.30	19	1.0	1.0	90.3
	5.40	22	1.1	1.1	91.4
	5.50	25	1.3	1.3	92.7
	5.60	24	1.2	1.2	93.9
	5.70	15	.8	.8	94.7
	5.80	17	.9	.9	95.5
	5.90	15	.8	.8	96.3
	6.00	25	1.3	1.3	97.5
	6.10	13	.7	.7	98.2
	6.20	8	.4	.4	98.6
	6.30	4	.2	.2	98.8
	6.40	4	.2	.2	99.0
	6.50	4	.2	.2	99.2
	6.60	1	.1	.1	99.2
	6.70	1	.1	.1	99.3
	6.80	1	.1	.1	99.3
	6.90	1	.1	.1	99.4
	7.00	12	.6	.6	100.0
	Total	1982	100.0	100.0	

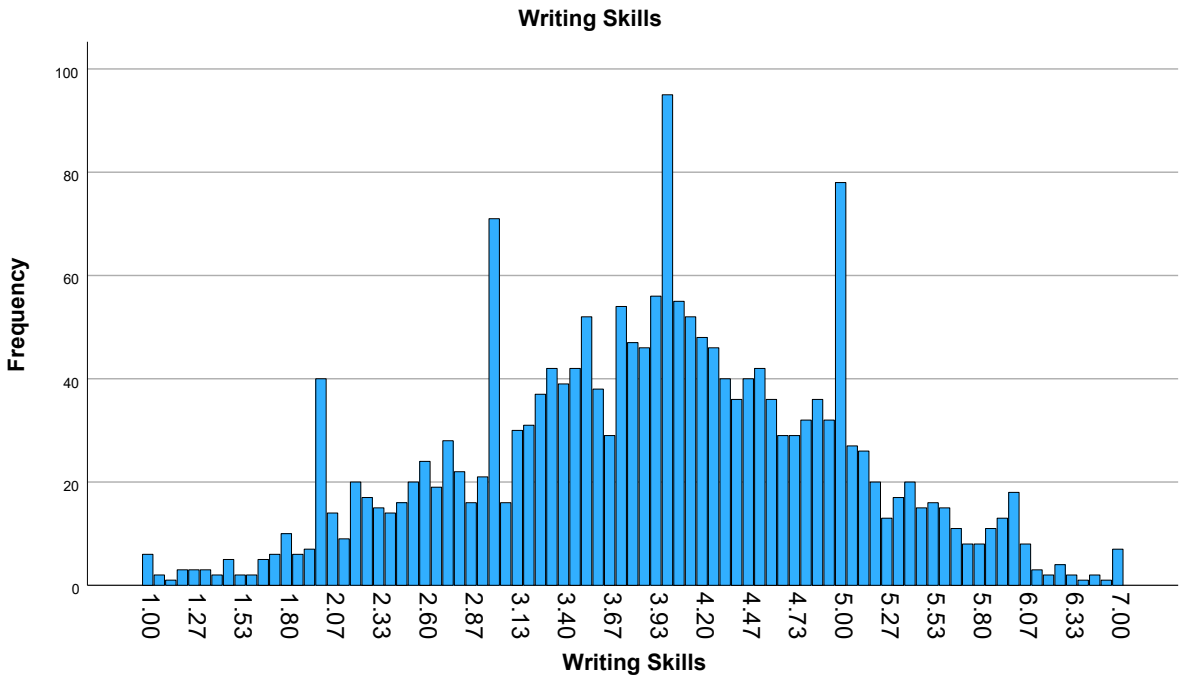
Listening Skills

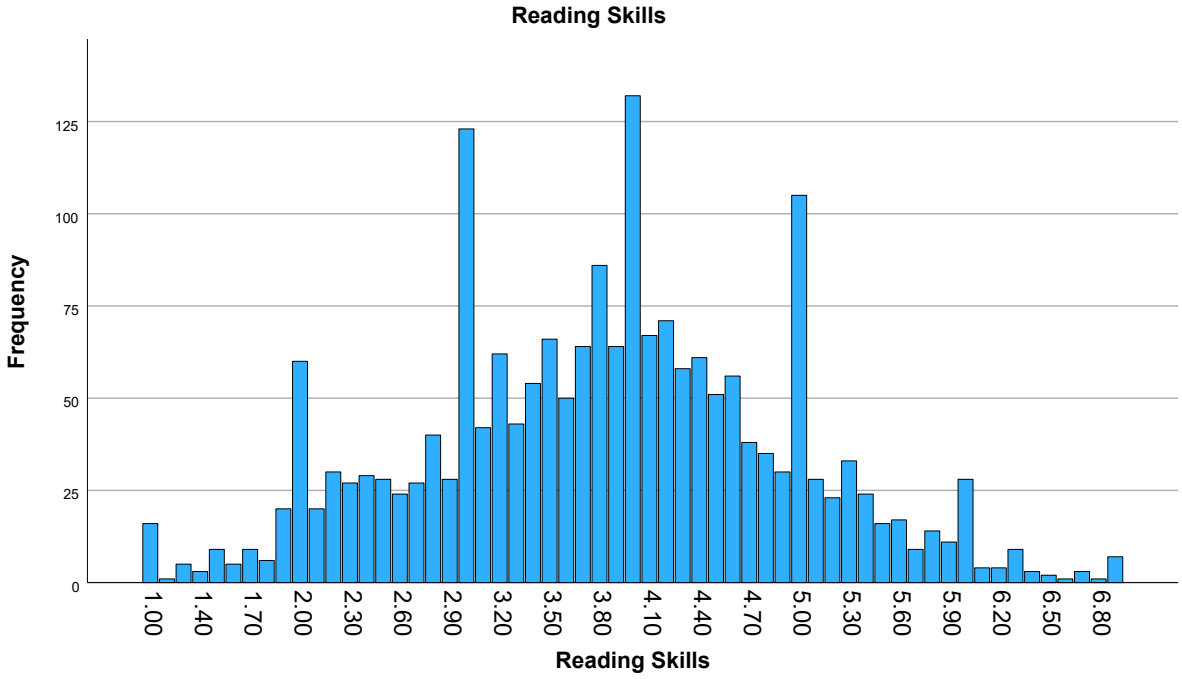
	Frequency	Percent	Valid Percent	Cumulative Percent

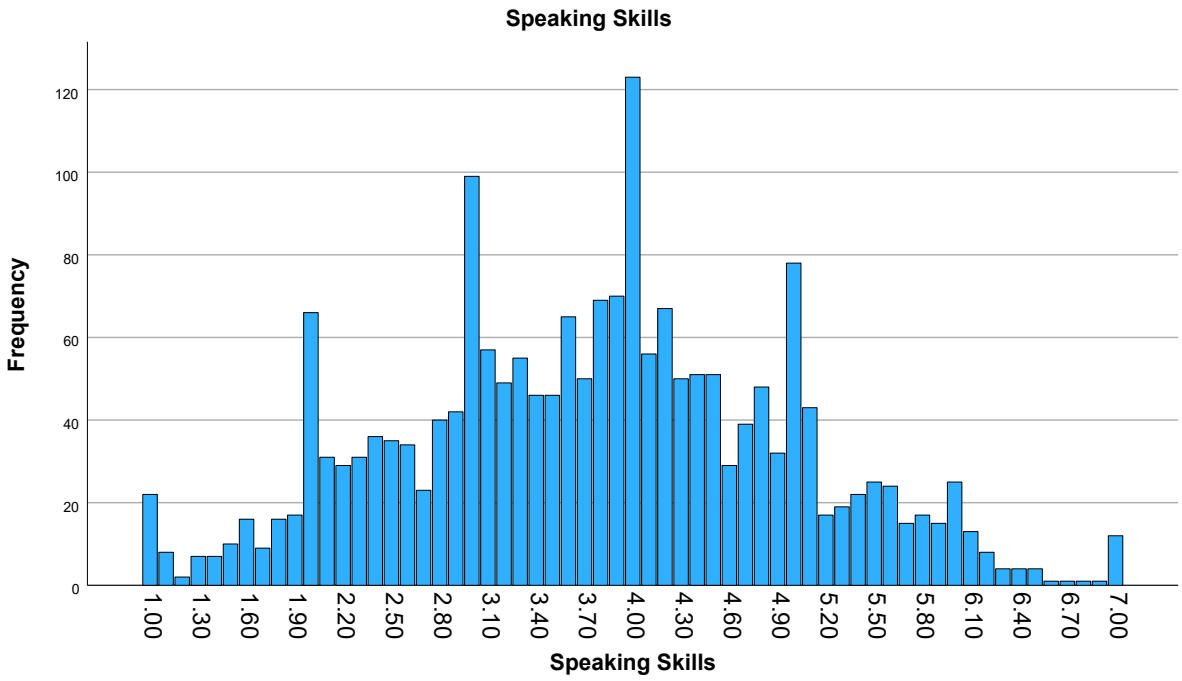
Valid	1.00	22	1.1	1.1	1.1
	1.10	17	.9	.9	2.0
	1.20	15	.8	.8	2.7
	1.30	10	.5	.5	3.2
	1.40	8	.4	.4	3.6
	1.50	8	.4	.4	4.0
	1.60	9	.5	.5	4.5
	1.70	10	.5	.5	5.0
	1.80	19	1.0	1.0	6.0
	1.90	24	1.2	1.2	7.2
	2.00	102	5.1	5.1	12.3
	2.10	44	2.2	2.2	14.5
	2.20	47	2.4	2.4	16.9
	2.30	46	2.3	2.3	19.2
	2.40	38	1.9	1.9	21.1
	2.50	48	2.4	2.4	23.6
	2.60	39	2.0	2.0	25.5
	2.70	47	2.4	2.4	27.9
	2.80	42	2.1	2.1	30.0
	2.90	51	2.6	2.6	32.6
	3.00	184	9.3	9.3	41.9
	3.10	76	3.8	3.8	45.7
	3.20	69	3.5	3.5	49.2
	3.30	61	3.1	3.1	52.3
	3.40	72	3.6	3.6	55.9
	3.50	67	3.4	3.4	59.3
	3.60	54	2.7	2.7	62.0
	3.70	51	2.6	2.6	64.6
	3.80	41	2.1	2.1	66.6
	3.90	47	2.4	2.4	69.0
	4.00	112	5.7	5.7	74.7
	4.10	65	3.3	3.3	78.0
	4.20	36	1.8	1.8	79.8
	4.30	37	1.9	1.9	81.6
	4.40	34	1.7	1.7	83.4
	4.50	29	1.5	1.5	84.8
	4.60	29	1.5	1.5	86.3
	4.70	31	1.6	1.6	87.8
	4.80	20	1.0	1.0	88.8

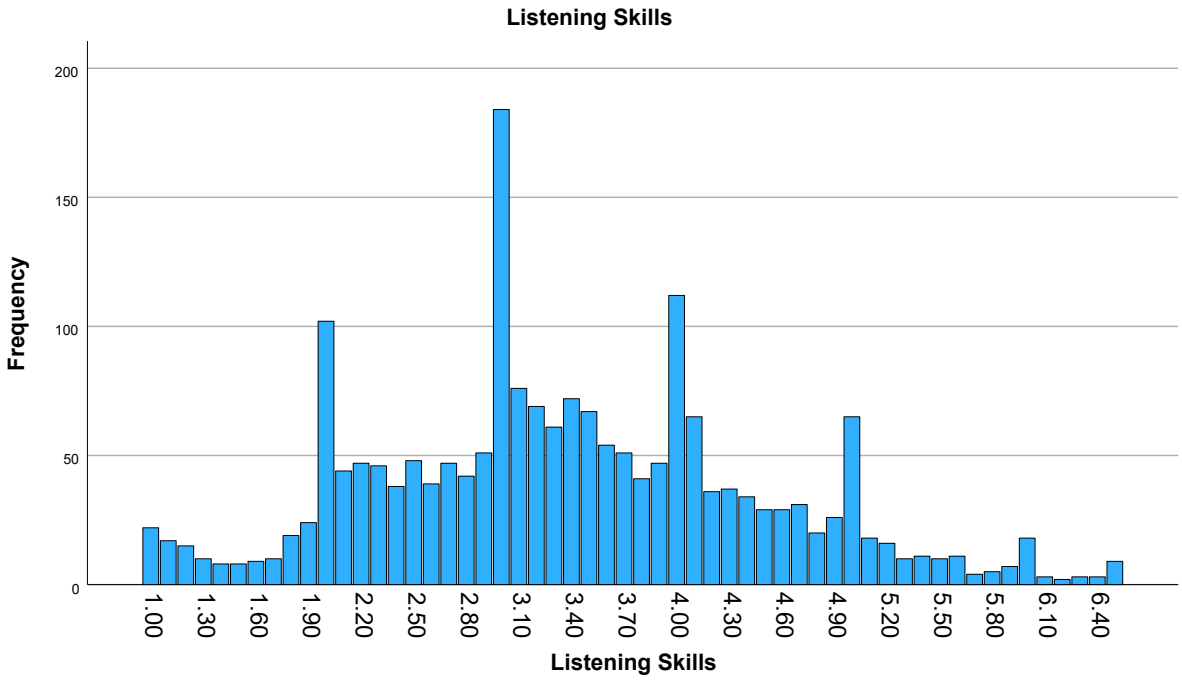
	4.90	26	1.3	1.3	90.2
	5.00	65	3.3	3.3	93.4
	5.10	18	.9	.9	94.3
	5.20	16	.8	.8	95.2
	5.30	10	.5	.5	95.7
	5.40	11	.6	.6	96.2
	5.50	10	.5	.5	96.7
	5.60	11	.6	.6	97.3
	5.70	4	.2	.2	97.5
	5.80	5	.3	.3	97.7
	5.90	7	.4	.4	98.1
	6.00	18	.9	.9	99.0
	6.10	3	.2	.2	99.1
	6.20	2	.1	.1	99.2
	6.30	3	.2	.2	99.4
	6.40	3	.2	.2	99.5
	7.00	9	.5	.5	100.0
	Total	1982	100.0	100.0	

Bar Chart


Writing Skills
Frequency
100
80
60
40
20
0
1.00
1.27
1.53
1.80
2.07
2.33
2.60
2.87
3.13
3.40
3.67
3.93
4.20
4.47
4.73
5.00
5.27
5.53
5.80
6.07
6.33
7.00
Writing Skills


Reading Skills
Frequency
125
100
75
50
25
0
1.00
1.40
1.70
2.00
2.30
2.60
2.90
3.20
3.50
3.80
4.10
4.40
4.70
5.00
5.30
5.60
5.90
6.20
6.50
6.80
Reading Skills


Speaking Skills
Frequency
120
100
80
60
40
20
0
1.00
1.30
1.60
1.90
2.20
2.50
2.80
3.10
3.40
3.70
4.00
4.30
4.60
4.90
5.20
5.50
5.80
6.10
6.40
6.70
7.00
Speaking Skills


Listening Skills
Frequency
200
150
100
50
0
1.00
1.30
1.60
1.90
2.20
2.50
2.80
3.10
3.40
3.70
4.00
4.30
4.60
4.90
5.20
5.50
5.80
6.10
6.40
Listening Skills

T-Test EMI vs. CMI in HK

Notes

Output Created		03-OCT-2025 14:51:23
Comments		
Input	Data	D:\NVivo and stuff files4Travel\EMIvsCMI_HKSPSS.3October.sav
	Active Dataset	DataSet1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	1482
Missing Value Handling	Definition of Missing	User defined missing values are treated as missing.
	Cases Used	Statistics for each analysis are based on the cases with no missing or out-of-range data for any variable in the analysis.
Syntax		T-TEST GROUPS=Q18(1 2) /MISSING=ANALYSIS /VARIABLES=WritingMean ReadingMean SpeakingMean ListeningMean /ES DISPLAY(TRUE) /CRITERIA=CI(.95).
Resources	Processor Time	00:00:00.05
	Elapsed Time	00:00:00.03

```
[DataSet1] D:\NVivo and stuff
files4Travel\EMIvsCMI_HKSPSS.3October.sav
```

Group Statistics

	PMoI	N	Mean	Std. Deviation	Std. Error Mean
Writing Skills	English	1037	3.7895	1.02195	.03174
	Cantonese	445	4.3667	.96121	.04557
Reading Skills	English	1037	3.6972	1.04526	.03246
	Cantonese	445	4.3034	1.01149	.04795
Speaking Skills	English	1037	3.5923	1.11707	.03469
	Cantonese	445	4.2771	1.12707	.05343
Listening Skills	English	1037	3.1913	1.03142	.03203
	Cantonese	445	3.8645	1.14187	.05413

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
Writing Skills	Equal variances assumed	.786	.375	-10.144	1480
	Equal variances not assumed			-10.395	889.521
Reading Skills	Equal variances assumed	.008	.929	-10.332	1480
	Equal variances not assumed			-10.469	866.208
Speaking Skills	Equal variances assumed	.015	.901	-10.788	1480
	Equal variances not assumed			-10.750	833.731
Listening Skills	Equal variances assumed	11.174	<.001	-11.146	1480
	Equal variances not assumed			-10.703	768.937

Independent Samples Test

t-test for Equality of Means

		Significance		
		One-Sided p	Two-Sided p	Mean Difference
Writing Skills	Equal variances assumed	<.001	<.001	-.57722
	Equal variances not assumed	<.001	<.001	-.57722
Reading Skills	Equal variances assumed	<.001	<.001	-.60617
	Equal variances not assumed	<.001	<.001	-.60617
Speaking Skills	Equal variances assumed	<.001	<.001	-.68479
	Equal variances not assumed	<.001	<.001	-.68479
Listening Skills	Equal variances assumed	<.001	<.001	-.67317
	Equal variances not assumed	<.001	<.001	-.67317

Independent Samples Test

		t-test for Equality of Means		
		Std. Error Difference	95% Confidence Interval of the Difference	
			Lower	Upper
Writing Skills	Equal variances assumed	.05690	-.68884	-.46560
	Equal variances not assumed	.05553	-.68620	-.46824
Reading Skills	Equal variances assumed	.05867	-.72125	-.49109
	Equal variances not assumed	.05790	-.71981	-.49252
Speaking Skills	Equal variances assumed	.06347	-.80930	-.56028
	Equal variances not assumed	.06370	-.80983	-.55976
Listening Skills	Equal variances assumed	.06040	-.79165	-.55470

	Equal variances not assumed	.06290	-.79664	-.54970

Independent Samples Effect Sizes

		Standardizer[a]	Point Estimate	95% Confidence Interval	
				Lower	Upper
Writing Skills	Cohen's d	1.00412	-.575	-.688	-.462
	Hedges' correction	1.00462	-.575	-.687	-.462
	Glass's delta	.96121	-.601	-.718	-.482
Reading Skills	Cohen's d	1.03525	-.586	-.698	-.472
	Hedges' correction	1.03577	-.585	-.698	-.472
	Glass's delta	1.01149	-.599	-.717	-.481
Speaking Skills	Cohen's d	1.12008	-.611	-.725	-.498
	Hedges' correction	1.12064	-.611	-.724	-.498
	Glass's delta	1.12707	-.608	-.725	-.489
Listening Skills	Cohen's d	1.06576	-.632	-.745	-.518
	Hedges' correction	1.06630	-.631	-.745	-.518
	Glass's delta	1.14187	-.590	-.707	-.472

a. The denominator used in estimating the effect sizes.
Cohen's d uses the pooled standard deviation.
Hedges' correction uses the pooled standard deviation, plus a correction factor.
Glass's delta uses the sample standard deviation of the control (i.e., the second) group.

Appendix L: NVivo Codebooks

Codebooks for Students

Codebook - EMI Student Interviews: Years 1-4 (Combined)

Name	Description	Files	References
CMI vs EMI secondary schools		24	24
Language improvement and fewer challenges over time		78	78
Development of coping strategies		2	2
Increased confidence		5	5
Increased exposure		15	15
Increased exposure to academic style		6	6
Increased exposure to varieties of English accents		21	21
Increased fluency		1	1
Increased language practice		5	5
Increased listening practice		9	9
Increased reading practice		9	9

Name	Description	Files	References
Increased speaking practice		17	17
Increased vocabulary knowledge		10	10
Increased writing practice		17	17
Language gains		31	31
Language support from ELC		23	23
Language support from lecturers		2	2
Listening		82	82
Lack of exposure to Varieties of English		6	6
Speaking rate or delivery rate		9	9
Understanding classmates' accents		8	8
Understanding key vocabulary		4	4
Understanding lecturers' accents		79	79
Understanding lecturer's codeswitching		2	2
Understanding lecturers with lower English proficiency		4	4

Name	Description	Files	References
Understanding main ideas of lectures		1	1
Productive skills		3	3
Reading		41	41
Identifying key ideas of a text		5	5
Lack patience to read		1	1
Lack practice reading		2	2
Reading carefully to understand a text		3	3
Understanding academic texts		17	17
Understanding specific vocabulary		17	17
Understanding translated texts		7	7
Speaking		36	36
Answering questions		1	1
Anxiety and pressure		4	4
Communicating ideas confidently		1	1
Communicating ideas fluently		14	14
Conveying ideas in English to listeners with lower proficiency		8	8

Name	Description	Files	References
Lack of confidence		3	3
Lack of fluency		4	4
Lack of opportunities & practice		7	7
Presenting information or ideas		2	2
Speaking accurately		4	4
Unplanned real-time speaking		11	11
Synchronous skills		15	15
Vocabulary		47	47
Academic vocabulary		14	14
Technical / Discipline specific vocabulary		22	22
Formal vs informal vocabulary		2	2
Lack of exposure to authentic English		1	1
Lack of exposure to unfamiliar vocabulary		20	20
Limited vocabulary knowledge		2	2
Writing		73	73
Expressing ideas clearly and logically		10	10

Name	Description	Files	References
Expressing ideas in correct English		13	13
Integrating sources in written work		3	3
Lack of clear instructions from the Lecturer		1	1
Lack of formal writing		5	5
Lack practice writing		2	2
Limited vocabulary		11	11
Linking ideas from different sources		1	1
Linking sentences smoothly		7	7
Organising ideas in coherent paragraphs		14	14
Planning written assignments		2	2
Summarizing or paraphrasing ideas in sources		3	3
Using appropriate academic style		42	42

Codebook - EMI Student Interviews: Year 1

Name	Description	Files	References
CMI vs EMI secondary schools		7	7
Language improvement and fewer challenges over time		2	2
Increased exposure to varieties of English accents		3	3
Listening		21	21
Lack of exposure to Varieties of English		3	3
Speaking rate or delivery rate		5	5
Understanding classmates' accents		5	5
Understanding key vocabulary		1	1
Understanding lecturers' accents		20	20
Understanding lecturer's codeswitching		2	2
Understanding lecturers with lower English proficiency		0	0
Understanding main ideas of lectures		1	1

Name	Description	Files	References
Understanding overall organization of lectures		0	0
Understanding questions		0	0
Local vs non-local		0	0
Productive skills		0	0
Reading		9	9
Identifying key ideas of a text		1	1
Identifying supporting ideas and examples		0	0
Lack of reading culture		0	0
Lack patience to read		1	1
Lack practice reading		1	1
Reading carefully to understand a text		1	1
Reading quickly to find specific information		0	0
Reading quickly to get overall meaning		0	0
Taking brief relevant notes		0	0
Understanding academic texts		2	2
Understanding specific vocabulary		4	4

Name	Description	Files	References
Understanding the organization of a text		0	0
Understanding translated texts		0	0
Using own words when taking notes		0	0
Working out the meaning of difficult words		0	0
Speaking		10	10
Answering questions		1	1
Anxiety and pressure		1	1
Asking questions		0	0
Communicating ideas confidently		1	1
Communicating ideas fluently		8	8
Conveying ideas in English to listeners with lower proficiency		4	4
Lack of confidence		1	1
Lack of fluency		2	2
Lack of opportunities & practice		0	0
Participating actively in discussions		0	0

Name	Description	Files	References
Presenting information or ideas		0	0
Reluctance to speak		0	0
Shyness		0	0
Speaking accurately		1	1
Speaking clearly		0	0
Speaking from notes		0	0
Unplanned real-time speaking		3	3
Using visual aids		0	0
Synchronous skills		3	3
Vocabulary		13	13
Academic vocabulary		7	7
Colloquialisms and idioms		0	0
Technical / Discipline specific vocabulary		6	6
Formal vs informal vocabulary		1	1
Lack of exposure to authentic English		0	0
Lack of exposure to unfamiliar vocabulary		4	4
Lack of incidental vocabulary learning		0	0

Name	Description	Files	References
Lack of reading		0	0
Lack of vocabulary development skills		0	0
Limited vocabulary knowledge		1	1
Writing		15	15
Expressing ideas clearly and logically		3	3
Expressing ideas in correct English		2	2
Integrating sources in written work		0	0
Lack of clear instructions from the Lecturer		1	1
Lack of exposure to written academic English		0	0
Lack of formal writing		0	0
Lack practice writing		1	1
Limited vocabulary		4	4
Linking ideas from different sources		0	0
Linking sentences smoothly		2	2
Organising ideas in coherent paragraphs		3	3

Name	Description	Files	References
Planning written assignments		0	0
Proofreading written work		0	0
Reluctance to write		0	0
Revising written work		0	0
Summarizing or paraphrasing ideas in sources		0	0
Using appropriate academic style		4	4
Writing a bibliography		0	0
Writing introductions of an essay		0	0
Writing the body of an essay		0	0
Writing the conclusion of an essay		0	0

Codebook - EMI Student Interviews: Year 2

Name	Description	Files	References
CMI vs EMI secondary schools		8	8
Language improvement and fewer challenges over time		26	26
Development of coping strategies		2	2
Increased confidence		0	0
Increased exposure		3	3
Increased exposure to academic style		2	2
Increased exposure to varieties of English accents		5	5
Increased fluency		1	1
Increased language practice		2	2
Increased listening practice		2	2
Increased speaking practice		2	2
Increased vocabulary knowledge		2	2
Increased writing practice		1	1

Name	Description	Files	References
Language support from lecturers		2	2
Similar level(s) of challenges		9	9
Listening		22	22
Lack of exposure to Varieties of English		1	1
Speaking rate or delivery rate		2	2
Understanding classmates' accents		3	3
Understanding key vocabulary		1	1
Understanding lecturers' accents		21	21
Understanding lecturers with lower English proficiency		2	2
Local vs non-local		0	0
Productive skills		1	1
Reading		8	8
Identifying key ideas of a text		1	1
Reading carefully to understand a text		1	1
Understanding academic texts		3	3

Name	Description	Files	References
Understanding specific vocabulary		5	5
Speaking		10	10
Anxiety and pressure		2	2
Communicating ideas fluently		2	2
Conveying ideas in English to listeners with lower proficiency		2	2
Lack of confidence		2	2
Lack of fluency		1	1
Lack of opportunities & practice		2	2
Speaking accurately		2	2
Unplanned real-time speaking		1	1
Synchronous skills		5	5
Vocabulary		7	7
Academic vocabulary		2	2
Colloquialisms and idioms		0	0
Technical / Discipline specific vocabulary		3	3
Formal vs informal vocabulary		0	0

Name	Description	Files	References
Lack of exposure to authentic English		0	0
Lack of exposure to unfamiliar vocabulary		4	4
Lack of incidental vocabulary learning		0	0
Lack of reading		0	0
Lack of vocabulary development skills		0	0
Limited vocabulary knowledge		0	0
Writing		18	18
Expressing ideas clearly and logically		4	4
Expressing ideas in correct English		3	3
Integrating sources in written work		0	0
Lack of clear instructions from the Lecturer		0	0
Lack of exposure to written academic English		0	0
Lack of formal writing		0	0
Lack practice writing		0	0
Limited vocabulary		3	3

Name	Description	Files	References
Linking ideas from different sources		0	0
Linking sentences smoothly		2	2
Organising ideas in coherent paragraphs		3	3
Planning written assignments		0	0
Proofreading written work		0	0
Reluctance to write		0	0
Revising written work		0	0
Summarizing or paraphrasing ideas in sources		0	0
Using appropriate academic style		14	14
Writing a bibliography		0	0
Writing introductions of an essay		0	0
Writing the body of an essay		0	0
Writing the conclusion of an essay		0	0

Codebook - EMI Student Interviews: Year 3

Name	Description	Files	References
CMI vs EMI secondary schools		4	4
Language improvement and fewer challenges over time		25	25
Development of coping strategies		0	0
Increased confidence		0	0
Increased exposure		5	5
Increased exposure to academic style		2	2
Increased exposure to varieties of English accents		7	7
Increased fluency		0	0
Increased language practice		3	3
Increased listening practice		2	2
Increased motivation		0	0
Increased reading practice		2	2
Increased speaking practice		6	6

Name	Description	Files	References
Increased vocabulary knowledge		2	2
Increased writing practice		7	7
Lack of feedback from lecturers		0	0
Language gains		15	15
Language support early on		0	0
Language support from lecturers		0	0
Similar level(s) of challenges		4	4
Listening		15	15
Following a discussion		0	0
Identifying different views and ideas		0	0
Identifying supporting ideas and examples		0	0
Lack of exposure to spoken English		0	0
Lack of exposure to Varieties of English		0	0
Listening to everyday conversations		0	0
Speaking rate or delivery rate		1	1

Name	Description	Files	References
Taking brief clear notes		0	0
Understanding classmates' accents		0	0
Understanding key vocabulary		0	0
Understanding lecturers' accents		15	15
Understanding lecturer's codeswitching		0	0
Understanding lecturers with lower English proficiency		0	0
Understanding main ideas of lectures		0	0
Understanding overall organization of lectures		0	0
Understanding questions		0	0
Local vs non-local		0	0
Productive skills		2	2
Reading		9	9
Identifying key ideas of a text		1	1
Identifying supporting ideas and examples		0	0

Name	Description	Files	References
Lack of reading culture		0	0
Lack patience to read		0	0
Lack practice reading		0	0
Reading carefully to understand a text		0	0
Reading quickly to find specific information		0	0
Reading quickly to get overall meaning		0	0
Taking brief relevant notes		0	0
Understanding academic texts		4	4
Understanding specific vocabulary		4	4
Understanding the organization of a text		0	0
Understanding translated texts		3	3
Using own words when taking notes		0	0
Working out the meaning of difficult words		0	0
Speaking		8	8
Answering questions		0	0
Anxiety and pressure		0	0

Name	Description	Files	References
Asking questions		0	0
Communicating ideas confidently		0	0
Communicating ideas fluently		3	3
Conveying ideas in English to listeners with lower proficiency		0	0
Lack of confidence		0	0
Lack of fluency		1	1
Lack of opportunities & practice		4	4
Participating actively in discussions		0	0
Presenting information or ideas		1	1
Reluctance to speak		0	0
Shyness		0	0
Speaking accurately		0	0
Speaking clearly		0	0
Speaking from notes		0	0
Unplanned real-time speaking		3	3
Using visual aids		0	0
Synchronous skills		4	4

Name	Description	Files	References
Vocabulary		17	17
Academic vocabulary		3	3
Colloquialisms and idioms		0	0
Technical / Discipline specific vocabulary		7	7
Formal vs informal vocabulary		1	1
Lack of exposure to authentic English		1	1
Lack of exposure to unfamiliar vocabulary		8	8
Lack of incidental vocabulary learning		0	0
Lack of reading		0	0
Lack of vocabulary development skills		0	0
Limited vocabulary knowledge		1	1
Writing		21	21
Expressing ideas clearly and logically		1	1
Expressing ideas in correct English		6	6
Integrating sources in written work		1	1

Name	Description	Files	References
Lack of clear instructions from the Lecturer		0	0
Lack of exposure to written academic English		0	0
Lack of formal writing		3	3
Lack practice writing		1	1
Limited vocabulary		3	3
Linking ideas from different sources		0	0
Linking sentences smoothly		2	2
Organising ideas in coherent paragraphs		4	4
Planning written assignments		0	0
Proofreading written work		0	0
Reluctance to write		0	0
Revising written work		0	0
Summarizing or paraphrasing ideas in sources		1	1
Using appropriate academic style		13	13
Writing a bibliography		0	0

Name	Description	Files	References
Writing introductions of an essay		0	0
Writing the body of an essay		0	0
Writing the conclusion of an essay		0	0

Codebook - EMI Student Interviews: Year 4

Name	Description	Files	References
CMI vs EMI secondary schools		5	5
Language improvement and fewer challenges over time		25	25
Development of coping strategies		0	0
Increased confidence		5	5
Increased exposure		7	7
Increased exposure to academic style		2	2
Increased exposure to varieties of English accents		6	6
Increased fluency		0	0
Increased language practice		0	0
Increased listening practice		5	5
Increased reading practice		7	7
Increased speaking practice		9	9
Increased vocabulary knowledge		6	6

Name	Description	Files	References
Increased writing practice		9	9
Language gains		15	15
Language support from ELC		24	24
Language support from lecturers		0	0
Listening		24	24
Lack of exposure to Varieties of English		2	2
Speaking rate or delivery rate		1	1
Understanding classmates' accents		0	0
Understanding key vocabulary		2	2
Understanding lecturers' accents		23	23
Understanding lecturer's codeswitching		0	0
Understanding lecturers with lower English proficiency		2	2
Understanding main ideas of lectures		0	0
Productive skills		0	0
Reading		15	15

Name	Description	Files	References
Identifying key ideas of a text		2	2
Lack patience to read		0	0
Lack practice reading		1	1
Reading carefully to understand a text		1	1
Understanding academic texts		8	8
Understanding specific vocabulary		4	4
Understanding translated texts		4	4
Speaking		8	8
Answering questions		0	0
Anxiety and pressure		1	1
Communicating ideas confidently		0	0
Communicating ideas fluently		1	1
Conveying ideas in English to listeners with lower proficiency		2	2
Lack of confidence		0	0
Lack of fluency		0	0
Lack of opportunities & practice		1	1

Name	Description	Files	References
Presenting information or ideas		1	1
Speaking accurately		1	1
Unplanned real-time speaking		4	4
Synchronous skills		3	3
Vocabulary		10	10
Academic vocabulary		2	2
Technical / Discipline specific vocabulary		6	6
Formal vs informal vocabulary		0	0
Lack of exposure to authentic English		0	0
Lack of exposure to unfamiliar vocabulary		4	4
Limited vocabulary knowledge		0	0
Writing		19	19
Expressing ideas clearly and logically		2	2
Expressing ideas in correct English		2	2
Integrating sources in written work		2	2

Name	Description	Files	References
Lack of clear instructions from the Lecturer		0	0
Lack of formal writing		2	2
Lack practice writing		0	0
Limited vocabulary		1	1
Linking ideas from different sources		1	1
Linking sentences smoothly		1	1
Organising ideas in coherent paragraphs		4	4
Planning written assignments		2	2
Summarizing or paraphrasing ideas in sources		2	2
Using appropriate academic style		11	11

Codebook for Instructors & Lecturers

Name	Files	References
CMI vs EMI secondary schools	15	15
Language improvement and fewer challenges over time	40	40
Development of coping strategies	3	3
Increased confidence	8	8
Increased exposure	22	23
Increased exposure to academic style	6	7
Increased fluency	3	3
Increased language practice	1	1
Increased listening practice	3	3
Increased motivation	2	2
Increased reading practice	3	3
Increased speaking practice	7	7
Increased writing practice	10	11
Language gains	3	3
Language support early on	3	3
Listening	14	14
Following a discussion	3	3
Lack of exposure to spoken English	8	8
Listening to everyday conversations	1	1
Speaking rate or delivery rate	2	2

Name	Files	References
Taking brief clear notes	1	1
Understanding key vocabulary	3	3
Understanding lecturers' accents	4	4
Understanding main ideas of lectures	6	8
Local vs non-local	11	11
Productive skills	16	17
Reading	6	6
Lack of reading culture	2	2
Lack patience to read	3	3
Lack practice reading	1	1
Reading quickly to get overall meaning	1	1
Understanding academic texts	2	3
Speaking	32	32
Answering questions	4	4
Anxiety and pressure	1	1
Asking questions	2	2
Communicating ideas confidently	2	2
Communicating ideas fluently	3	3
Lack of confidence	9	9
Lack of fluency	4	4
Lack of opportunities & practice	14	15

Name	Files	References
Participating actively in discussions	2	2
Presenting information or ideas	3	3
Reluctance to speak	8	8
Shyness	6	6
Speaking clearly	4	4
Unplanned real-time speaking	1	1
Synchronous skills	9	9
Vocabulary	39	39
Academic vocabulary	6	6
Colloquialisms and idioms	4	4
Technical / Discipline specific vocabulary	20	20
Formal vs informal vocabulary	1	1
Lack of exposure to authentic English	1	1
Lack of exposure to unfamiliar vocabulary	3	3
Lack of incidental vocabulary learning	1	1
Lack of vocabulary development skills	4	4
Limited vocabulary knowledge	20	22
Overuse of online dictionaries & translation tools	12	12
Writing	31	31
Expressing ideas clearly and logically	8	8
Expressing ideas in correct English	4	4

Name	Files	References
Lack of exposure to written academic English	4	4
Lack practice writing	3	3
Organising ideas in coherent paragraphs	2	2
Planning written assignments	2	2
Reluctance to write	1	1
Using appropriate academic style	7	7