Intelligibility, Accentedness, and Attitudes in English as a Lingua Franca

By

Paul William Lochland
B.Sc., GradDipEdu., M.TESOL. M.Edu

Submitted in fulfilment of the requirements for the degree of

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I am the author of the thesis entitled:

Intelligibility, Accentedness, and Attitudes in English as a Lingua Franca

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Abstract

There are three times as many Non-Native Speakers of English (NNSs) in the world today than Native Speakers of English (NSs). The changing voice of English users has led some academics to challenge traditional models of English diaspora and revisit notions of intelligibility, mutual intelligibility, and negotiated meaning. It has also led to the emergence of a new paradigm called English as a Lingua Franca (ELF). There have been many debates about the nature of ELF as well as how it compares with other paradigms, such as English as an International Language (EIL) and World English (WE). The cause of misunderstandings in ELF is one research area of particular interest. While some studies have focused on the impact of speaker-related factors on communication breakdown, others have turned their attention to the perception of foreign speech and the influence of listener-related factors. Using a proposed model of foreign speech adaptation as its theoretical framework, this study investigated the impact of a shared first language and shared language typology on the intelligibility and accentedness of ELF. It also explores ELF users’ emotional attitudes towards convergent varieties of English. An online survey and semi-structured interviews were used to collect the data, which was analyzed using the constant comparative method. The study adopted the verbal-guise technique (VGT) to source speech samples of convergent Englishes, such as Chinese-English, French-English, Japanese-English, and German-English, and the listeners were sampled from the student cohort at La Trobe University, Melbourne, Australia. The study was limited by a data collection procedure and absence of data triangulation. A number of thesis contributions stem from this study. Firstly, the results showed that a shared first language and shared typology between NNSs do not have a positive impact on the intelligibility of English as an Additional Language (L2) speech. It was concluded that
typologically similar speakers, exposure, speech rate, and proficiency may influence the intelligibility of ELF. The results also showed that a shared first language and shared typology do not lead to weaker judgments of accentedness in ELF. The phonology of one’s Interlanguage, proficiency, familiarity, and the speaker’s identity will likely have an impact on judgments of accentedness. Furthermore, the present study found a strong correlation between intelligibility and accentedness in ELF, which is probably due to NNSs’ unique perception of L2 speech. In addition, it was inferred that systemic knowledge about the suprasegmental features of L2 speech and English, schematic knowledge about the speaker’s identity and motivations, and identity transformations underline emotional attitudes towards convergent Englishes in ELF. Finally, there tended to be a relationship between accentedness and emotional attitudes towards L2 speech. While this study has contributed to our understanding of foreign speech adaptation from a NNS’s perspective, there is still much to be learnt about L2 speech perception in ELF.
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<tr>
<td>ASEAN</td>
<td>Association of South East Asian Nations</td>
</tr>
<tr>
<td>EIL</td>
<td>English as an International Language</td>
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<td>EFL</td>
<td>English as a Foreign Language</td>
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<td>ELF</td>
<td>English as a Lingua Franca</td>
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<td>ELFA</td>
<td>English as an Academic Lingua Franca</td>
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<td>ELFE</td>
<td>English as a Lingua Franca in Europe</td>
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<tr>
<td>ELICOS</td>
<td>English Language Intensive Courses for Overseas Students</td>
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<td>ELT</td>
<td>English Language Teaching</td>
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<td>ESL</td>
<td>English as a Second Language</td>
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<tr>
<td>GA</td>
<td>General American</td>
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<tr>
<td>IELTS</td>
<td>International English Language Testing System</td>
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<td>L1</td>
<td>English as a First Language</td>
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<tr>
<td>L2</td>
<td>English as an Additional Language</td>
</tr>
<tr>
<td>LFC</td>
<td>Lingua Franca Core</td>
</tr>
<tr>
<td>LOTE</td>
<td>Languages Other than English</td>
</tr>
<tr>
<td>MGT</td>
<td>Matched-Guise Technique</td>
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<tr>
<td>NESB</td>
<td>Non-English Speaking Backgrounds</td>
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<td>NNS</td>
<td>Non-Native Speaker of English</td>
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<td>NS</td>
<td>Native Speaker of English</td>
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<tr>
<td>PCA</td>
<td>Principal Component Analysis</td>
</tr>
<tr>
<td>RMIT</td>
<td>Royal Melbourne Institute of Technology</td>
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<tr>
<td>RP</td>
<td>Received Pronunciation</td>
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<tr>
<td>SELF</td>
<td>Studying in English as a Lingua Franca</td>
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<td>Abbreviation</td>
<td>Full Form</td>
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<tr>
<td>SLA</td>
<td>Second Language Acquisition</td>
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<td>SPM</td>
<td>Syllable Per Minute</td>
</tr>
<tr>
<td>StAust</td>
<td>Standard Australian</td>
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<td>StNZ</td>
<td>Standard New Zealand</td>
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<td>StSA</td>
<td>Standard South African</td>
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<tr>
<td>VGT</td>
<td>Verbal-Guise Technique</td>
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<tr>
<td>VOICE</td>
<td>Vienna-Oxford International Corpus of English</td>
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<tr>
<td>WE</td>
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CHAPTER ONE

Introduction

1.1 Problem Statement

The pressure for students to be competitive in a globalized economy, where English has firmly established itself as primary language for communication, has brought about an unprecedented demand for tertiary qualifications from English-speaking universities. This demand has led a number of institutions in Europe, and other non-English speaking parts of the world, to offer English as the language of instruction (Mauranen, 2010). Moreover, hundreds of thousands of students each year travel to English-speaking countries, such as Australia, to study at university. Strevens (1992) noted that most of the English used in the world today "relates to NNS populations requiring English… for dealing with other NNS populations, without the presence or intervention of native speakers” (as cited in Kachru, 1992b, p. 41). However, the assumption that these dealings refer to conversations between NNSs in non-English speaking countries may not be applicable to all contexts. Due to a dramatic influx of international students into the English-speaking universities of Australia, for example, the linguistic background of the student population has diversified. This diversification has changed the nature of communication that take place inside and outside the classroom.

A significant proportion of students studying in most Australian tertiary institutions originate from non-English speaking backgrounds. For instance, 36% of the student body studying at Royal Melbourne Institute of Technology (RMIT) University in
2011 was international students from Non-English Speaking Backgrounds (NESB), such as China, Indonesia, and Vietnam (RMIT, 2011). These numbers suggest there may be a growing amount of academic discourse held in ELF. Traditionally, ELF has been defined as a language medium that is “usually in a simplified, adapted, or specialized form, used as a means of communication among groups of people who do not have a common language” (McArthur, 2003, p. 3). However, ELF is now used as the language medium across an array of domains, including those of Australian educational institutions. Therefore, it is more than likely that interlocutors with the same first language background use ELF in such domains in order to include other NNSs, or L2 users in the conversation. ELF may be defined as a language medium that is adaptive and flexible to the communicative needs of its L2 users. The important point to make regarding the definition of ELF, as well as the development of ELF corpora, is that NSs are not present in spoken ELF interactions. The reason for this position is discussed in section 2.1.1 ELF Corpora, Domains, Modes, and Regions

There has been a growing interest in the nature of ELF interactions. Furthermore, an interest in the nature of ELF led some to challenge traditional views about the role and forms of different English language varieties. In the early 1980s, Hullen (1982) and Smith (1984) argued for the acknowledgment of ELF perspectives in applied linguistic research (as cited in Smit, 2010, p. 48). Some later research into ELF interactions, conducted by Firth (1990, 1996) and Meierkord (1996), further questioned traditional Second Language Acquisition (SLA) perspectives orientated around NS, or L1 ideologies (as cited in Smit, 2010, p. 48). Additionally, it has been argued that, in ELF contexts, language norms are not ‘owned’ by NSs “but mutually negotiated by the involving efforts and adjustments of all parties” (Jenkins, 2009, p. 201). Though some scholars claim that
ELF varieties are emerging and should be recognized as legitimate World Englishes, most academics would agree that “it seems vital to pay more attention to the nature of ELF interactions, and ask whether and how they are different from both interactions between native speakers, and interactions between native speakers and non-native speakers” (Seidlhofer, 2004, p. 221). As a result, more research is needed into the different facets of ELF interactions, such as the causes of misunderstandings. More specifically, the factors that contribute to the misunderstandings that arise during ELF interactions in academic settings have not yet been identified.

At this point, it would be pertinent to review key definitions for the concepts most commonly used in discussions about misunderstandings and ELF. The main reason for this is that some of the terms cited hereafter have been used interchangeably in the literature, whilst others have had “some rather heavy-handed” reinterpretation (Nelson, 2008, p. 306). For example, Munro, Derwing, and Morton (2006) defined comprehensibility as a “listener’s estimation of difficulty in understanding an utterance” (p. 112). This interpretation is quite different from how it was originally coined by Smith (1992), who differentiated understanding into three levels: intelligibility, comprehensibility, and interpretability. Bamgbose’s (1998) explicated each of these levels when he stated that understanding speech is “a complex matter…. a complex of factors comprising recognizing an expression, knowing its meaning, and knowing what that meaning signifies in the sociocultural context” (as cited in Jenkins, 2000, p. 11). In light of the work by Kirkpatrick, Deterding, and Wong (2008), Munro and Derwing (1999), and Smith and Nelson (1985), intelligibility refers to a listener’s ability to accurately recognize and record individual words. This study focused on the intelligibility level of understanding in its investigation of communication breakdown in ELF.
Jenkins (2000) stated that pronunciation is the greatest barrier to successful communication in ELF interactions. It has been noted that ‘we might need a word or two before we even realize that [an individual is] not speaking the language we expected, or several sentences before we hit an unfamiliar lexical item, but pronunciation is immediately salient’ (Nelson, 2008, p. 299). There has been extensive research investigating the numerous factors that influence the strength of a foreign accent. Some of these factors include age of L2 learning, the amount of L2 exposure, gender, formal instruction, motivation, language learning aptitude, and language use (Piske, MacKay, & Flege, 2001). Derwing (2008), in her discussion of pronunciation instruction, mentioned the impact of social identity, choice of instructional approach and phonological distance between L1 (English as a First Language), and L2 as factors that also influence foreign accent acquisition. Gender would appear not to be a predictor (Flege & Fletcher, 1992; Olson & Samuels, 1973; Snow & Hoefnagel-HoKhle, 1977; Suter, 1976). Another factor relates to what has been referred to as an Optimal Period (OP) for accent free speech (Werker & Tees, 2005). However, according to Piske et al. (2001) “no study has as yet provided convincing evidence… that L2 speech will automatically be accent-free if it is learned before the age of about 6 years and that it will definitely be foreign-accented if learned after puberty” (p. 197). Irrespective of how a foreign accent is brought about, few would doubt the fact that foreign accented speech has a significant influence on the perception of L2 speech.

As the majority of research into the perception of L2 speech has been from a NS’s perspective, very little is known how NNSs perceive L2 speech. It has been argued that NNSs and NSs may perceive the phonological features of L2 prosody and segmental features differently (Lochland, 2011). Moreover, some scholars have stressed the need for
more research into whether NNSs find foreign-accented speech just as intelligible as native-produced speech (Major, 2007). Sewell (2010) also raised concerns about the lack of studies looking at the intelligibility of ELF across a range of contexts. Thus, there is still a great deal of unknowns about the impact of phonology on the intelligibility of spoken word in ELF contexts.

In addition to the speaker-related factor of pronunciation mentioned above, there are also listener-related factors that may influence the intelligibility of L2 speech. Two such factors are judgments of accentedness and the attitudes people have towards language variation. Firstly, accented speech has been shown to be an extremely salient feature of pronunciation (Derwing, 2008). One of first judgments people make in the perception of foreign speech is accentedness. However, this is a term shrouded in controversy. Despite the fact that the majority of English spoken in the world today is by NNSs, accentedness has predominately been judged by “how closely the pronunciation of an utterance approaches that of a native speaker” (Kennedy & Trofimovich, 2008, p. 461), or “the extent of the differences between native speaker and non-native speaker productions” (Munro & Derwing, 2006, p. 521). More recently, accentedness was described as “how different a pattern of speech sounds compared to the local variety” (Derwing & Munro, 2009, p. 478). However, these definitions may not encompass the meaning of accentedness as it is used across various contexts for two reasons. First, the latter definition becomes somewhat confusing in the context of ELF interactions because there is no ‘local variety’, such as that of an inner circle country (Kachru, 1992b). Instead, multiple linguistic varieties may be present in ELF interactions. Secondly, it has been shown that NS and NNS are known to accommodate the speech patterns, such as accent of their interlocutor (Jenkins, 2006c); therefore, accentedness cannot be
considered a static voice quality, and perhaps, not such a ‘long-term characteristic of one’s vocal output’, as it has been suggested (Derwing, 2008). Thus, accent edness refers to the degree to which phonological patterns are similar to a listener’s expectation of speech sounds at any given point in time. It should be noted that the word ‘expectation’ is used in its broad sense when referring to one’s anticipation of accent strength.

The second listener-related thought to influence the intelligibility of ELF is attitude. Though the three components of attitude have been labeled somewhat differently over the decades: cognitive, affective, and conative (Lambert & Lambert, 1964, as cited in Agheyisi & Fishman, 1970, p. 140), cognition, affect and readiness for action (Baker, 1992, p. 13), and knowledge, emotion and behavior (Ladegaard, 2000, p. 216); the features of each component have been defined with relative consistency. Ladegaard (2000) succinctly defined each component: knowledge refers to knowledge and experience with (1) language varieties (2) language use in regional and social perspective, and (3) own language use. The features of behavior entail variations in linguistic behavior depending on (1) interlocutor and auditor (2) context, and (3) topic. Lastly, the emotion component refers to opinions about (1) Speech Quality (2) speakers (3) own language use (p. 216). For the purposes of the present study, emotional attitude is the opinions people have towards four dimensions of language, which include Speech Quality, Status and Solidarity, Social Attractiveness and Personal Integrity, and Academic Competence.

Numerous studies have demonstrated a correlation between NSs’ sociocultural attitude towards foreign-accented speech and the intelligibility of such utterances. There has also been research, albeit mostly in the periphery of SLA research, acknowledging the value of NNSs’ judgments and attitudes towards their own L2 speech and those of
other NNS (Harding, 2008; Munro et al., 2006; Munro, Derwing, & Sato, 2006). There have been limited researches on NNSs’ attitudes towards L2 accents. As a result, there is a significant gap in our understandings of what these attitudes may be and how they may contribute to misunderstandings in ELF interactions.

1.2 Research Questions

The aim of this study was to answer four research questions. Firstly, does foreign-accented speech influence the intelligibility and accentedness L2 speech? Secondly, does the perception of foreign speech sounds have an impact on NNSs’ emotional attitudes towards a speaker in ELF? Thirdly, will sharing a first language or language typology with an interlocutor affect any of these three variables? Finally, is a relationship between intelligibility and accentedness and/or accentedness and emotional attitudes?

1.3 Scope

One of the most common domains in which ELF interactions take place is the educational setting. This is the result of two forces at work. Firstly, more and more educational institutions in non-English speaking countries are implementing policies requiring English as the medium of instruction (Mauranen, 2010). Secondly, a myriad of students and professionals are migrating to English-speaking countries for a wide range of academic and professional purposes. The present study investigated three factors: intelligibility, accentedness, and emotional attitudes towards L2 speech, which may contribute to misunderstandings that arise in ELF interactions of an academic setting. The
research was conducted in an English Language Intensive Course for Overseas Students (ELICOS) Centre at La Trobe University, Melbourne, Australia.

1.4 Overview of the Study

This study investigated three factors that influence misunderstandings in ELF, which include the intelligibility of L2 speech from the perspective of NNSs, their judgments of accentedness, and the emotional attitudes towards foreign accents. The overview of the study is as follows:

Chapter One: This chapter examines the spread of English and the nature of ELF.

Chapter Two: In this chapter, three causes of misunderstanding in ELF interactions, namely conversational structures, lexiogrammar, and pronunciation are discussed. This chapter also reviews the literature on accentedness judgments and people’s emotional attitudes towards language variation.

Chapter Three: This chapter presents the quantitative research designs and methods for measuring intelligibility, judgments of accentedness and language attitudes.

Chapter Four: This chapter describes a qualitative approach to the investigation of emotional attitudes towards language variation. Both chapters finish by discussing the limitations of the study.

Chapter Five: In this chapter, the quantitative result for the intelligibility, accentedness, and emotional attitudes data sets are presented.

Chapter Six: Written as a narrative, Chapter Six gives an interpretive account of ELF users’ emotional attitudes towards L2 speech.
Chapter Seven: This chapter discusses the intelligibility, accentedness, and emotional attitudes data sets and makes inferences about the results by comparing and contrasting them with the interpretative data.

Chapter Eight: In this chapter, the thesis concludes by restating the thesis statement, summarizing the main ideas of each chapter, and finishing with a discussion of future research directions and the practical implications of the results.
Trends in World Englishes

2.1 The Changing Voice of English Language Users

Trying to quantify the spread of English speakers across the globe is not without its challenges. Firstly, there is the ambiguous task of defining a ‘native’ and ‘non-native’ speaker, and secondly, there is controversy surrounding the method by which they should be counted. In 1985, Crystal argued that NNSs should not be determined by their connection with an English language medium, such as readership of English newspapers (as cited in Strevens, 1992). Instead, NNSs should be determined by their use of English across all the macro-skills of reading, speaking, listening, and writing. Using a similar criterion for classification, Bowen, in 1975, reported that there was an equal number of NS and NNS in the world (as cited in Strevens, 1980, p. 62). Over two decades later, Crystal (1997) estimated that there were approximately 1 billion users of English in expanding circle countries (as cited in Fiedler, 2010, p. 205). However, the number of NSs had increased only slightly in comparison (Fiedler, 2010; Gnuzman & Intemann, 2008, as cited in Smit, 2010, p. 46). Despite the discrepancies in quantifying the number of English speakers around the world, it may be assumed with a high degree of confidence that NSs are by far the minority of English users in the world today.

The spread of English has been described by Kachru (1992b). His model comprises three concentric circles, each representing a disparate sociolinguistic orientation of the English language (refer to Diagram 1). As English has spread around
the world, it has evolved in two ways. Firstly, English has diverged from colonial English forms to evolve into new varieties, or 'inner circle' Englishes. Alternatively, the English language has converged with the linguistic features of other languages, evolving into varieties of English referred to as outer circle and expanding circle Englishes. Kachru (1992b) has made a valuable contribution to the field of applied linguistics, but his model has been criticized because it does not emphasize the significance of the most dominant English language users, or NNSs. More specifically, some scholars have expressed concerns with the notion that inner circle Englishes are norm-providing, outer circle Englishes are norm developing, and expanding circle Englishes are norm-dependent (Ghim-Lian Chew, 2010; Pakir, 2009). Moreover, the symbolism represented by the concentric circles conveys a 'ripple out' metaphor whereby the norms of inner circle Englishes spread out from the central point of the inner circle varieties to create new varieties of outer circle Englishes as the NS norms are blended with linguistic and sociocultural features of local languages.

A growing body of literature concentrating on the use of English by expanding circle users. More specifically, it is the use of English as a lingua franca (ELF), or a language medium for interlocutors who do not share a first language, which has led many scholars to question contemporary theories about the English language. Moreover, these questions focus not so much on the diaspora of English as it applies to Kachru’s (1992b) concentric circles, but more so regarding the nature of English in the absence of NSs, even in what have traditionally been considered L1 dominated speech communities (p. 356). That is, ELF conversations are not only taking place in expanding circle countries, but also in a number of domains in inner circle countries, such as education. For instance, some educational settings in Australia have experienced a dramatic increase in the
number of students coming from NESB. Table 1 shows the proportion of students from NESB in the academic domains of five Australian universities.

Table 1

**Proportion of International Students from NESB at Five Australian Universities from 2010-2011**

<table>
<thead>
<tr>
<th>Institution</th>
<th>Percentage of students from NESB</th>
<th>Total number of student enrolments (Australian campuses only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deakin University</td>
<td>17%</td>
<td>39,606</td>
</tr>
<tr>
<td>Monash University</td>
<td>20%</td>
<td>63,338</td>
</tr>
<tr>
<td>Melbourne University</td>
<td>21%</td>
<td>49,000</td>
</tr>
<tr>
<td>La Trobe University</td>
<td>30%</td>
<td>32,762</td>
</tr>
<tr>
<td>RMIT University</td>
<td>36%</td>
<td>36,489</td>
</tr>
</tbody>
</table>

*Note. Sourced from Deakin University, 2011; La Trobe University, 2011; Marginson, 2011; RMIT, 2011.*

Table 1 shows the proportion of students from NESB at five leading universities in Melbourne, Australia. The data was collected by asking the students to self-evaluate their language background. Overall, the NESB student cohort makes up a significant proportion of the student population at these universities. It should be noted that these statistics represent student enrolments across all faculties, so it is quite possible that there will be a higher concentration of NESB students in degrees popular with international students, such as Accounting and Finance. By looking at the popularity of English
medium courses not only in countries, such as Australia, but also in countries like Germany and Slovenia, one may expect these concentrations to increase even further in the future.

The prevalence of students from NESB at five academic domains in Australia suggests that ELF interactions do not only exist in the academic domains of expanding circle countries, such as those studied by House (2009a) at the University of Hamburg. Therefore, Australian tertiary institutions may need to evaluate the efficacy of their English as a Second Language (ESL) programs, especially those preparing student for entry into the academic domains mentioned in Table 1. To conclude, it is advised that current descriptions of English do not adhere so rigidly to traditional models of the English language but, rather, consider closely the diversity of speech communities and linguistic backgrounds of the individuals that reside within them.

2.1.1 ELF Corpora, Domains, Modes and Regions

Further to the discussion in 2.1. The Changing Voice of English Language users, the Englishes of the world have evolved via two pathways: convergence and divergence. Traditionally, divergence processes have led to establishment of new inner circle varieties of English while convergent processes have lead to the outer circle varieties of English. Unfortunately, these processes do not adequately describe the nature of ELF. That is, the spread of English does not equate to the ‘distribution’ of NS norms. Rather, one needs to acknowledge the importance of ELF users as “agents of language change” (Brutt-Griffler, 1998, as cited in Seidlhofer, 2001, p. 138). As ELF is neither a new addition to inner circle Englishes (divergence), nor an amalgamation of NS norms with the linguistic
features of one particular language community (i.e. convergence in the traditional sense), the concept of concentric circles as Kachru (1992a) intended may not be applicable to the description of how ELF norm develop. Thus, it may be suggested that an ELF variety of English evolves from a process in which linguistic norms are negotiated via the convergence of multiple languages. The notion of negotiated norms in ELF is further discussed in 2.2.2 The Negotiation of ELF Norms.

An issue that has divided some ELF theorists is whether to incorporate NS norms in the negotiation of ELF norms as illustrated above. Succinctly put by Seidlhofer, Breiteneder, and Pitzl (2006), some ELF researchers “tend to approach the description of ELF data more through the lens of familiar [inner circle] forms” (p. 9). Contrasting ELF norms with inner circle norms has been referred to as an exonormative approach to the description of ELF features (ibid, 2006). Other ELF theorists believe ELF is a language in its own right, or *sui generis*; therefore, it is not appropriate to describe ELF features in relation to inner circle norms. Consequently, endonormative approaches to ELF description use external compilation criteria that “are determined by socially based definitions of the prominent genres in the discourse community” (Mauranen & Ranta, 2008, p. 199). This approach may be the most useful in describing ELF varieties given that “the Internet, mobile phones and other technology increasingly establish the potential for use of English [by NNSs] which is quite independent of the controls offered by traditional educational systems, publishing outlets and radio/television (Brumfit, 2002, p. 5).

Due to the theoretical assumptions that ELF is either endonormative or exonormative in nature, there are also differences in the methodological approaches to the description of ELF features. Namely, the exonormative approach focuses on the
quantitative analysis of forms, whereas the endonormative approach is centered on the interpretation of processes (Seidlhofer, Breiteneder, & Pitzl, 2006, p. 10). Despite their differences, both approaches aim to describe the linguistic features unique to ELF interactions. Table 2 outlines the four most extensive ELF corpora currently being generated, their approach to linguistic description, the domain and region in which the data is collected as well as the mode of communication under investigation.

Though there are theoretical and methodological differences in the way in which ELF features have been described, there is a common thread that runs through each of the corpora. More specifically, L2 speech has by far been the most popular mode of communication for analysis. Mauranen (2006) stated, “ELF studies have largely been concerned with the spoken mode. Speech undoubtedly lends itself more readily to observing change than writing, which in its published form is heavily monitored and tends to be conservative” (p. 146). The need to document emerging forms of English, such as ELF, was noted some time ago by Strevens (1980), who suggested:

With a few exceptions, only native-speaker forms of English have been described in a tolerably comprehensive way, and although much effort in sociolinguistics is currently being devoted to the description and explanation of diversity, it seems that the proliferation of forms of English is taking place faster than the descriptions of them… nevertheless, once a form of English is identified as having an existence it cries out to be described, at least in its essential or differential features. (p. 64)
Table 2

*ELF Corpora by Approach, Domain, Mode, and Region*

<table>
<thead>
<tr>
<th>Corpus</th>
<th>Approach</th>
<th>Domain</th>
<th>Mode</th>
<th>Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lingua Franca Core (LFC)</td>
<td>Exonormative</td>
<td>Academic &amp; Informal</td>
<td>Spoken</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Vienna-Oxford International Corpus of English (VOICE)</td>
<td>Endonormative</td>
<td>Professional, Informal &amp; Academic</td>
<td>Spoken</td>
<td>Europe</td>
</tr>
<tr>
<td>Studying in English as a Lingua Franca (SELF)</td>
<td>Endonormative</td>
<td>Academic</td>
<td>Spoken &amp; Written (reports, essays and term papers)</td>
<td>Europe</td>
</tr>
</tbody>
</table>

Note. Sourced from Breiteneder, Pitzl, Majewski, & Klimpfinger, 2006; Breiteneder, 2009; Mauranen, 2006; Mauranen, 2003; Mauranen & Metsä-Ketelä, 2006; Seidlhofer, 2004)

It is common knowledge that all languages evolve and diversify over time. However, the above quote does not emphasize the unprecedented rate at which English is diversifying, nor the disproportionate amount of research into native vs. non-native forms of English. This issue has also been raised by many ELF researchers, such as Barbara Seidlhofer (2007), who argues the existence of regional ELF varieties, such as the English as a Lingua Franca in Europe (ELFE), and stresses the need for its description and codifications to identify “the salient linguistic features… that characterize ELFE” (p. 141).
Another argument for research to focus on spoken ELF is connected to an endonormative approach to the description of ELF features. Mauranen (2006) stressed that:

The strong tendency of speakers to cooperate puts pressures on speakers to adapt to each other’s ways of speaking. Such negotiation of both meaning and form is largely lost in writing, particularly in published varieties, where a chain of gatekeepers will iron out a good deal of unconventional and non-standard forms. Norms of the standard language carry a lot of weight in academic writing. (p. 148)

It is assumed here that ‘gatekeepers’ refers to academics and journal editors who prescribe NS forms. This concern also was raised by Ammon (2000, 2001), who questioned “the legitimacy of [inner circle] norms, and the extent to which written English (in articles in learned journals, for example) should be subjected to correction to conform to native speaker conventions of use, thus allowing these journals to exert a gatekeeping function based not on academic expertise but purely on linguistic criteria whose relevance for international intelligibility has not actually been demonstrated” (as cited Seidlhofer, 2004, p. 223).
2.2 The Nature of ELF

2.2.1 English as a Lingua Franca, English as an International Language and World English

Broached in Chapter One was the debate surrounding the nature of ELF. While some theorists have questioned the claim that ELF is a variety of English, other scholars have argued that ELF is *sui generis* and, thus, should be awarded the same legitimacy as that given to inner and outer circle varieties of English. Moreover, Dewey (2007) noted that there was a growing interest in academic circles about the transformations that take place in ELF interactions to address the communicative needs of its users. A state-of-the-art paper by Jenkins, Cogo, and Dewey (2011) gives a detailed account of these transformations in the areas of phonology, lexicogrammar, and pragmatics. Thus, a number of linguistic transformations occur in ELF contexts. It is, therefore, important that these transformations be studied so that we may better understand the nature of ELF. The following section compares and contrasts ELF, EIL and WE, paying particular attention to the discussions of speech community, Interlanguage, NS ideologies, pluricentricity and research methodology.

The key to understanding the difference between EIL and ELF perspectives lies in one’s interpretation of a ‘speech community’. In the past, authors have used the term ‘speech community’ to discuss English language norms, learner motivation, and other aspects of SLA. However, underpinning this term has been the idea of a homogenous (predominantly NS) language community. However, the ELF paradigm represents a speech community that is linguistically heterogeneous. Thus, the idea that interactions are
held in a multilingual speech community has challenged mainstream SLA perspectives and the Modern Foreign Language teachings of EIL theory.

One such challenge pertains to the EIL perspective of the Interlanguage continuum. The critique of the Interlanguage theory proposed by EIL ideology centers around the view that English language learners progress along a continuum towards the acquisition of NS norms and proficiency, where words such as ‘transfer, interference, conformative, deficit, error and fossilization’ have been used to describe EIL learning (Jenkins, 2006a, p. 140). Such descriptions of language learners are not applicable to ELF contexts because neither interlocutor is a NS and so NS norms and proficiency become irrelevant. As the norms of NS are no longer the model in ELF contexts, a very different set of terms have been used to describe the features of ELF, some of which include ‘difference, contact, evolution, transformative and variant’ (Jenkins, 2006a, p. 140). English language varieties in expanding circle countries are emerging in their own right and exhibiting shared features which differ systematically from NS English norms, regardless of the ELF speaker’s L1” (Jenkins, 2006a, p. 142). Due to this shift in thinking, it has been argued that SLA research needs to focus less on learner inability or ‘deficiency’ and more on how a learner’s ability may differ from their interlocutor. For example, it may be more advantageous to consider how a learner’s L1 influences (as opposed to interferes with) intelligible communication. In doing so, the focus of SLA research is not on the ‘reduction of errors’, but how a learner’s language skills as well as individual qualities influence L2 production and reception. This view resonates with Jenkins’ (2006b) description of ELF theory as having a ‘difference perspective’ as opposed to a ‘deficient perspective’ (p. 140). It also challenges the EIL perspective that the ‘established’ NS norms, which have been encoded from the descriptions of L1
corpora, should be ‘distributed’ without change to expanding circle countries (Seidlhofer, 2001). The different perspective of ELF theory has led ELF researchers to focus more on the interactional features of ELF conversations rather than the traditional approach where the morphology and syntactic features of a language are described, as has been the case with inner and outer circle varieties of English.

The Interlanguage concept of ‘fossilization’, or a learner’s inability to move along the continuum towards the target language, is questionable for two reasons. Firstly, the idea of fossilization focuses on a target language by which all measurements of language proficiency are taken. Moreover, since a learner’s proximity is gauged in relation to the norms of inner circle countries, as is the case with English, then only NSs can be the true judges of intelligibility. Traditionally, concerns about an over reliance on NS evaluations and the imposition of NS ideology have focused on English speakers in outer circle countries. For example, Bamgbose, in 1998 raised concerns that only NSs have been used to evaluate the intelligibility of nativized varieties of English (as cited in Nelson, 2008, p. 300). However, this concern has more recently been applied to English language learning in expanding circle countries. For example, Jenkins (2005a, p. 200) stated, “In [English as a Foreign Language] EFL, the principal goal of the NNS’s pronunciation is that it should be intelligible to their NS interlocutor(s). On the other hand, ELF interactions typically occur between NNSs of English, and the principle goal of pronunciation for ELF is, in turn, to be intelligible to the NNSs”. Subsequently, research has begun to shift its theoretical perspective to place greater emphasis on the intelligibility of L2 speech from the perception of both NSs and NNSs, with the latter speech community being preferred.
The issue of differentiating the forms and functions of English between outer and expanding circle countries has been further complicated by the problem of describing the nature of ELF. Moreover, there has been difficulty in “distinguishing a nativized variety from a foreign language variety (e.g. Selinker, 1972, 1992, as cited in Jenkins, 2006a, p. 138). The distinction between the different forms of English has also troubled World Englishes (WE) theorists when differentiating between EFL and ELF. However, due to an increased acceptance of some “outer circle Englishes as varieties rather than interlanguages, the expanding circle has by default become the prime target of SLA’s standard native speaker (NS) ideology” (as cited in Jenkins, 2006a, p. 138). Unfortunately, as Seidlhofer (2004, p. 213) noted, SLA researchers maintain a “deficit view of ELF in which variation is perceived as deviation from inner circle norms and described in terms of errors or fossilization”. The use of the term ‘error’ to describe language use in the expanding circle resonates with the view that inner circle norms are the default norms for ELF settings. These purist views of EIL are in direct conflict with ELF ideology. Put eloquently by Beccaria (1988):

Language is the social and cultural property of the people, but it is not like the environment which should be protected because polluting effluents and garbage are illegally discharged in it. Language is not a monument which deteriorates in contact with air. It is not like the Ara Pacis Augustae to keep in a glass tower. It has to live in the streets, in academies and in narrow lanes, in books and in songs, in isolated valleys and busy metropoles. Its ‘Babelic’ spirit forcefully reflects the composite community it is the expression of. To talk of corruption is foolish. (as cited in Pulcini, 1997, p. 81)
The preceding section compared and contrasted the ideologies of EIL and ELF. This study will now consider the ideologies of ELF and WE. By comparing and contrasting the two paradigms, it is hoped the following section will demonstrate the pertinence of an ELF approach to the current study. Discussions that compare and contrast the ELF and WE paradigms are centered on the scope of research, notions of multiplicity and creativity, level of analysis, and intelligibility.

It has been argued that ELF and WE are similar in two ways. Firstly, both paradigms reject the monolithic, native-speaker ideology in support of diversity and appropriateness of English use in different contexts. Secondly, the paradigms are alike because they both emphasize the pluricentricity of English, encourage the description of emerging varieties of English, acknowledge that language adapts to environmental particulars, and highlight the discourse strategies of English-knowing bilinguals (Cogo, 2008; Pakir, 2009). However, claims about the similarities between ELF and WE have not been made without their challenges. For example, Berns (2008) argued that “the commonalities between ELF and WE are seldom more than superficial” In addition, Berns criticized ELF theory for “the tendency of ELF research to have [not only] a more restricted focus, but also because of its pursuit of a ‘common core’ of phonological features that are regarded as being important for mutual intelligibility” (as cited in Sewell, 2010, p. 257).

The two points raised by Berns (2008) require scrutiny. Firstly, ELF research is claimed to have a restricted focus. However, ELF issues have been investigated in the fields of linguistics, applied linguistics, psycholinguistics, and sociolinguistics. ELF interests have also featured in SLA literature, and influenced theories of English language teaching and learning and assessment. Secondly, proponents of ELF have acknowledged
that both linguistic factors, such as description and accommodation skills, and non-linguistic factors, such as attitudes, play an important role in ELF research (Jenkins, 2000).

The second criticism by Berns (2008) suggested there are inconsistencies with ELF perspectives. For example, the notions of multiplicity and creativity run “counter to the view that a common linguistic (formal) core of an international variety of English can be codified, standardized, and then taught” (Berns, 2008, p. 331). Thus, “there remains a certain tension between the ‘common core’ of features suggested by ELF researchers and the ‘multiplicity and creativity’ of local varieties perceived by the WE movement (Sewell, 2010, p. 41). It is argued that the description of phonological features found in the LFC (refer to 2.3.3.2.1.2.3 Long-Term Vocal Qualities) is not represent a monolithic and static view. Cogo (2008) stated, “ELF research is documenting [both] the ELF features стрategies that are common to all ELF users [such as the LFC, as well as] the local features стрategies that characterize distinct ELF varieties [such as those described by Seidlhofer (2007)]” (p. 58). She added further weight to this argument by stating, “Critics of ELF, including Saraceni, think that ELF stops at documenting the common ground without acknowledging the differences in the various lingua franca uses of English” (p. 58).

It is believed that the criticisms of ELF, which suggest it is monocentric in nature, are due to a resistance to accept ELF as a legitimate variety in its own right. If ELF is accepted as a legitimate variety of English, then ELF varieties may be valued as having distinct features as well as possessing features that are shared between the different varieties of ELF, just as the different varieties of inner circle Englishes possess similarities and differences. Therefore, the evolution of ELF may be described as a
dynamic and creative process where the adaptation and transformation of each variety is due to both exonormative (leading to commonalities between the varieties) and endonormative (leading to a diversity of forms and functions) processes. Perhaps this approach to understanding the nature of ELF will shed light on the multiplicity/pluricentricity vs. monocentricity debate.

The argument that ELF research has been narrow in focus may not relate to the field of inquiry, but rather the level of analysis. It would be pertinent at this point to draw the readers’ attention to, perhaps, neglected areas of ELF research. So far, studies have concentrated on the phonology of ELF more so than its morphosyntactic features, and the conversational structures of ELF in different domains (e.g. business and academic setting) and regions (e.g. Europe and Southeast Asia). Both approaches have viewed ELF at the community level. Lacking in ELF research is a consideration of individual characteristics. Few studies have investigated the impact of different L2 speech patterns, such as accentedness, on communication breakdown in ELF. Moreover, few studies have addressed social factors in ELF. Therefore, the relationship between judgments of accentedness and language attitudes warrants further investigation.

The narrow focus of ELF research may also relate to the different levels of understanding and an emphasis on pronunciation rather than perception. As pointed out by Sewell (2010), the early work by Jenkins into “phonological features may give the misleading impression that intelligibility derives from linguistic forms and is speaker-dependent” (p. 265). This may have led some theorists, such as Berns (2008), to assume that an ELF researcher’s “primary concern is not negotiation for interpretability (or comprehensibility)” but the influence of speaker-related factors on intelligibility (p. 328). As a result, most ELF researchers have focused on the negotiation of understanding at the
intelligibility (pronunciation) level. Very few scholars, such as Watterson (2008), have investigated the frequency of miscommunications in ELF conversations caused by intelligibility, comprehensibility, and interpretability. However, a significant amount of research since the mid nineties has focused on the pragmatic characteristics of ELF conversations (refer to section 2.3.1 Conversational Structures). More specifically, studies have analyzed the strategies ELF users employ in order to deal with miscommunication rather than focus on the language forms that cause communication breakdown.

The third contrast between ELF and WE is in interpretation of intelligibility. The focus of ELF research is on “international intelligibility, whether in ‘norm-abiding’ or ‘norm-developing’ contexts of lingua franca use” (Seidlhofer, Breiteneder, & Pitzl, 2006, p. 8). In contrast, Sewell (2010) stated that WE research has focused on the intelligibility of outer circle varieties to “identify different versions of local varieties, perhaps in terms of the cline (graded sequence of differences) of intelligibility posited by Kachru [and] help to increase the acceptance of such varieties, at both pedagogical and general societal levels” (p. 265). Though there has been extensive research into the intelligibility of outer circle varieties of English, mostly focusing on morphological and syntactic issues, there has been limited research into the intelligibility of ELF varieties of English. By investigating the intelligibility of L2 speech in ELF interaction, the current study hopes to add weight to the argument that ELF is a legitimate variety of English.

It is suggested that the most significant difference between ELF and WE is that “WE includes all users of English in the three circles”, while ELF research focuses predominately on expanding circle users (Pakir, 2009, p. 228). Moreover, the ELF paradigm “relates to a model of English that connects the different varieties of world
Englishes; thus, is considered by some a *sui generis*” (House, 1999, p. 74). The claim that ELF is *sui generis* has probably caused the greatest division between WE and ELF scholars. Cogo (2008) commented:

> ELF celebrates and supports diversity and appropriateness of English use in different contexts, therefore rejecting a monocentric model of lingua franca use and supporting endonormative realizations of lingua franca varieties. This last point is the most controversial within WE, as some scholars would not agree to Expanding Circle Englishes as legitimate varieties. (p. 58)

It is the argument that ELF varieties are endonormative, thus transforming and adapting as they evolve into unique varieties of English that has not only fuelled criticisms from WE proponents, but also created divisions amongst ELF theorists. The following section will discuss the descriptions of ELF from an endonormative vs. exonormative perspective.

To summaries, the ELF perspective is considered a pertinent approach to the investigation of miscommunication amongst international students in ELICOS for the following reasons. Firstly, current ELF perspectives adopt an endonormative view of new English varieties rather than comparing new varieties of English to inner circle norms of English language use. Secondly, WE theory has traditionally focused on the linguistic forms. However, ELF approaches are concerned more with the communicative processes involved in ELF use. Finally, ELF research focuses on the English language of expanding circle users, who make up the vast majority of the ELICOS student cohort. It is an endonormative approach to the investigation of interactions between linguistic (i.e. intelligibility and accentedness) and non-linguistic (i.e. attitude) features by expanding circle users that led this author to adopt an ELF perspective for the current study.
2.2.2 The Negotiation of ELF Norms

Discussions about the *sui generis* nature of ELF may have been hindered by some contemporary constructs of English Language diaspora. For example, scholars have questioned the idea inner circle Englishes are norm-providing, outer circle Englishes norm developing, and expanding circle Englishes norm-dependent (Ghim-Lian Chew, 2010; Pakir, 2009). Moreover, Cogo (2008) and Seidlhofer (2004) drew attention to the fallacy of NS ideology in their discussion of emergent varieties of English. Perhaps, it is the symbolism of the concentric circles, which depicts the linguistic norms of divergent Englishes 'rippling out' from a central point of origin to converge with other languages. This model does not acknowledge the existence of English in the absence of L1 norms, yet ELF neither has diverged from an inner circle variety, nor is it the convergence of an inner circle variety with another language. Thus, the concept of concentric circles may not facilitate discussions about ELF. According to Brutt-Griffler, (as cited in Dewey, 2007) and Hulmbauer, Bohringer, and Seidlhofer (2008) a new paradigm is needed in order to guide theoretical insight into the diversification and role of modern English. It is suggested that the multilingual condition of ELF interactions creates a liminal space where linguistic norms are shared and negotiated to meet the communicative needs of its interlocutors. Furthermore, the rheological nature of ELF norms should by no means be indicative of an illegitimate variety of English, as was the case with the convergent varieties of English. Refer to Figure 1 for a model depicting the negotiation of language norms in ELF.
Illustrated in Figure 1 is the dynamic interplay between first language and L2 norms. It is through this adaptive interaction, which may involve up to four different linguistic norms, collaborative understanding of meaning in prose ensues.

Discussions about the role of ELF have also brought into question a fundamental assumption of SLA theory, which is the notion that divergent varieties of English not only act as the sole model of language norms for L2 users, but their speakers act as the sole judicator of ‘correct’ English. This is not a new issue of concern. As far back as 1998, Bamgbose highlighted that only NSs had been used to evaluate the intelligibility of English (as cited in Nelson, 2008, p. 300). More recently, Jenkins (2005) argued, “In EFL, the principal goal of the NNS’s pronunciation is that it should be intelligible to their
NS interlocutor(s). On the other hand, [ELF] interactions typically occur between NNSs of English, and the principle goal of pronunciation… is, in turn, to be intelligible to the NNSs” (p. 200). Despite the prevalence of ELF as a medium for communication around the world, the majority of SLA research continues to source only NSs for evaluations of English pronunciation.

2.3 Misunderstandings in ELF

2.3.1 Conversation Structures

Up until this point, the study has discussed factors leading to the spread of English around the globe as well as the theoretical perspectives of ELF. Also discussed were the unique, endonormative approaches to the description of spoken ELF interaction as opposed to the more traditional approach of describing language forms at the lexicogrammar level. In addition, the dichotomy of ELF as a register for communication or a language for expression of cultural identity was addressed. The next section of this literature review will examine possible causes of misunderstandings in ELF.

The pioneering works of Meeuwis (1994), Firth (1996), Meierkord (1996), House (1999), and later Lesznyak (2004), were some of the earliest studies into the pragmatics of ELF (as cited in Seidlhofer, 2001, p. 142). Meeuwis (1994) and House (2002) suggested that communication breakdown in ELF interactions may be due to pragmatic factors. Supporting this argument, Mauranen (2010) also stated, “Despite the approximate rather than accurate forms in standard language terms, comprehensibility is not adversely affected. Where comprehension mostly seems to break down is over pragmatic matters
rather than lexicogrammatical accuracy” (p. 19). Moreover, Mauranen (2007, 2010) and Dewey (2007) found that ELF speakers use explicit communication strategies of topic negotiation, metadiscourse and self-rephrasing in order to achieve communicative success in academic domains. Contrary to Alptekin’s (2010, p. 111) claim that…”in the absence of native speakers and a native culture, [ELF] lacks idioms, puns, connotations, slang, humor, and culture specific pragmatic dimensions”, Seidlhofer (2009b) found that ELF speakers co-construct idiomatic expressions as they converge on shared meaning.

Despite the many studies on ELF pragmatics (Baumgarten & House, 2009; Cogo & Dewey, 2006; House, 2009a, 2009b; Mauranen, 2006, 2009; Pickering, 2009; Polzl & Seidlhofer, 2006; Seidlhofer, 2009b; Watterson, 2008), it has been suggested that pragmatics does not lead to a loss of intelligibility (Firth, 2009; Seidlhofer, 2004). Moreover, studies into intercultural pragmatics have focused on successful strategies used by interlocutors to anticipate miscommunication, avoid it, deal with miscommunication when it arises, and even address communication breakdown after the event. However, the fact remains that communication breakdown has occurred and perhaps avoiding or sidestepping the problems may not always be possible. Hence, the causes of communication breakdown, such as intelligibility, very much warrant further consideration.

**2.3.2. Lexicogrammar**

As pointed out by Cogo and Dewey (2006), pragmatics and lexicogrammar are fundamentally interconnected. That is, shifts in the conversational strategies employed by ELF users lead to changes in lexicogrammatical forms and vice versa. Some scholars,
such as Hulmbauer’s (2009), have claimed that grammatical deviation from Standard English is a major contributor to communication breakdown. However, studies by Jenkins (2000), Meierkord (2004, 2006), Seidlhofer (2009b), Bjorkman (2008), and Murańen (2010, p. 18) have indicated otherwise. ELF speakers have been shown to utilize a number of lexicogrammar features (see Jenkins, Cogo, & Dewey, 2011), which not only differ from the standards found in inner circle varieties of English, but these variant forms tend to facilitate effective communication between interlocutors rather than cause communication breakdown. It seems that the alternative forms of lexicogrammar used by L2 users may not be a major contributor to misunderstandings in ELF contexts.

### 2.3.3 Pronunciation

The intelligibility of English is a topic that has been widely discussed for decades, especially in discourse about emergent varieties. Adding to what is already a complex topic is the synonymic use of the terms mutual intelligibility and intelligibility. However, the origins of these words could not be any more different. In the past, the disparity between the meanings of mutual intelligibility and intelligibility may be attributed to anxiety about the ‘uncontrolled’ spread and diversification of English. One of the earliest uses of mutual intelligibility was in reference to the divergent forms of English, where it was defined as a difference between the dialects of inner circle Englishes (Agheyisi & Fishman, 1970, p. 143). Lehmann (as cited in Hammerstrom, 2008) also claimed, “mutually intelligible forms of speech are known as dialects, and [that] the term” language” is used for mutually unintelligible forms of speech” (p. 35). However, as
English began to spread around the world, academics began to shift their attention away from the comprehension of divergent Englishes, such as those spoken in the inner circle countries of Kachru’s (1992b) concentric circles, focusing their attention instead on the convergent or outer circle, varieties of English (p. 356). Coincidentally, this shift in academic inquiry was coupled with a change in the vernacular used to describe the divergent and convergent varieties of English. For instance, mutual intelligibility, which appeared prominently in the literature about the linguistic differences between divergent Englishes, was used to a lesser extent to discuss the comprehension of convergent varieties of English. Thus, as the English language has changed, so has the language used to describe it.

The terms ‘mutually intelligible’ and ‘negotiated meaning’ had traditionally been used to describe divergent varieties of English. Therefore, some linguists may have been reticent to use such terms when describing the convergent varieties of spoken English, especially those of the expanding circle countries. It seems that an alternative theoretical framework was needed to discuss the emergent Englishes. The seminal work of Smith (1982), which differentiated the understanding of spoken language into three levels: intelligibility, comprehensibility and interpretability, provided such a framework.

Comprehensibility refers to the proposition that listeners have about the locutionary force of utterances. Interpretability may be defined as the proposition that a listener has about the illocutionary force behind an utterance.

In a novel approach to the study understanding and accented speech, Matssura, Chiba and Fujieda (1999) expanded on the original definition of comprehensibility, coining the term perceived comprehensibility, which raised readers’ awareness of the perceptual nature of comprehension and the important role a listener plays in the
understanding of spoken word. *Perceived comprehensibility* may be defined as a subjective judgment about the locutionary force of utterances. If listeners have a perception of comprehensibility, it stands to reason they may also make judgments about the intelligibility and interpretability of speech. Therefore, *perceived intelligibility* is defined as a subjective judgment about one’s ability to recognize accurately individual words. In addition, *perceived interpretability* is the subjective judgment about the illocutionary force of an utterance. Therefore, discussions about the understanding of spoken word need to consider both the speaker and listener.

As mentioned above, some academic may have been reluctant to accept the view that NNSs play an active role in the negotiation of meaning. In response, other scholars raised concerns about the influence of ‘native speaker’ (NS) ideology in discourse about the diaspora of English. One such concern was that inner circle users of English were the sole judicators of intelligibility. It has been argued that all English language users, NSs and NNSs alike, may decide the intelligibility of English. For example, Smith and Nelson (2006) have been praised for stating that the intelligibility of spoken English is a two-way interaction, which involves both NSs and NNSs. In their study, both L1 and L2 speakers were asked to assess the intelligibility, comprehensibility, and interpretability of inner and expanding circle varieties of English. More recently, a study by Munro, Derwing, and Morton (2006) also asked both NNSs and NSs to rate the intelligibility of Cantonese, Japanese, Polish, and Spanish varieties of English. Though few studies have called upon expanding circle users to judge the intelligibility of L2 speech, those that have signify a shift in opinion about issues of ownership and open the door for innovative research into the understanding of spoken Englishes from everyone’s perspectives.
The final section of this chapter will briefly discuss the negotiation of intelligibility in ELF, followed by a detailed account of the factors influencing the intelligibility of L2 speech. For ease of exposition, the factors are separated into the areas of pronunciation and perception. The pronunciation-related factors include short-term and long-term vocal qualities. A model of foreign speech adaptation is used to frame discussions about the perception-related factors, such as judgments of accentedness, phonological discord, and perceived intelligibility. The influences of familiarity and exposure are also examined. Finally, the extent to which a Shared First Language or typologically similar first language may also enhance the intelligibility of L2 speech is addressed.

2.3.3.1 Negotiating Intelligibility in ELF

The term ‘negotiated meaning’ was first used in discourse about L1 development, but has been relabeled in studies investigating ELF interactions. Some of the better-known synonyms are co-constructed meaning (Cogo, 2010; Gumperz, 1992, Mauranen, 2009) and shared meaning (Smith & Nelson, 1985; Watterson, 2008). One of the first studies to investigate the negotiation of meaning in ELF was the pioneering work of Varonis and Gass (1985). They found that L2 speakers prefer to amend their own language use when coping with misunderstanding rather than correct the language forms of others, a strategy Firth (1996) later coined the ‘let it pass’ principle (p. 243). A paradigm shift away from monolithic based models of the English language has led a growing number of scholars (see Baumgarten & House, 2010; Pickering, 2009; Seidlhofer, 2009b) to argue that L2 users also actively negotiate norms in ELF contexts.
As a result, the literature has seen a flurry of cross-cultural studies drawing attention to
the pragmatics strategies employed by L2 users to anticipate misunderstandings, avoid
them, deal with them, and address them after the event. For example, Cogo and Dewey
(2006) and Watterson (2008) found that L2 users frequently use repetition as a strategy in
the negotiation of meaning when misunderstandings were caused at the intelligibility
level. In addition, Hynninen (2011) used the term ‘mediation’ to discuss “a form of
speaking… where a co-participant intervenes in the course of the interaction by
rephrasing another participant’s turn that was addressed to a third party” (p. 965).
Perhaps, repetition is a conversational strategy ELF users employ to cope with one’s own
intelligibility issues, while rephrasing is used to aid the intelligibility problems
experienced by one’s interlocutor. Thus, L2 speakers employ a diverse array of pragmatic
strategies to negotiate intelligibility in ELF.

It has been claimed that ELF users employ conversational strategies to “create
supportive and cooperative communication and display community membership in
discourse“ (Cogo, 2010, p. 309). This is in line with Seedhouse’s (2004) argument that
ELF users have a “structural bias towards co-operation” (p. 4). However, this position
may represent all aspects of negotiation, which can also be a power play of tendered
interests. It is possible that ELF users choose to accommodate a feature of their L2
interlocutor, such as their accent, or maintain their own linguistic identity. A study by
Pölzl (2003) supported this view, concluding that cultural identities are asserted,
accommodated, and negotiated in ELF. More recently, Seidlhofer (2009a) also suggested
that ELF users try to “strike a balance” between cooperative considerations, such as
accommodating the linguistic features of others, and maintaining an allegiance to one’s
own sociolinguistic identity (p. 210). Thus, the negotiation of meaning in ELF may be
Pressured by individual motivations as well as the need to achieve a shared understanding of each speaker’s purpose and intention.

Despite the pragmatic strategies used by ELF users to negotiate their way through misunderstandings, the fact remains that a non-understanding has occurred, and perhaps avoiding or sidestepping the problem may not always be the best solution. In fact, Watterson (2008) noted that misunderstandings sometimes lead ELF users to abandon the topic of conversation all together, a situation he described as “hardly an ideal option in many real-world situations” (p. 400). It has been suggested that pragmatic factors may not contribute significantly to misunderstandings in ELF conversations (Firth, 2009; Seidlhofer, 2004). Thus, there may be other factors causing communication difficulties for ELF users.

Pronunciation plays a pivotal role in the understanding of L2 speech. Unfortunately, the majority of research to date has focused solely on the perception of foreign-accented speech from a L1 listeners’ perspective. There is a significant gap in our understanding of how foreign speech is perceived by L2 users, a concern shared by Munro and Derwing (2010). Moreover, the impact of L2 speech may be more pronounced at the intelligibility level of understanding. A study by Field (2005) showed that L2 listeners “place greater reliance on interpretations at the word level” (p. 418). Furthermore, Watterson’s (2008) analysis of lingua franca conversations also found that L2 listeners experience “non-understanding at the level of individual lexical items”, and that 47% of the misunderstandings were due to intelligibility issues, compared with 23% and 30% for comprehensibility and interpretability, respectively (p. 400). Not only is L2 phonology causing intelligibility issues in ELF, but it has also been suggest that certain pronunciation features of L2 speech may affect L1 listeners and L2 listeners differently
(Kashiwagi & Snyder, 2010). Hence, the intelligibility of L2 speech is where this paper now turns.

2.3.3.2 The Intelligibility of L2 Speech

2.3.3.2.1 Short-Term Speech Qualities

It has been asserted that four short-term vocal qualities may influence the intelligibility of L2 speech. Firstly, Firth (1992) found speech rate to have an impact on intelligibility of speech for L1 listeners. Similarly, Kashiwagi and Snyder (2010) found that variations in L2 speech rates were responsible for the intelligibility problems experienced by L2 listeners. Secondly, Cooke and Lecumberri, (2011) suggested that Lombard speech benefits the intelligibility of L2 speech. Lombard speech may be defined as a speech adjustment to background noise. Moreover, Smiljanic and Bradlow (2011) investigated the intelligibility of clear speech, or “a speech style that talkers resort to when they are aware that the listener may have hearing problems or are not native speakers of the target language” (p. 4020). They found that both L2 and L1 listeners find L2 clear speech to be more intelligible than L2 Lombard speech. The use of clear speech by L2 users may have been what Pickering (2009) noted when describing the pitch movements in key and tone used by ELF users to negotiate meaning. Retroflexion and creaky voice are two further factors of speech quality that have been shown to influence the intelligibility for L2 speech for L1 listeners (Edwards & Zampini, 2008, p. 351). Finally, synthesized reproductions of L2 speech have been shown to impact intelligibility. A study by Jones, Berry and Stevens (2007) investigated the influence of different
synthesized L2 speech rates on its intelligibility. They concluded that both L1 and L2
listeners were equally impacted by variations in synthesized speech rates. Thus, there are
a number of short-term vocal outputs that influence the intelligibility of L2 speech.

2.3.3.2.1.2.3 Long-Term Speech Qualities

For some time, studies have looked at the interaction between long-term linguistic
qualities of L2 speech and its intelligibility. As far back as 1969, Bansal (as cited in
Nelson, 2008, p. 301) noted that prosodic features are important factors that contribute to
the intelligibility of L2 speech for L1 listeners. Since then, numerous studies (see
Anderson-Hsieh, Johnson, & Koehler, 1992; Derwing, 2008; Johansson, 1978; Munro &
Derwing, 2001) have concurred that prosody is important to the intelligibility of L2
speech for L1 listeners. In addition, suprasegmental features, such as pausing, have also
been found to cause intelligibility issues for L1 listeners (Anderson-Hsieh & Koehler,
1988; Tajima, Port, & Dalby, 1997). Finally, Field (2005) compared the effect of L2
prosodic features on L2 and L2 listeners. He found no significant difference between L2
listeners and L1 listeners in the intelligibility of Standard British English words with non-
standard syllable stress. Therefore, prosodic features have been found to affect the
intelligibility of L2 speech.

There is an increasing body of literature suggesting that variations in the
segmental features of L2 speech may also affect its intelligibility. For example, a study
by Koster and Koet (1993) demonstrated that segmental features are detrimental to the
intelligibility of L2 speech for L1 listeners. More recently, Derwing (2008) also found
that the segmental features of L2 speech inhibit intelligibility for L1 listeners. Thus, the
segmental features of foreign accents have been found to influence the intelligibility of L2 speech for L1 listeners.

Regarding the intelligibility of L2 segmental features for L2 listeners, Jenkins (2000) stated that the segmental features of L2 speech contribute significantly to intelligibility issues in ELF interactions. The pioneering work of Jenkins into the phonological causes of misunderstandings in ELF has been cited extensively, with the features of her Lingua Franca Core (LFC) being validated by subsequent research findings. For example, Deterding and Kirkpatrick (2006) found the segmental features causing miscommunication in the ELF contexts of South East Asia to be the same as the UK based LFC. More recently, Kashiwagi and Snyder (2010) showed that segmental ‘errors’ significantly influenced the intelligibility of L2 speech for L2 listeners. Therefore, L2 listeners may experience intelligibility issues due to the segmental features of foreign accented speech. In summary, short term and long term pronunciation features have been found to influence the intelligibility of L2 speech for both L2 listeners and L1 listeners. However, the extent to which the pronunciation features of L2 influence misunderstanding is only one aspect of the intelligibility issue. The intelligibility of L2 speech is also dependent on the perception of foreign speech sounds.

2.3.4 Perception

So far, this study has discussed the intelligibility of L2 speech from a production viewpoint. The following section considers the intelligibility of L2 speech from a listener’s perspective. In order to discuss the different knowledge bases, cognitive functions and judgments involved in the perception of foreign speech, a model of foreign
speech adaptation is proposed. The model describes a 2-tiered process of phonemic assimilation and integration. In addition, the model demonstrates the role judgments and knowledge bases play in the perception of foreign speech sounds. The section concludes with a discussion of four factors: familiarity, exposure, Shared First Language, and typologically similar first language, which are thought to influence one’s adaptation to foreign speech.

2.3.4.1 Foreign Speech Adaptation Model

Scholars have wondered how ELF users navigate towards mutual understanding when speakers bring to the discussion such a diverse array of linguistic experiences. Firth (1996) tackled this issue from a methodological perspective, suggesting innovative conversational analysis methods in order to study the negotiation of meaning in ELF. Despite acknowledging the theoretical and methodological shortcomings of contemporary perspectives almost 30 years ago, only recently has research started to investigate the nature of ELF interactions. Thus, there is still a great deal we do not know about the perception of L2 speech from the perspective of L2 listeners. It is hoped that the following discussion will further our understanding of foreign speech perception and shed light on some of the issues relating to the perception of L2 speech.

According to the social cognitivist Widdowson (1985), understanding language involves an approximation between two internalized points of reference. One point of reference is an individual’s linguistic knowledge about the symbolic function of words, which he called systemic knowledge (ibid, p. 18). In the case of speech perception, this symbolism represents the phonology of words and how they are strung together to
produce utterances. The other point of reference is schematic knowledge, which is an assumption of how language ought to be used given the pragmatic conditions at hand. It is argued that, in the process of understanding spoken text, the schematic knowledge acts as a tributary to the systemic knowledge base when a misunderstanding arises. Foster also argued that schematic knowledge plays a compensatory role to systemic knowledge (cited in Field, 2004, p. 368). In regard to the intelligibility of L2 speech, it is suggested that more pressure is placed on the systemic knowledge of ELF users than their ESL or EFL counterparts due to the diversity of the Englishes being used. Furthermore, there may also be greater pressure on one’s schematic knowledge in ELF interactions because interlocutors bring with them a myriad of assumptions about English language norms as well as the experiences of their first language. Therefore, there may be unique demands placed on the language facility of ELF users.

The systemic and schematic knowledge systems play a direct role in the understanding of foreign speech. The user also utilizes two cognitive functions in order to process foreign speech. In the first stage, a listener deals with misunderstanding by trying to align unfamiliar speech sounds with pre-existing phonemic inventory, which has been referred to as phonemic assimilation (Leikin, Ibrahim, & Eviatar, 2009, p. 447). A limited number of studies have attempted to measure phonemic assimilation. Measuring the reaction time needed to identify a foreign accented word has been the most popular technique. For example, Clarke and Garrett (2004) used word-image matching to measure participants’ reaction times to L1 and L2 accents. In another study, Floccia, Butler, Goslin, and Ellis (2009) also used reaction times to measure phonemic assimilation, finding that foreign accented speech produced a delay in reaction time when L1 listeners were asked to identify a known word vs. a pseudo-word at the end of a sentence. This
delay in reaction time, however, did not occur in subsequent trials, nor were the delayed reaction times greater for non-native accents than for native accents. Thus, phonemic assimilation is the first stage of foreign speech perception.

It is also argued that some of the aforementioned conversational strategies used to cope with misunderstandings at the intelligibility level may in fact be phonemic assimilation at work. Evidence of this may be found in the pioneering work of Firth (1996), which showed that ELF users accommodate the speech of others by incorporating an interlocutor’s speech patterns into their own vocal outputs. In addition, Watterson (2008) found repetition to be the most frequent repair strategy used for intelligibility issues in ELF contexts. Repetition is an example of convergent accommodation strategies, which enables a speaker to “change their speech to converge more closely to that of the interlocutor, in order to be more intelligible” (Cogo & Dewey, 2006, p. 70). It is possible that repetition not only aids the intelligibility of L2 speech for the listener, but may also function as a kinaesthetic exercise on the part of the speaker to assimilate phonemically foreign speech sounds. Hence, it is likely, there is still much to learn about the cognitive processes involved in foreign speech perception if one adopts an interdisciplinary approach to SLA.

If phonemic assimilation is successful, then one’s phonemic categories are reconfigured to accommodate the new speech sounds, such as the phonemes of a particular L2 variety. This stage is called phonemic integration. It is believed that that latter stage enhances the intelligibility of L2 speech. Floccia et al. (2009), who drew on the work of Norris, McQueen, and Cutler (2003), described this process as follows:

An unfamiliar accent would cause initial disruption due to inaccurate pre-lexical processing. When the listener eventually establishes the identity of the words
(through guessing for instance), the lexicon can begin to instruct the pre-lexical processing levels to interpret mismatched phonemes or accent patterns to fit the unfamiliar accent. Over time, information available from the lexical level of analysis could lead listeners to retune their pre-lexical categories, which in turn leads to enhanced lexical recognition. (p. 380)

The phonemic integration of foreign speech sounds does not only apply to L2 speech. In fact, it has been shown that listeners are able to integrate a variety of speech patterns. A study by Bradlow and Bent (2008) demonstrated that listeners can become attuned to speech produced by talkers with hearing impairments, computer synthesized speech, time-compressed speech, and noise noise-vocoded speech (p. 708). Further evidence of phonemic integration may be found in the area of speech accommodation theory. For example, Jenkins (2007) stated that NNSs employ a range of accommodation strategies, such as adopting the accent of others, while participating in ELF conversations. It may be argued that the accommodation of foreign speech sounds may be evidence that an individual has integrated the foreign speech sounds of others into their phonetic inventory. However, that is not to say that a person may integrate the speech patterns of others yet exhibit no adjustment to their vocal outputs.

In the foreign speech adaptation model, foreign speech sounds are phonemically assimilated, integrated, and at times, misunderstood. That is, a person is not able to assimilate the foreign speech sounds with their systematic knowledge. Given below is a discussion of the cognitive processes that manage misunderstandings caused by unintelligible L2 speech. When a listener is unable to identify the word using their systemic knowledge, then input is needed from schematic knowledge. In this phase of
foreign speech perception, the schematic system plays a tributary role in order to facilitate the integration of unfamiliar speech sounds into one’s phonemic inventory.

In the model of foreign speech adaptation, there is an interaction of two knowledge bases with two cognitive processes. The model also suggests that judgments mediate this interaction. The idea that judgments are involved in the perception of foreign speech is nothing new. Field (2005) suggested that judgments play a role in the intelligibility of L2 speech. However, yet to be described are the characteristics of each judgment and its role in the perception of foreign speech. This thesis proposes that there are at least three distinct judgments that regulate the flow of information from each of the knowledge bases at specific stages during the perception of foreign speech sounds. Figure 2 illustrates the system of cognitive functions involved in the perception of foreign speech sounds. This model of foreign speech adaptation is an eclectic blend of constructs sourced from a number of fields, including cognitive psychology, psycholinguistics, sociolinguistics, and applied linguistics.
Figure 2. A model of Foreign Speech Adaptation.
Figure 2 shows that judgments regulate the flow of information from the systemic and schematic knowledge bases. As illustrated above, it is posited that there are at least three types of judgments made about foreign speech sounds, which are accentedness, phonological discord and perceived intelligibility. Hence, the foreign speech adaptation model entails a complex process where a number of different judgments may influence the extent to which systemic and schematic knowledge are used to interpret foreign speech sounds.

2.3.4.1.1 Judgments about Foreign Speech

2.3.4.1.1.1 Accentedness

The first judgment involved in the perception of foreign speech is *accentedness*. One of first studies to investigate judgments of accentedness was conducted by Brennen, Ryan, and Dawson (1975), who asked 72 students studying at the University of Notre Dame, Illinois, to rate the degree of accent strength of eight Spanish-English accented speakers relative to each other (p. 29). Two years later, Ryan, Carranza, and Moffie (1977) asked NSs to evaluate the accentedness of Spanish-accented English using a 7-point rating scale, an approach that would become the most popular method for measuring judgments of accentedness. Over the years, numerous studies have shown that foreign-accented speech influence ratings of accentedness (Munro & Derwing, 1995, 2001; Riney & Flege, 1998; Riney, Takada, & Ota, 2000).

A number of studies have investigated a possible correlation between accentedness and the intelligibility of L2 speech. For example, Munro and Derwing (2010) have suggested quasi-independence between accentedness and intelligibility. That
is, a speaker can have a very strong accent yet be completely intelligibility. On the other hand, segmental features that differ from a “NS version” of pronunciations have been found to influence judgments of accentedness (Kashiwagi & Snyder, 2010, p. 4). It has also been found that suprasegmental features, such as speech rate and pausing, correlate with rating of accentedness (Kennedy & Trofimovich, 2008; Munro & Derwing, 2001).

Moreover, there have also been studies investigating the relationship between judgments of accentedness and comprehension. Buck (2001) warned that in a listening test, “accent is a very important variable… [that] can cause problems and may disrupt the whole listening comprehension process” (p. 35). Research by Derwing, Rossiter, and Munro (2002) indicated that a lack of familiarity with foreign accents might cause NSs to be “apprehensive about their own abilities [so] even listeners who are not biased against L2 speech might be dissuaded from trying hard to understand it” (p. 129). A study by Gluszek and Dovidio (2010) found a correlation between judgments of accentedness and perceived intelligibility. Hence, specific aspects of L2 phonology have been shown to influence L1 listeners’ judgments of accentedness.

Only a handful of studies have investigated judgments of accentedness from the perspective of L2 listeners. For instance, Munro, Derwing, and Morton (2006) found that L1 and L2 listeners did not differ significantly in their ratings of L2 accentedness.

Another study found that both segmental features of L2 speech, such as vowel and consonant ‘errors’, as well as the prosodic features of speech rate, influence the accentedness ratings of L2 listeners (Kashiwagi & Snyder, 2010). In sum, it appears that some features of L2 speech influence the accentedness judgments of L2 and L1 listeners alike.
Though accentedness has been studied extensively, questions still need to be asked about the theoretical underpinnings of its description and investigation. Regarding its description, Kashiwagi and Snyder (2010) defined accentedness as “the extent to which a speaker’s pronunciation is perceived to differ from a NS version” (p. 4). Moreover, it has been claimed that accentedness is a “perception of difference from local variety” (Munro and Derwing, 2010, p. 366). Notwithstanding the possible inherent ideological bias evident in the first definition, the latter definition has a shortcoming associated with the words ‘perception’, ‘local’ and ‘variety’. Firstly, it may be argued that accentedness is a judgment based not only on the perception of foreign speech sounds, but also on an expectation that foreign speech will be encountered. Secondly, the idea of a ‘local’ variety of English becomes quite localized indeed in ELF interactions because there is no uniform model of English language use, so the local variety in ELF is in fact all the L2 varieties of English brought to the conversation by each speaker. Finally, the notion of ‘variety’, as it has already been suggested, fails to reflect the pluricentricity of the language medium used in ELF, for example. Therefore, accentedness is defined as a judgment about the degree of similarity between a listener’s expectation of speech sounds and their experience with different varieties of a language.

It seems that NS ideologies and Selinker’s (1972) Interlanguage continuum theory have also influenced the research methodology used to investigate accentedness. For example, Harriott and Cichocki (1993) asked listeners to rate accentedness on a scale from “very French-sounding” to “very English-sounding” (p. 98). In addition, Kennedy and Trofimovich (2008) measured accentedness using a rating scale from “1 = no non-native accent to 9 = strong non-native accent” (p. 470). Finally, participants have been asked to rate accented speech from “speak with an American accent” to “speak with a
foreign accent” (Kang, 2010, p. 307). It is probable that these scales reflect a common assumption in SLA theory that L2 users move along a proficiency continuum away from the ‘defective’ features of L2 speech and more towards NS models of English. However, Major (2007) drew readers’ attention to a pitfall in this ideology by stating, “Studies have shown that not all NSs receive NS ratings and that some NNSs achieve NS ratings by native listeners” (p. 539). Moreover, a study by Kelch and Santana-Williamson (as cited in Moussu & Llurda, 2008, p. 321) found that over half of their participants were unable to identify correctly the NS/NNS background of a speaker. If people cannot distinguish between the pronunciations of an L1 and L2 speaker, then it may be invalid for methodological approaches to weigh judgments of accentedness solely against NS varieties of English. Due to a possible ideological shift away from the imposition of NS ideologies in SLA theory, researchers began to label their scales somewhat differently. For example, Flege, Birdsong, Bialystok, Mack, Sung, and Tsukada, (2006), Major (2007) and Piske, MacKay, and Flege (2001) all asked their participants to rate accentedness from very strong foreign accent to no foreign accent. Probably the most influential researchers in the area of accentedness, Munro and Derwing (2001) used an accentedness scale ranging from “no accent” to “very strong accent” (p. 458). Even though the wording of these scales differs ever so slightly from those mentioned above, it highlights a significant shift in how researchers view the study of L2 speech. Thus, there is a growing body of literature challenging the NS-NNS dichotomy in academic discourse.

It is possible that NS ideology and the fallacy of NS perspectives in research methodology have also had a negative impact on some aspects of SLA theory. The overreliance on NS perceptions of L2 speech may have left a gaping hole in the literature,
especially if NSs and NNs differ fundamentally in their perception of foreign accented speech. It is argued that NSs and NNSs differ in their perception of accented speech in two ways. Firstly, L2 listeners may well expect their interlocutor’s variety of English to vary from their own, so they may always have an expectation of hearing foreign speech sounds. This expectation may be quite different for that of a L1 listener, who is contrasting L2 speech sounds with their first language, not with a number of different Englishes. This difference in the expectation of foreign speech sounds, which is the essence of accentedness judgments, will have a direct impact on how foreign speech sounds are perceived. Thus, the accentedness of L2 speech may be more pronounced for L1 listeners.

It has been argued that accentedness is a salient feature of pronunciation (Derwing, 2008). Moreover, a study by Itti, Rees, and Tsotsos (2005) found the saliencies of environmental stimuli are processed more readily by systemic processes rather than schematic ones. Therefore, it may stand to reason that L1 listeners process the salience of accented speech using their systemic knowledge. More specifically, L1 listeners may rely significantly on a contrast between unfamiliar speech sounds and their systematic knowledge of their mother tongue (English) in order to make sense of foreign speech patterns. On the other hand, ELF users may have a higher expectation of hearing foreign speech sounds, as this is the norm; thus, unfamiliar sounds may not be the most salient feature of L2 speech. While this may reduce the role played by judgments of accentedness, it may lead L2 users to rely more heavily on another type of judgment called phonological discord. Phonological discord may be defined as a judgment about the degree of disruption unfamiliar speech sounds cause the process of phonological assimilation. This judgment not only evaluates the pressure placed on the process of
phonological assimilation, which is likely to be greater in ELF contexts given the diversity of linguistic forms present, but also regulates the amount of information flowing from the schematic knowledge base.

2.3.4.1.1.2 Phonological Discord

In Catford’s (1950) seminal paper on intelligibility, he proposed that listeners have a “threshold of intelligibility” (p. 14). Nelson (2008) described the threshold as:

The degree of exposure to another language or variety of a language [makes] a user familiar with it. More familiarity lowers one’s intelligibility threshold, i.e. makes the speech in question more accessible, reduces resistance, and thus allows or evinces greater intelligibility. (p. 299)

While the term ‘accessibility’ resonates with the idea of perceptual flexibility proposed by Bradlow and Bent (2008), the idea of ‘reducing resistance’ alluded to the judgment of phonological discord. Accentedness is quite different to phonological discord. Accentedness involves a judgment about the degree of similarity between one’s expectation of and experience with foreign speech sounds while phonological discord is a judgment about the cognitive effort needed to phonological assimilation these sounds. Owens (1985) carried out one of the earliest studies into judgments of phonological discord, albeit referring to such judgments as ‘accentedness’. Other names given to the concept of phonological discord include: irritation (Fayer & Krasinski, 1987), comprehensibility, (Munro & Derwing, 2001), and comfortableness (Zhang & Hu, 2008). Hence, phonological discord is another judgment that may influence the intelligibility of foreign speech sounds.
The most popular method used to investigate judgments of phonological discord has been rating scales. The extensive works of Munro and Derwing (2010) have demonstrated a strong correlation between judgments of phonological discord (or comprehensibility as they called it) and the intelligibility of L2 speech. Recently, a study by Kang (2010) looked more specifically at the influence of suprasegmental features on judgments of phonological discord. He found speech rate to have the greatest influence on the judgments of L1 listeners. To summarize, accentedness, phonological discord, and perceived intelligibility are judgments that act as filters to the perception and subsequent intelligibility of L2 speech.

Applied linguists and psycholinguists have also endeavored to measure objectively the phenomenon whereby foreign accents cause a disruption in the cognitive processing of speech. This led researchers to measure disruption in units of time rather than subjective judgments of listeners. For example, Clarke and Garrett (2004) used word-image matching to measure participants’ reaction times to NS and NNS accents. Moreover, Floccia et al. (2009), following Munro and Derwing’s (2006) measurement of comprehensibility (or judgment of disruption as it is refer to in this report), found that foreign accented speech produced a delay in reaction time when NSs were asked to identify a known word vs. a pseudo-words at the end of a sentence. This delayed reaction time, however, did not habituate in subsequent trials, nor were the delayed reaction times greater for non-native accents than for native accents. More recently, Kang (2010) also investigated the relationships between NSs’ judgments of disruption and aspects of L2 speech, such as speech rate and suprasegmental features.
2.3.4.1.3 Perceived Intelligibility

The final judgment involved on the perception of L2 speech is perceived intelligibility. While some scholars have investigated judgments of understanding at the levels of perceived comprehensibility (Munro & Derwing, 1995) and perceived interpretability (see Zhang & Hu, 2008), others have studied judgments of perceived intelligibility. For instance, the sociolinguist Wolff (as cited in Jenkins, 2007, p. 67) was one of the first to highlight the subjective quality of intelligibility judgments. Later, Owens (1985) found that the three prosodic features of word stress, juncture, and sentence rhythm/intonation influence the perceived intelligibility of ELF users more so than accentedness, with juncture correlating the most with perceived intelligibility. Finally, Fayer and Krasinski (1987) found that “judgments of intelligibility of nonnative speech seem to be made rather quickly and [L1 and Spanish] listeners rate [Spanish] speakers similarly for intelligibility” (p. 323). Thus, these studies emphasize the subjective nature of speech perception and the active role listeners play in the intelligibility of L2 speech.

2.3.4.2 Factors Influencing Foreign Speech Adaptation

2.3.4.2.1 Familiarity and Exposure

There are two factors thought to influence a person’s adaptation to foreign speech, and thus the intelligibility of L2 speech. The first is familiarity, which may be defined as the active pursuit of knowledge about accented speech, such as formal training in foreign accent appreciation. A study by Munro, Derwing, and Sato (2006) found that formal
training had a positive impact on the intelligibility of L2 speech for linguistically unsophisticated L1 listeners. However, other research has suggested that familiarity training alone may not have the greatest impact on the intelligibility of foreign accented speech. It has been suggested that exposure, which is a passive experience with foreign speech, may also influence the intelligibility of L2 speech. For example, a study by Sabin and Wright concluded that a combination of both familiarity training and passive exposure enhanced a participant’s ability to discriminate between foreign sounds more so than familiarity training alone (as cited in Bradlow & Bent, 2008, p. 727). Hence, it appears that familiarity is a factor found to influence the intelligibility of L2 speech for L1 listeners at least.

Some people have claimed that exposure may not influence the intelligibility of L2 speech. For instance, Kirkpatrick, Deterding, and Wong (2008) found exposure did not have an impact on intelligibility of foreign accents. Their finding suggested that L1 listeners find L2 speech to be intelligible despite the fact that the listeners had had relatively no exposure to that particular variety of English accent. A study by Munro, Derwing, and Morton (2006) also found that L2 listeners might find a novel L2 accent to be intelligible. On the other hand, others have argued to the contrary. For example, Varonis and Gass (1985) found that exposure to one accent, as well as to a variety of accents, enhanced a L1 listener’s comprehension of L2 speech. In addition, it has been shown that L1 listeners who have had experience with a variety of L2 speech find foreign accents significantly more intelligible than inexperienced L1 listeners do (Kennedy & Trofimovich, 2008). Furthermore, Matsuura (2007) reported that the L2 listeners scored the intelligibility of unknown accents proportionately to their exposure to a variety of convergent and divergent Englishes. More recently, Floccia et al. (2009) found that an
increased exposure to three divergent varieties of English increased the intelligibility of a convergent variety for monolingual L1 listeners. Also working with L1 listeners, a study by Bradlow and Bent (2008) found that even “exposure to any one foreign accent… promotes a degree of perceptual flexibility that facilitates recognition of any other foreign accent” (p. 722). The concept of perceptual flexibility has similarities to the mechanism of phonological assimilation mentioned above. More specifically, perceptual flexibility refers to the plasticity of the speech faculty to assimilate foreign speech sounds with the existing repertoire of speech sounds. It is argued that a combination of familiarity and exposure to L2 speech exercises the cognitive mechanism involved in the perception of speech sounds, brings about greater flexibility in the phonological assimilation of foreign accented speech, and thus, enhancing the intelligibility of L2 speech.

2.3.4.2.2 Shared First Language

The research reviewed in this thesis has supported the premise that listeners compare L2 speech sounds with their repertoire of English speech sounds as well as their schematic knowledge about the phonology of languages. Therefore, it may be reasonable to infer that interlocutors who share the same first language accent (e.g. a Chinese speaker having a conversation in English with another Chinese speaker) may experience fewer issues associated with the phonological assimilation of speech sounds. Smith and Bisazza (1982) and Munro, Derwing, and Morton (2006) observed an improvement in understanding when the listener and speaker shared a first language. Hayes-Harb, Smith, Bent, and Bradlow (2008), who coined this idea the Interlanguage Speech intelligibility Benefit, also reported that native Mandarin listeners could more accurately identify Mandarin-accented English words than their L1 counterparts could. However, they also
found that native Mandarin listeners did not find Mandarin-accented English speech more intelligible than native English speech. Bent and Bradlow (2003) also found no significant difference in the intelligibility of speech material produced by L1 or L2 speakers. Furthermore, Harding (2008) found that a shared first language did not aid intelligibility. Finally, Major, Fitzmaurice, Bunta, and Balasubramanian’s (2002) findings were inconclusive. Therefore, it is difficult to argue with a high degree of certainty that sharing a first language enhances intelligibility.

These findings raise the possibility that there is no benefit of a shared first language. Perhaps these conflicting results are due to methodological considerations, such as differences in how intelligibility was measured. However, it is more likely that these differences can be attributed to, firstly, the error in assuming that the participants would have had extensive exposure to their own accent variety via interaction and their Interlanguage. However, it had not been established whether L2 users would have had exposure to their own accent, nor was it certain that a person’s Interlanguage accent was the same as the L2 accent produced when speaking. Thus, more discourse about the nature of L2 exposure and the characteristics of person’s inner L2 monologue will hopefully shed light on this complex phenomenon and inform future research directions. Nonetheless, these findings support the notion that the perception of foreign speech has a significant impact on the intelligibility of L2 speech.

2.3.4.2.3 Shared Typology

While some academics argue that the intelligibility of L2 speech is evinced when a L2 speaker and L2 listener share a first language, others posit that intelligibility may be enhanced when L2 interlocutors share a language typology. Different methods have been
used to classify the phonological typology of languages. For example, it is possible to classify a language by taking a single prosodic property, such as tone, and measuring its density in order to place the language on a unidimensional scale. Because “there is agreement that certain properties converge to characterize two prosodic prototypes, tone and stress”, the stress system of English would place it at the stress end of the scale, while the tone system of Chinese would put it at the other end (Hyman, 2009, p. 214). The issue with a linear dimension of language typology is the placement of intermediate languages, which have equal density of stress and tone. Perhaps, a star topology may be a more suitable dimension, where languages are placed within a network of prosodic nodes. To avoid the issue associated with intermediate languages, the languages sourced in the current study have a greater concentration of one prosodic property, such as Tone, Syllable, Mora, or Stress, than the other. Hence, these four phonological typologies were used to investigate the impact of Shared Typology on intelligibility and accentedness in ELF.

One of the first studies to investigate the relationship between typologically related languages and intelligibility was by Major, Fitzmaurice, Bunta, and Balasubramanian (2002). They found that Chinese and Japanese listeners, whose languages are more similar to Syllable languages than Stress languages, found a novel, syllable-timed Spanish accent to be as comprehensible as a familiar American accent. Moreover, a study by Deterding and Kirkpatrick (2006), albeit investigating the benefits of sharing phonological features with an Asian ELF, concluded that misunderstanding occurred less frequently when an individual’s first language shared more pronunciation features common to all ASEAN (Association of South East Asian Nations) languages. Perhaps, the ASEAN languages were related more so by typology than common
segmental features. Lastly, Bradlow and Bent (2008) took this line of inquiry one step further. They asked whether the benefits of exposure to one accent could be generalized to a typologically-related novel accent. It is concluded that interlocutors with typologically similar languages may experience fewer instances of misunderstanding at the intelligibility level.

2.3.5 Language Attitudes

It has been argued that the intelligibility of L2 speech and judgments of accentedness may contribute to misunderstandings during ELF interactions in Australian educational settings. There is also the possibility that another factor, attitudes towards language variation, may cause communication breakdown in ELF contexts. The following sections will discuss the trends in the literature regarding the three areas of language attitudes, which are behavior, knowledge, and emotions. There will be particular attention paid to the emotional attitudes of ELF listeners towards the foreign accents of L2 speech.

From a cognitive perspective, the perception of language involves a minimum of three systems, such as beliefs, judgments, and attitudes. In addition, it is more than likely that the judgment and belief systems precede the formation of attitudes about language and identity. Moreover, three dimensions of language attitudes, which include knowledgeable attitudes, emotional attitudes, and behavioral attitudes, are sequential. For example, a person may hear foreign speech patterns and develop a belief about the speaker’s identity. Next, the person refers to their knowledgeable attitude about that particular language variety, such as Received Pronunciation (RP) is more prestigious than
GA. Following this, emotional attitudes are formed about the Speech Quality and the Speaker. In the final step, a person develops an attitude that may or may not guide their behavior towards the speaker. This process became evident in the current study when the interview and survey data sets were compared during the data analysis. For instance, it could be seen that a student’s first reaction was to decide whether the speech sounds were produced by a NNS or NS. Then, knowledgeable attitudes regarding the legitimacy of that variety, for example, were formed. Afterwards, the participant developed more often than not a negative emotional attitude towards some attributes of the Speaker and most attributes of Speech Quality, especially if they thought the speech sounds were produced by a NNS. Lastly, a behavioral attitude was formed, such as whether or not the participant wanted to work with the NNS, have them as their group leader, or seek their assistance with homework.

It has been argued that people may express attitudes about a language, and then act in complete contradiction (Baker, 1992; Ladegaard, 2000). That is, what a person says and what they do may be completely different. Therefore, Wicker (1969, as cited in Ladegaard, 2000) argued, “attitudes will be unrelated or only slightly related to overt behaviors” (p. 215). For this reason, research has instead focused on the relationship between overt linguistic behaviors, which depend on (1) interlocutor and auditor, (2) context, (3) topic, and other areas of attitudes, such as emotion. For example, Lindemann (2002) examined the relationship between the ability of NSs to complete successfully a communication task with a NNS and their emotional attitudes towards the L2 speech of their interlocutor.

Another dimension of attitude towards language relates to the knowledge about (1) language varieties (2) language use in regional and social perspective (3) own
language use. More specifically, research has endeavored to raise awareness of power differentials, prestige, and preferences associated with particular varieties of English (Nero, 2005). There are also opposing beliefs about the role of English as a language for identity or a language for communication. ELF has received a considerable amount of attention regarding this issue is ELF. House (2003) suggested, “[L2 users] are unlikely to conceive of [ELF] as a language for identification” (p. 560). Whilst this may be true, others have taken this stance one step further and claimed that ELF is primarily used as an instrument for communication. For example, Seidlhofer (2001, 2004) defined ELF as a register and an instrument for communication. Moreover, Meierkord (2002) suggested that ELF “is both a linguistic masala and a language ‘stripped bare’ of its cultural roots” (as cited in Seidlhofer, 2004, p. 218). However, the notion that ELF is simply a tool for communication may be refuted on both socio-political and theoretical fronts. Regarding a socio-political perspective, one may argue that such a notion is an attempt to downplay concerns about the diaspora of English. Canagarajah (2006) also argued that scholars have a tendency to define English as a neutral, egalitarian, and culture-free language. On the other hand, if one views ELF as a medium where people share their ideas, values, and beliefs, then it is unlikely that ELF users share a uniform identity. Thus, one of the defining characteristics of ELF speech communities is the interaction between a diverse array of sociolinguistic identities.

There are also theoretical perspectives about the expression of cultural identity in ELF. In spite of a shared knowledge of sociolinguistic norms, which benefits NSs interlocutors, it is argued that ELF users make up for this by negotiating the norms of both divergent varieties of English as well as their own convergent variety. Thus, claims that ELF is as a neutral language used solely for communicative purposes may ignore the
possibility that, in the absence of a NS model, ELF users fill this normative vacuum with the linguistic norms of their L1. Moreover, the absence of NSs may give ELF speakers more freedom, and thus, the opportunity to express their own cultural identity by using the linguistics features of their first language. Therefore, it would be not unreasonable to assume that these features may take on a more pivotal role in the negotiation of meaning in ELF interactions. The shift away from the idea of a target model, instead moving towards the notion of a negotiated language medium, or ‘common ground’, is in line with Cook’s (1993) ‘multicompetence’ approach to SLA theory. As put by House (2003), multicompetence is the “possession of more than one set of linguistic and socio-cultural knowledge in one and the same individual [where the focus of SLA is] on language use rather than the development and acquisition [of NS norms] (p. 558). Moreover, Pölzl (2003) argued that English in lingua franca contact situations is used as a native-culture-free code. It has also been argued that “ELF users have the freedom to either create their own shared, temporary culture, to partly ‘export’ their own individual primary culture into ELF, or to reinvent their cultural identities by blending into other lingua-cultural groups (Vikkula & Nikula, 2010, p. 256)

Erling and Bartlett (2006) later revisited the idea that L2 users may transform their identity in ELF interactions. The results of their study, which investigated German students’ preferences for either UK, US or a Europeanized ELF, “further confirm[ed] that [ELF] users are making English their own, i.e. appropriating the language for their own purposes, asserting their identities through English and empowering themselves as rightful owners of the language” (ibid, p. 9). More recently, Virkkula and Kikula (2010) reported that after time spent in an ELF context, the identity of Finnish L2 speakers shifted from one of language learner to that of language user. More specifically:
The participants identified themselves as legitimate users and speakers of lingua franca English by describing how they interacted in lingua franca situations, were successful, and had freedom of choice on how to speak and how to feel when speaking. This is in line with Bourdieu’s (1991) and Norton’s (2000) discussions of legitimacy and ownership. (ibid, p. 268)

Thus, the cultural identity of ELF speakers is asserted, negotiated, and expanded in lingua franca interactions, but it may also be transformed.

So far, the changing identities of L2 users in the ELF contexts have been discussed. There is growing evidence to support the idea that the attitudes of L2 users are also changing the way English is used as a lingua franca. However, research looking at people’s attitudes towards language variation has focused predominately on either NSs’ evaluations of convergent varieties of English, such as Chinese-English, or NNSs’ opinions about divergent varieties, such as RP and GA. It seems little is known about the attitudes of NNSs towards language variation, especially L2 varieties. Therefore, this paper aims to highlight what is currently known about the emotional attitudes of L2 users towards different varieties of English. More specifically, this paper will look at the emotional attitudes of ELF users towards divergent and convergent varieties of English.

2.3.5.1 Emotional Attitudes towards Language

There has been considerable research into the emotional attitudes towards English language varieties. Studies have investigated people’s attitudes towards different standards of divergent and convergent Englishes. Lambert, Hodgson, Gardner, and Fillenbaum (1960) conducted perhaps one of the most seminal studies on people’s
attitudes towards spoken language. In their study, participants were asked to evaluate Canadian-English and French-English accents according to 14 attributes: height, good looks, leadership, sense of humor, intelligence, religiousness, self-confidence, dependability, entertainingness, kindness, ambition, sociability, character, and general likeability (ibid, p. 44). A later study by Zahn and Hopper (1985, p. 118) asked participants to rate different American accents according to 30 attributes, some of which were quite unusual, such as sweet-sour, energetic-lazy, and good-bad. While the popularity of some attributes has fallen out of vogue over the years, a number of them have stood the test of time and have been used extensively in sociolinguistic research.

Validity issues have also challenged research into people’s attitudes towards language variation. For example, there has been little consistency between studies in the categorization of even the most well established attributes. Namely, one study may assign an attribute to a category of emotional attitudes, yet another study assigns the exact same attribute to a completely different category. For example, Eisenchlas and Tsurutani (2011) classified intelligence as an attribute of Competence, whereas Cavallaro and Chin (2009) considered it an attribute of Status. Thus, such inconsistencies in the categorization of attributes make it difficult for sociolinguists to identify trends and gaps in the literature. It also hinders a researcher’s ability to compare one’s work with that of others and address issues regarding the reliability and credibility of their findings. Table 3 shows the classification of 23 attributes that were used to investigate people’s emotional attitudes towards linguistic variation. These categories will act as a theoretical framework to guide the discussion of ELF user’s emotional attitudes towards L2 speech.

In the following section, the dimensions, categories, and attributes found in Table 3 above will provide the structure to review the literature regarding emotional attitudes
towards Speech Quality. Each category begins with an exposition of NSs’ attitudes towards convergent varieties of English. Next, NNSs’ opinions about divergent varieties are discussed. Finally, the review focuses on NNSs’ emotional attitudes towards convergent varieties. It has been argued that contextual factors are vital to the understanding of language attitudes. Therefore, the research is collated and critiqued according to region in which it was conducted, such as Central Asia, Eastern Asia, Europe, Eastern Europe, North America, and Oceania.

Table 3

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<thead>
<tr>
<th>Dimension</th>
<th>Category</th>
<th>Attribute</th>
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<tbody>
<tr>
<td>Speech Quality</td>
<td></td>
<td>Nice, Natural, Fluent, and Native.</td>
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<tr>
<td>Speaker</td>
<td>Status &amp; Solidarity</td>
<td>Successful, Wealthy, and Educated.</td>
</tr>
<tr>
<td>Social Attractiveness &amp; Personal Integrity</td>
<td>Kind, Patient, Friendly, Interesting, Confident, and Honest.</td>
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2.3.5.1.1 Emotional Attitudes towards Speech Quality

People develop quite strong opinions about a person just from the way they speak. It has been argued that a person’s accent can influence these evaluations more strongly than any other aspect of speech. In fact, Jenkins (2007) suggested that... “accent is the most salient factor in ‘evoking images’ in response to speech styles and, therefore... accent exerts the strongest influence on (language-based) attitudes” (p. 78). Most studies have investigated the emotional attitudes of NS towards L2 varieties of English, finding that NSs mostly hold negative attitudes towards foreign accents (Cargile, 1997; Lindemann, 2002; Lippi-Green, 1994). However, academics have begun to recognize the importance of research that considers the perspectives of L2 users. Therefore, there is a growing body of knowledge about the emotional attitudes of NNSs towards different varieties of English, such as the divergent Englishes. For instance, Zhang and Hu (2008) investigated the attitudes of Chinese students studying in North America towards General American (GA), RP, and Standard Australian (StAust) accents. Though the results showed no significant difference between the three accent varieties for the speech qualities of eloquence and nativeness, the students had more positive opinions about the most familiar varieties, which were GA and RP. Xu, Wang, and Case (2010) also studied the attitudes of Chinese students towards divergent varieties of English, but it involved Chinese students still living in China. Dissimilar to the study conducted in North America, the students living in China found the US dialects to be more fluent than the UK dialects despite the fact that the UK varieties scored higher on a measure of intelligibility. The findings of studies coming out of Europe paint yet another picture of L2 users’ emotional attitudes towards divergent varieties of English. A study by Paunovic (2009) found that Serbian students rated RP more positively for pleasantness than StAust
and GA, while Irish and Southern American speakers were evaluated poorly. Moreover, Rindal (2010) found that Norwegian high school students rate RP higher than GA for the traits of intelligibility and aesthetic quality. Similarly, Danish high school and university students also rated RP speakers positively for linguistic attractiveness when compared with Scottish, Cockney, GA, and StAust Englishes (Ladegaard & Sachdev, 2006, p. 103). Thus, it seems that the emotional attitudes of L2 users towards divergent varieties of English, or their respective dialects, depend significantly on contextual factors.

In comparison, few studies have investigated the emotional attitudes of NNSs towards convergent varieties of English. In Eastern Asia, Chiba, Matsuura, and Yamamoto (1995) conducted one of the first studies on the emotional attitudes of NNSs towards L2 speech. Their study showed that affective variables, such as instrumental motivation and exposure, might have led Japanese university students to rate speakers from Sri Lanka, Hong Kong, and Malaysia poorly for intelligibility, yet score their own accent high for eloquence. Recently, some academics have been researching possible differences in the emotional attitudes of NNSs towards standard and non-standard forms of convergent English. For example, a study by Cavallaro and Chin (2009) found that Chinese, Indonesian, and Malayan students equally rate the fluency of standard and non-standard forms of Singapore English. Turning now to an eastern European context, Paunovic (2009) also looked at the influence of exposure on the rating of different accents. The results of the study illustrated that Serbian students tend to rate Russian speakers poorly. Moreover, the students also negatively rated the divergent varieties with which they had had limited exposure, such as Irish and Southern US speakers. Thus, the less exposure a person has to a particular accent, the more likely they will rate the accent
negatively for the attributes of Speech Quality. Furthermore, this rating is irrespective of the accent originating from a convergent or divergent variety of English variety.

2.3.5.1.2 Emotional Attitudes towards the Speaker

Another dimension of emotional attitude is the relationship between foreign speech patterns, the perceived identity of the speaker, and one’s opinions about the speaker. However, one must take caution when speculating about the identity of the speaker based purely on the speech patterns. A number of studies have demonstrated that a person’s assumptions about the identity of the speaker tend to be unreliable. To exemplify, Paunovic (2009) concluded that NNSs had “meager results in accent recognition (p. 1)”. Moreover, a clever study by Hu and Lindemann (2009) investigated if NNSs would negatively rate the speech of a NS if they were told the speaker was a student from China. Their results demonstrated that the mere impression of L2 speech might lead NNSs to such opinions as “incorrect… not fluent… sounds strange… sounds stupid [and] no beauty” (ibid, p. 258). Hu and Lindeman (2009) attributed this phenomenon to the “idealized perception of native English” held by NNS (p. 253).

Given below is a brief overview of the research on the attitudes of NS and NNS towards divergent and convergent varieties of English. The Speaker dimension of emotional attitudes is subdivided into three categories, which are Status and Solidarity, Social Attractiveness and Personal Integrity, and Academic Competence.
2.3.5.1.2.1 Status and Solidarity

Status and Solidarity is one category of language attitudes that have been used extensively to describe the attributes of a speaker. It has been shown that NSs generally hold negative attitudes towards the Speech qualities of L2 speech, possibly due to the fact that “it is not easy for the NSs to come to terms with the variations that occur in NNS use of what the NS feels to be ‘one's own language” (Strevens as cited in Kachru, 1992b, p. 28). Moreover, the severity of the rating may be directly proportionate to the NS’s beliefs about the proximity of the accent to their divergent variety. For example, the pioneering work of Nesdale and Rooney (1990) found that NSs in Australia rated speakers with a Vietnamese-Australian accent more poorly on Status and Solidarity than speakers with an Italo-Australian. Speakers with an Anglo-Australian accent were rated the most positively out of the three accent types. Along the same vein, it has also been suggested that NNSs that identify themselves as being members of a NS community in terms of Status would acquire the same social stereotypes about L2 speech as NSs. For instance, Meyerhoff, Schleef, and Clark (2010) found that Polish immigrants hold the same attitudes about Polish- accented English as NSs if they identified themselves as being British. Therefore, the emotional attitudes people have about linguistic variation are influenced not only by the perceived identity of the speaker but by also the identity of the listener and their affiliation with different speech communities.

A number of studies have investigated the emotional attitudes of NESB students towards divergent varieties of English. Most of the research has concentrated on Asian and European educational settings. In Asia, Evan (2010) found that Chinese university students rated the Status of RP more positively than other diverging varieties of English,
such as GA, StAust, and Standard NZ (StNZ). In addition, Luk, (1998) conducted a study on the attitudes of Chinese students living in Hong Kong towards different varieties of divergent Englishes. She reported that an overwhelming number of the participants also showed a strong preference for English language teachers with an RP accent. Continuing this trend, Evan (2010) showed that Chinese students from Dalian city in northern China also evaluated RP higher for Status than GA. However, a study by Xu, Wang, and Case (2010), who recruited a different group of Chinese students in Dalian city, found the exact opposite. Their results suggested that US dialects have a higher Status than UK dialects in that region of China. In agreement with the findings of Xu, Wang, and Case (2010), McKenzie (2008) found that Japanese students hold more favorable attitudes towards the Status of the US dialect than the Scottish ones. In short, there are similarities about the attitudes of Asian students towards divergent varieties of English on the one hand. On the other hand, students from the same city in Asia may also differ in their attitudes.

While a number of studies have investigated the emotional attitudes of Asian students towards the Status and Solidarity of divergent Englishes, other studies have looked at European and Oceania contexts and people’s emotional attitudes towards language. Similar to the results seen in China, RP seems to have a high Status in Europe, too. For instance, Danish high school and university students rated RP speakers higher for the attributes of Status when compared to Scottish, Cockney, GA, and StAust (Ladegaard & Sachdev, 2006, p. 103). Likewise, Norwegian adolescent students thought RP had a higher Status than GA English, and was the preferred model for the teaching and learning of pronunciation (Rindal, 2010, p. 255). Moving towards the fringe of Europe, Paunovic (2009) found British English holds a special status in the Serbian population being a
high-status variety, which was more than the accents of Northern Ireland, Scotland, Southern US, California, North-Midland US, Australia, South Africa, Russia, and Greece (p. 524). In one of the few studies conducted in Oceania, Mugler (2002) found that 156 students from Fiji and other Pacific nations scored GA high for Solidarity but StAust scored better for Status.

There have also been a number of studies, albeit limited, focusing on NESB students’ emotional attitudes towards convergent varieties of English. For example, a study by Renoud (2007) showed that ESL students studying in North America rated the education and wealth of Indian and Pakistani accented speakers lower than GA speakers did. Regarding an Eastern European context, the Russian-English accent was rated more poorly than RP in Status and Solidarity by Serbian students (Paunovic, 2009). Therefore, it seems that convergent varieties of English are rated negatively by both L1 and L2 users despite geographic differences.

2.3.5.1.2.2 Social Attractiveness and Personal Integrity

There have been studies conducted in East Asia and Europe investigating the attitudes of L2 users towards the Social Attractiveness and Personal Integrity of divergent varieties of English. Regarding attractiveness, Chiba, Matsuura, and Yamamoto (1995) reported that Japanese students thought GA speakers were friendlier than RP speakers were. However, these findings may not be germane to the educational settings of other Asian counties. For instance, Chinese students rated UK varieties more favorably than US varieties (Xu, Wang, & Case, 2010). While studies conducted in East Asia have focused predominately on the two most well-known varieties, researchers in Europe have
broadened their line of enquiry to include other, less well-known, varieties of divergent English. This shift in focus has led to some rather intriguing results. Over a decade ago, Ladegaard and Sachdev (2006) reported that Danish high school and university students downgraded an RP speaker for Social Attractiveness and Personal Integrity when compared with Scottish, Cockney, GA, and Standard South African (StSA) Englishes. Moreover, the results of a study by Paunovic (2009) indicated that Eastern European students considered a StAust speaker to be most Honest, helpful, reliable, and friendly of four speech samples. RP, GA received the second and third most positive evaluations, with the Irish accented speaker rated the lowest for Social Attractiveness and Personal Integrity. Thus, there is little regularity in the conclusions drawn by the studies conducted in Asia. However, there tends to be more consistency between those drawn from a European context. Moreover, the findings of the European studies seem to contradict those concerning the Status and Solidarity of divergent varieties. That is, L2 users thought RP and GA accents were more prestigious than other divergent varieties, yet they were both rated poorly for Social Attractiveness and Personal Integrity.

Moving on to L2 users’ attitudes towards the Social Attractiveness and Personal Integrity of convergent varieties, some studies have looked at the attitudes of students studying in Asia and Eastern Europe. For example, Cavallaro and Chin (2009) investigated the attitudes of NSs (Singaporeans) and NNSs (Chinese, Indonesians, and Malays) towards speakers of Standard and Non-Standard Singapore English. Comparing the two standards against the attributes of confidence, hard-working, ambition, honesty, kindness, and friendliness, they found both NSs and NNSs listeners rated the speakers of the Standard Singaporean English more positively than the non-standard variety. A study by Bresnahan, Ohashi, Nebashi, Liu, and Morinaga Shearman (2002) also found that
listeners that share the same language variety as the speaker will rate them higher on traits associated with Social Attractiveness and Personal Integrity. In addition, Thai and Korean students rated Standard Indian English lower than GA for attractiveness (Renoud, 2007). Likewise, Japanese students negatively rated the friendliness of Sri Lankan, Chinese, and Malaysian-English speakers (Chiba, Matsuura, & Yamamoto, 1995). Finally, a study conducted in Eastern Europe found speakers Russian-English accents received negative evaluations for Personal Integrity (Paunovic, 2009). Therefore, L2 users in both Asia and Europe generally have negative opinions about the Social Attractiveness and Personal Integrity of speakers using convergent varieties of English.

2.3.5.1.2.3 Academic Competence

The third category for the emotional attitudes towards a speaker is Academic Competence. Traditional lines of research inquiry have focused on NSs’ opinions about the competence of L2 users. However, there is a growing body of literature considering the opinions of NNSs. Regarding L2 users’ opinions towards divergent varieties of English, a study in Denmark found that high school and university students thought RP speakers were very competent, more so than Scottish, Cockney, GA, and StAust Englishes (Ladegaard & Sachdev, 2006). Similarly, Chinese students found speakers of UK varieties more intelligent than US varieties (Xu, Wang, & Case, 2010).

Other studies have also made direct comparisons between speakers (teachers) using either a divergent or convergent variety of English. Renoud (2007) found that Saudi Arabian, Quatrain, Korean, Taiwanese, Sudanese, Brazilian, French, Russian, Chinese, Thai, Indian, and Moroccan nationals studying ESL in America rated Standard
Indian English lower than GA for lecturer desirability and job attainment (p. 44).

Furthermore, a study by Kelch and Santana-Williamson (2002) investigated the attitudes of Vietnamese, Latino, and Korean ESL students in California, US towards the professionalism of NESB teachers. Their findings indicated that teachers perceived as being a NS were more likely to be rated positively for the attribute of experience (ibid, 2002, p. 61). Similar to the North American research, studies in Asia suggest that NNSs rate the Academic Competence of NS teachers more positively than NNS teachers (Watson, Todd, & Pojanapunya, 2009; Zhang & Hu, 2008). For example, Japanese students may find speakers from Sri Lanka, Hong Kong, and Malaysia less intelligent than NSs (Chiba, Matsuura, & Yamamoto, 1995).

Contrasting the language background not of the speakers but the listeners, researchers have compared the opinions of NNSs and NSs about the competency of NESB teachers. A study conducted in North America concluded that NSs might rate L2 users highly for the traits, of flexibility, collegiality, dedication, and creativity (Cheung, 2002; Moussu, 2006). However, these findings seem to be an exception to the rule as most studies suggest that both NSs and NNSs have negative opinions about the Academic Competence of L2 users. For instance, a study by Scheuer (2005) found that NSs might think L2 users are unintelligent based on their L2 speech alone (as cited in Jenkins, 2007, p. 79). Moving to an Asian context, Cavallaro and Chin (2009) reported that NSs and NNSs equally rated the intelligence of speakers using either standard or non-standard form of Singapore English. Hence, it appears that NSs and NNSs from around the world share similar views about the Academic Competence of divergent and convergent English users, especially if they are an educator. On the other hand, this differentiation may not
apply when comparing speakers using the standard and non-standard forms of convergent English.

To summarize the literature review, the spread of English has led to a paradigm shift in the way some academics view the role of English in the world today. This paradigm shift has brought into question the relevance of traditional models of English diaspora, along with notions of legitimacy, and research scoped by national borders. Moreover, there have been concerns raised about certain aspects of SLA theory and the methodologies used to test them. The spread of English has also led to debate as to whether ELF is a language for communication or identity. A brief account of identity transformations in ELF is also evident in the literature.

The literature review next explored possible causes of misunderstandings in ELF interactions. From a speaker’s perspective, it has been claimed that variations in conversational structures and lexiogrammar will lead to misunderstandings between ELF users. Certain pronunciation features have also been found to influence communication breakdown between NNSs. Following on from this, the constructs of mutual intelligibility, negotiated meaning, and intelligibility were critiqued.

The literature review then turned its attention to the role of listeners in the misunderstanding of L2 speech. A model of Foreign Speech Adaptation was used to propose a system of foreign speech perception. This system involved numerous processes, such as judgments of accentedness and perceived intelligibility, the assimilation and integration of foreign speech sounds, emotional attitudes towards language variation, and knowledge bases. In addition, many factors are thought to influence a person’s adaptation to foreign speech, such as familiarity and exposure, and a Shared First Language or Shared Typology between interlocutors. Probably the most
significant insight drawn from the literature review was the lack of research looking at L2 speech perception from a NNS’s perspective. Therefore, this study investigated the intelligibility and accentedness of foreign-accented speech from a NNS’s perspective. It also researched the emotional attitudes of ELF users towards the Speech Quality and the Speakers of convergent Englishes.
Quantitative Research Methodology

This study explored the concepts of intelligibility, judgments of accentedness, and emotional attitudes in the ELF context of an Australian tertiary institution. Section 3.1 details the methodological perspectives and approaches used to investigate the concepts mentioned above as well as reliability and validity issues, and limitations. Section 3.2 explains the methods used to source the speech samples, recruit listeners, collect the data, and analyze the data.

3.1 Research Design

The quantitative research design was divided into three parts. The first part gathered information about the intelligibility of four accent types from a NNS’s perspective. Secondly, this study investigated L2 users’ overt judgments of accentedness. Thirdly, the emotional attitudes of L2 users towards foreign accented speech were explored. The study of intelligibility, judgments of accentedness, and language attitudes drew on different research traditions. These different approaches are discussed below with respect to the methodological perspectives and approaches, reliability and validity issues, and research methods.
3.1.1 Methodological Perspectives and Approaches

3.1.1.1 Intelligibility

A number of researchers have recently used conversational analysis as the preferred methodology for the investigation of intelligibility issues in ELF conversation. Most notably, Deterding and Kirkpatrick (2006) used conversational analysis to find instances of an inappropriate response to an utterance, which were then interpreted as evidence of shortcomings in intelligibility in conversation. That is to say, intelligibility issues, or “disruptions to the smooth progress of conversation”, were identified by a participant’s inability to respond to a question posed by their interlocutor, and or a participant’s clarification to statements made by their interlocutor (Deterding & Kirkpatrick, 2006, p. 401). Moreover, Watterson (2008, p. 381) used the repair strategies employed by speakers as an indication of an inappropriate response to an utterance. Though it was unclear whether intelligibility issues in Watterson’s (2008) conversation analysis of ELF interactions were due to phonology or unknown lexicogrammar, the study was groundbreaking in that it addressed communication difficulties at all three levels of understanding: intelligibility, comprehensibility, and interpretability.

Some of the methods used to investigate the comprehension of an utterance include: repetition tasks (Wingstedt & Schulman, 1987, as cited in Floccia et al., 2009, p. 380); mispronunciation detection (Shmid & Yeni-Komshian, 1999, as cited in Floccia et al., 2009, p. 380); sentence recognition task (Bent & Bradlow, 2003); word-image matching (Smith & Bisazza, 1982); summary writing (Perlmutter, 1989, as cited in Munro et al., 2006, p. 113). In addition, traditional comprehension tests consisting of
cloze, true and false, short answer and multiple-choice items have also been widely used to measure the understanding of an utterance (Anderson-Hsieh & Koehler, 1988; Matsuura, 2007; Smith & Rafiqzad, 1979). However, it is unclear to which level of understanding these methods are intended to measure. Perhaps, the cloze activity most closely coincides with the notion that intelligibility may only be evident in the recognition and recording of individual words. However, a cloze activity still has its shortcomings. This instrument may allow a participant to use top-down processes, or schemata, to infer connections between the written and spoken text (Harmer, 2001; McKnight, 1993). It was therefore concluded that an orthographic transcription task of intonation units using standard orthography is likely to a more accurate measure of bottom-up processes, such as the recognition of speech sound patterns. This argument is grounded in the belief that understanding at the intelligibility level is derived from a linear, phonologically driven process identifying the smallest units of sound (McKnight, 1993). These small units of speech, also known as intonation units, can be “identified by such criteria as variable pauses, changes in pitch, or terminal contours… [and] represent the speaker’s focus of consciousness at the time when it is uttered and is a stable memory unit” (Chafe, 1994, para. 4). To sum up, this study measured the intelligibility of L2 speech by assessing a listener’s ability to recognize and record individual words spoken (Bent & Bradlow, 2003; Brodkey, 1972; Burda, Hageman, Scherz, & Edwards, 2003; Derwing & Munro, 1998; Kent, 1992).
3.1.1.2 Judgments of Accentedness

The second factor related to the perception of foreign accents is accentedness. Accentedness is defined as a subjective judgment about the degree to which phonological patterns are similar to a listener’s expectation of speech sounds at any given point in time. As to which instrument may be the most appropriate for measuring accentedness, two factors need to be considered. Firstly, accentedness is likely to be the first cognitive process involved in L2 speech perception. Moreover, this process is a judgment about the degree, or strength, of foreign speech sounds. That is to say, the greater the similarity between one’s expectations of speech patterns and the actual speech being heard, the weaker the judgment of accentedness will be. Therefore, any measurement tool needs to account for that fact that accentedness is a judgment dealing with degrees of similarity.

The idea that a judgment is a cognitive task dealing with degrees of similarity is congruent with the theoretical works of Pisoni and Remez (2008). Following Gestalt principles for the perceptual organization of speech, they suggested that the cognitive process of speech perception involves the organization of sound according to two functions. The first function compares incoming speech signals with one’s inventory of speech sounds. The second function groups the elements of speech sounds based on patterns of similarity.

Due to the subjective nature of accentedness judgments, measured in terms of degrees of similarity between a listeners’ expectations of speech sounds and the incoming speech sounds, equal-interval ratings scales have been widely used to measure judgments about foreign accents (Anderson-Hsieh, Johnson, & Koehler, 1992; Kennedy & Trofimovich, 2008; Munro & Derwing, 1995, 1998, 1999, 2001, 2006; Riney & Flege,
The current study also deemed equal-interval rating scales to be the most appropriate tool for measuring judgments of accentedness.

### 3.1.1.3 Emotional Attitudes towards Linguistic Variation

The third factor investigated was emotional attitudes towards language variation. More specially, the present study assigned L2 users’ attitudes towards foreign speech according to four categories: Speech Quality, Status and Solidarity, Social Attractiveness and Personal Integrity, and Academic Competence. However, it is pertinent at this point to clarify the concepts of judgment and attitude.

To build on the work of Van der Pligt and Eiser (1984), who made a noteworthy distinction between judgments and attitudes, there are two main qualities of a judgment. Firstly, a judgment may be defined as a cognitive process whereby a focal stimulus is compared to a reference set of stimulus. Furthermore, judgments are more likely to focus on the function of a stimulus rather than the characteristics of the stimulus itself. Such is the case regarding judgment of accentedness, in that the accented speech (focal stimulus) is compared to a listener’s expectation of speech sounds given the context (reference set of stimulus). In addition, there is concordance in that the judgment of phonological discord is a judgment about the cognitive effort needed to assimilate foreign speech sounds (focal stimulus) with a listener’s repertoire of speech sound (reference set of stimulus).

While a judgment may focus on the functionality of a speech signal, such as the impacts of unfamiliar sounds on the perception of L2 speech, an attitude towards a
stimulus is “made up of elements, each of which implies a positive or negative evaluation of the attitude object… which beliefs, feelings, and policy orientations all contribute” (Ostrom & UpShaw, as cited in Van der Pligt & Eiser, 1984, p. 26). In light of these differences between a judgment and an attitude, semantic differential ratings scales with bipolar adjectives were chosen to measure the connotative meaning one assigns to accented speech. Thus, the current study used nine-point semantic differential rating scales to measure quantitatively the emotional attitudes of NNSs towards Chinese-English, French-English, Japanese-English, and German-English.

### 3.1.2 Reliability Issues

According to Carmines and Zeller (1979), there are four basic methods for testing the reliability of empirical measurement: retest, alternative form, split halves, and internal consistency (p. 37). The retest method involves administrating the same test to the same participants at a later point in time. The alternative form method requires that another test, which has been designed to measure the same phenomenon as the original test, be given to the participants. The third approach is the split halves method, which involves the division of a single test in half, and the halves are correlated to estimate the tests reliability. This method is similar to the alternative form method in that each half of the test equates to a different version of the test, yet the split halves method need only be administered on the one occasion. Finally, the internal consistency method does not require a test to be split or repeated, thus avoiding some of the practical and statistical drawbacks associated with the first three methods. The internal consistency method looks at groups of items on a test that have been designed to measure the same construct and
estimates the strength of relationship between the items in each group. Therefore, four methods may be employed to estimate the reliability of empirical measurements.

As it was impractical to administer the same test or an alternative test to over 100 participants on two separate occasions, the retest and alternative methods were ruled out as possible reliability measures. In order to conduct a split-halves reliability test and obtain a reliability of .80, 27 items are required (Carmines & Zeller, 1979, p. 43). The attitude data set collected enough responses in order to conduct a split-halves reliability test. However, this method was not applicable to the intelligibility and accentedness data sets due to an insufficient number of responses. Thus, the internal consistency method was employed to test the in-group reliability of the intelligibility, accentedness, and emotional attitudes data sets.

3.1.2.1 In-Group Correlations

To address the reliability, or consistency, of the quantitative data, intraclass correlations were calculated to ascertain the level of in-group agreement between members of each listener group. That is, the intraclass correlations determined the amount of agreement between the Chinese participants, for example, about the intelligibility of the Chinese, French, Japanese, and German speakers. This analysis was needed because the intelligibility and accentedness scores of each listener group were compared to investigate the advantages of a Shared First Language or Shared Typology. Table 4 shows the inter-rater correlations used to estimate in-group consistencies for each group of the listeners.
Table 4

*Cronbach’s Alpha Values for Intraclass Correlation Coefficient by Listener Group for Intelligibility, Accentedness, and Emotional Attitudes*

<table>
<thead>
<tr>
<th></th>
<th>Chinese listeners</th>
<th>Arabic listeners</th>
<th>Vietnamese listeners</th>
<th>Thai listeners</th>
<th>Spanish listeners</th>
<th>Indonesian listeners</th>
<th>Japanese listeners</th>
<th>French listeners</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intelligibility</td>
<td>.900</td>
<td>.831</td>
<td>.907</td>
<td>.869</td>
<td>.790</td>
<td>.781</td>
<td>.873</td>
<td>.833</td>
</tr>
<tr>
<td>Accentedness</td>
<td>.869</td>
<td>.028</td>
<td>.255</td>
<td>.018</td>
<td>.588</td>
<td>.415</td>
<td>.030</td>
<td>.605</td>
</tr>
<tr>
<td>Emotional attitudes</td>
<td>.149</td>
<td>.491</td>
<td>.314</td>
<td>.372</td>
<td>.430</td>
<td>.368</td>
<td>.344</td>
<td>.578</td>
</tr>
</tbody>
</table>

Table 4 shows the level of agreement between eight listener groups for the intelligibility and accentedness of four accent types. Overall, there were strong levels of agreement between members of each listener group, which extended to both the intelligibility and accentedness data sets. There were especially strong correlations for all the listeners groups concerning the intelligibility of the four accent types. However, the Arabic, Thai, and Japanese listener groups showed low levels of agreement in accentedness of the four accent types. For instance, the Arabic participants did not agree with one another about the strength of the Chinese-English, French-English, Japanese-English, and German-English accents. Thus, comparisons between the accentedness ratings of each listener group needed to take into account these results.

As the listeners were also grouped all together as L2 users, intraclass correlation coefficients were needed to assess the reliability of the attitude data set. A Cronbach’s Alpha value was calculated to measure the level of agreement between the 100
participants in their attitudes towards the Chinese, French, Japanese, and German speakers. The analysis revealed an almost perfect agreement between the participants in their emotional attitudes towards the four L2 varieties. The Cronbach’s Alpha value was .976. Hence, there should be a high level of consistency and dependability regarding the attitude section of the quantitative data. Moreover, any inferences drawn about the attitudes of ELF users towards the four L2 accents should also be viewed as consistent and dependable.

3.1.3 Validity Issues

3.1.3.1 Intelligibility

3.1.3.1.1 Construct Validity

Construct validity is the level of associate between an abstract concept and the outcomes of a test designed to measure it. In other words, does an intelligibility test actually measure intelligibility, or does it measure something else? To enhance the construct validity of an intelligibility measure, five issues needed to be addressed. Firstly, gender is the only factor that has consistently brought about differences in speech patterns between individuals (Trudgill, 1983). Because there are such distinct differences in the way males and females speak, there is a possibility that a listener’s intelligibility scores may represent gender differences rather than the listener’s ability to recognize words. In order to address the impact of gender differences in speech patterns, only female speakers were used when sourcing speech samples.
Speech rate can also influence the construct validity of an intelligibility measure. Numerous studies have shown a direct correlation between speech rate and intelligibility scores (Matsuura, 2007; Munro & Derwing, 1998, 2001). Moreover, a study by Block and Killen (1996) found speech rates for reading to be slightly slower than that of conversation (as cited in Jones, Berry, & Stevens, 2007, p. 644). It should be noted that their findings found no gender differences in speech rates for either reading or conversation. In the past, speech rate was calculated according to the number of words spoken per minute (wpm). However, this unit of measurement has been widely criticized mostly because of the work by Griffiths’ (1991) in the late 1980s and early 1990s. It is now common practice to measure speech rate according to the number of syllables spoken per minute (spm). It has been reported that speech rates of 272 spm are acceptable to both native and non-native listeners (Jones, Berry, & Stevens, 2007, p. 644). Moreover, NSs have been found to rate accentedness the lowest (i.e. having the weakest accent) when speech rates for foreign-accented utterances are at the optimal rate of 285.6 spm (Munro & Derwing, 2001). Furthermore, NNSs prefer both native speech and non-native speech at 270 spm (Derwing & Munro, 2001).

Due to these findings, the speech samples were not sourced from written text being read aloud. Moreover, the speech rate range considered acceptable for the speech samples of the present study was 210-290 spm. The speech rate of each speech sample was analyzed using Praat Phonetic Analysis Software and the following was found:

Speaker One: 42 Syllables in 12 seconds = 210spm; Speaker Two: 46 Syllables in 11 seconds = 250spm; Speaker Three: 44 Syllables in 15 seconds = 176spm; Speaker Four: 47 Syllables in 11 seconds = 256 spm; Speaker Five: 40 Syllables in 13 seconds = 184
spm; Speaker Six: 54 Syllables in 13 seconds = 249 spm; Speaker Seven: 56 Syllables in 14 seconds = 240 spm; Speaker Eight: 54 Syllables in 14 seconds = 231 spm.

An analysis of the samples revealed that Speakers Three and Five had speech rates below the optimal range. In the past, studies have treated speech samples with speech compression-expansion software to remedy this problem. However, the present study found such adjustments had a detrimental effect on the quality of the samples. In addition, sourcing alternative speech samples given the specificity of the accent types and authenticity of the samples proved quite challenging. Therefore, the slower speech samples were used and the implications of this were discussed in Chapter Seven.

The third issue surrounding the construct validity of intelligibility measures is the presence of unfamiliar vocabulary in the speech sample. Therefore, care was taken when selecting the intonation units to avoid speech material with complex lexical items or register specific vocabulary. Listeners involved in the pilot study were also asked to review the speech sample excerpts and single out any new vocabulary.

The fourth concern relates to confusion between the concepts of intelligibility and perceived intelligibility. Kent (1992) stated that there has been serious concern raised “regarding the [construct] validity of interval scale measures of intelligibility” (p. 24). As discussed in the Introduction, subjective judgments about the intelligibility of someone’s speech are more likely a measure of perceived intelligibility. Therefore, the identification and recording of individual words was deemed the most valid measure of intelligibility.

Finally, listeners may have used contextual clues to predict the words present in the speech samples, which is more likely a measure of comprehensibility than intelligibility. This was especially pertinent for intonation units sourced from the end of a conversation. Therefore, the intonation units sourced from each speaker were played out
of sequence to prevent the participants from using top-down cognitive processes to guess any words they could not recognize. This issue is one of the main shortcomings of other methods used to measure intelligibility, such as a cloze activity or transcriptions task where listeners are presented entire utterances in sequence. In addition, the transcription method does not allow for the measurement of other levels of understanding, such as comprehensibility and interpretability. Thus, a number of issues concern the construct validity of an intelligibility measure.

3.1.3.1.2 Content Validity

Content validity is the ability of a test to measure every facet of an abstract concept. With respect to the present study, what was the best way to measure the intelligibility of L2 speech from a NNS’s perspective? There may be some concerns regarding the content validity of an intelligibility measure. For example, previous research has indicated good content validity of two-word identification tests for measuring intelligibility (Kent, 1992, p. 29). However, the present study deemed the intonation unit as the most appropriate unit of measurement. The intonation units ranged in length from 4-8 words. Because intonation units are based on the short-term memory’s capacity to retain and retrieve approximately seven pieces of information, the participants were quite capable of remembering and recording all the words present in each intonation unit. In sum, a number of construct and content validity issues challenge the study of intelligibility.
3.1.3.2 Accentedness Judgments

3.1.3.2.1 Construct Validity

Four factors may concern the construct validity of an accentedness measure. Firstly, some may claim that gender has an influence on judgments of accentedness; however, numerous studies have shown no relationship between gender and judgments of accentedness (Piske et al., 2001). Therefore, it is suggested that gender did not impede the construct validity of the accentedness data. Secondly, a listener’s accentedness ratings may be influenced by exposed resulting from other data collect tasks. For example, Munro and Derwing (1994, as cited in Munro, 2008) found that “familiarity with a particular utterance led to harsher accentedness ratings” (p. 209). This was not considered an issue for the current study as the participants were exposed only once to each intonation unit/speech excerpt and the different accents were alternated.

Thirdly, idiosyncratic aspects of speech will reduce the construct validity of an accentedness measure. Therefore, it was deemed wise to source intonation units from two different speakers of each accent variety. Finally, it was important there be no significant difference in the accent strength between the two Chinese speakers, for example. Therefore, a set of Spearman’s rho was calculated for the speakers of each accent type. The results found a strong correlation in the accentedness ratings between the speakers for each accent type. The strongest association between any speaker pair was that of the French-English speech samples, with a strong correlation of .871. (See Appendix I Assessing Construct Validity of the Accentedness Data). Thus, four characteristics of speech challenge the construct validity of an accentedness measure.
3.1.3.2.2 Content Validity

Numerous researchers have deemed equal-interval 9-point rating scales as the most credible measure of subjective accentedness judgments (Brennan & Brennan, 1981; Burda et al., 2003; Derwing & Munro, 1998; Southwood & Flege, 1999, as cited in Munro et al., 2006, p. 112; Thompson, 1991). Thus, 9-point semantic differential ratings scales with a slider bar were used to measure judgments of accentedness. The scales were not labeled with intervals markers or ordinal values because the researcher wanted the participants to focus more on the degree of accent strength rather than make a judgment according to a pre-determined value.

3.1.3.3 Language Attitudes

3.1.3.3.1 Construct Validity

The categorization of the language attributes, gender, age, and idiosyncratic voice qualities may lessen construct validity when measuring language attitudes. Firstly, researchers have been cautioned about simultaneously measuring attributes from multiple dimensions of language attitudes, such as knowledge, behavior, and emotion, but claiming the measurement is a one-dimensional scale (Baker, 1992). Therefore, this study only investigated emotional attitudes towards language, and the constant comparative method of data analysis facilitated the identification and segregation of attitudes that belonged to the other two dimensions. Moreover, the empirical analysis of language attitudes has shown that people think some attributes belong to one category more so than another does. Principal Component Analysis (PCA) has been used to assess the construct
validity of attribute categorization. PCA is a mathematical procedure that converts a set of variables (attributes) into a set of values of uncorrelated variables called principal components. The attributes are then loaded to one of the categories of emotional attitudes, such as Solidarity or Status (Jolliffe, 2002). Using PCA, McKenzie (2008) found the attributes of intelligence, confidence, fluency, and clarity are loaded strongly on the Status dimension compared with the Solidarity dimension. A study by Ryan and Carranza (1975) also reported that intelligence, along with education, wealth, strength, and success, was loaded in the Status dimension (cited in Nesdale & Rooney, 1990, p. 312). Moreover, the results of a PCA conducted by Paunovic (2009) also found that attributes of success, education, and intelligence were load heavily in the Status dimension. More recently, Cavallaro and Chin (2009) found that fluency, hard work, ambition, intelligence, and confidence were loaded more strongly in the Status category when compared with the Solidarity dimension. In contrast, traits such as trustworthiness, friendliness, goodness, kindness, gentleness, pleasantness, honesty, funniness, and modesty have been shown to load in the Solidarity category (McKenzie, 2008; Ryan & Carrama, 1975, as cited in Nesdale & Rooney, 1990, p. 312). Therefore, the loading of an attribute will depend on: the dimension being investigated, the number of categories or subcategories in the dimension, and the sociocultural characteristics of the participants’ speech community.

As the present study proposed the subcategory of Academic Competence, it would not have been prudent to rely solely on previous research for the classification of attributes. Therefore, Principle Component Analysis (PCA) was used to test the loading of each attribute into the categories of Speech Quality, Status and Solidarity, Social Attractiveness and Personal Integrity, and Academic Competence. The results of the PCA analysis, which can be seen in Appendix H, demonstrated that almost all the attributes of
emotional attitude are clearly loaded to either the category of Speech Quality, Status and Solidarity, Social Attractiveness and Personal Integrity, and Academic Competence. However, the attribute of Helpfulness loaded quite similarly to the categories of Social Attractiveness and Personal Integrity and Academic Competence with loadings of .435 and .443, respectively. Moreover, the attribute of Cooperation also loaded heavily to both the categories of Social Attractiveness and Personal Integrity and Academic Competence with loadings of .495 and .393, respectively. Finally, the attribute of Honesty loaded more so to the category of Academic Competence rather than Social Attractiveness and Personal Integrity. Because of the PCA, the Helpfulness, Cooperation, and Honesty attributes were moved into the Academic Competence category.

As one’s emotional attitude about a speaker is synonymous with the concept of identity, the second construct validity issue related to gender. It is widely accepted that gender has an influence on speech patterns. As a result, it was plausible that the speaker’s gender affected a participant’s emotional attitudes more so than their accent. However, previous research has found “no significant difference in ratings given to female speakers by either the male or female participants (Cavallaro & Chin, 2009, p. 151). Furthermore, an analysis of the interview data revealed only two references to the gender of a speaker. The comments were made during discussions about the Social Attractiveness and Personal Integrity of the Chinese and French speakers. It should be noted that both comments were positive. Given the lack of attention shown to the gender of the speakers, it is unlikely that gender negatively swayed the construct validity of the emotional attitude data set.

Another factor to influence the construct validity of a language attitude measure is age. It address this issue, the age of the speakers was restricted. Only speakers between
28-32 years old were selected. Moreover, there was little evidence in the interview data to suggest age played a significant part in the formation of emotional attitudes in the present study. For example, one of the participants made a connection between a speaker’s educational achievement and her age. Mel believed that a Chinese-English user might be a “post-graduate because I think they have got experience and quite old.” It should be noted that Mel’s comment was one of only two instances where a participant made a direct reference to the age of the speaker. The other reference was made by Shane and his discussion of the French-English speaker’s Social Attractiveness and Personal Integrity. Thus, age did not appear to have a significant impact on the students’ emotional attitudes towards L2 speech.

Idiosyncratic voice qualities may also affect the construct validity of language attitudes data. In order to address this issue, the excerpts from both speakers were played at random to reduce the likelihood of a participant becoming fixated on the idiosyncratic features of one speaker rather than the accent type shared by both speakers. The students were also played the same number of excerpts from each speaker to avoid uneven exposure to the idiosyncratic features of one speaker.

3.1.3.3.2 Content Validity

A mixed-methods approach was employed to address the content validity of the attitude data set. Researchers have recently been adopting the mixed-methods approach because it produces empirical research with scientific rigor (Henry & McTaggat, 1996; Van Krieken et al., 2000). Researchers choose a mixed-methods approach to fulfill a specific purpose, such as triangulation, complementarity, development, initiation and expansion (Riazi & Candlin, 2014, p. 143). Moreover, the mix-methods approach has
become quite prevalent in the field of applied linguistics. In fact, approximately 75% of these studies from 1995-2008 used elements of both qualitative and quantitative methodology at some stage in the data collect and analysis process (Hashemi, 2012). Despite the popularity of the mix-methods approach, Silverman (2000) warned novice researchers about the employment of multiple methods and the aggregation of data from different theoretical positions in a misguided attempt to “produce a more complete picture” (p. 99). The current author is a proponent of Situated Cognition Theory. Therefore, it is believed that meaning evolves from actions situated in a particular context. Therefore, some quantifiable data, such as a postal survey, were not considered a realistic representation of an individuals’ attitude towards an accent as the survey elicits attitudes based on the memory of an accent rather than attitudes that are formed whilst listening to an accent. Because this type of data is not considered a true representation of reality, it cannot be aggregated with other types of data, such as responses to an interview, which may be considered authentic representations of reality. The methods selected for this study reflect this epistemological viewpoint and “embrace both qualitative and quantitative methodologies in a systematic way in line with the ontological formulations of the object of study, so that different layers or dimensions of an object may be investigated through appropriate methods” (Riazi & Candlin, 2014, p. 141). The mixed-methods approach in this study had a complementary purpose because the researcher hoped to enhance the explanatory power of the emotional attitude data. More specifically, the complementarity of the rating data with the interview data would facilitate a deeper understanding of ELF users’ emotional attitudes towards L2 speech.
3.1.4 Limitations

There were some limitations associated with the speech samples, the analysis of the quantitative data sets, the data collection procedures, the classification of attributes, and face validity. Firstly, the speech samples were sourced from ELF contexts at various academic institutions around the world. Therefore, there were acoustic differences in the quality of the speech samples. These differences, while not affecting the intelligibility of the recordings, may have had a consequence for the measurement of accentedness. Evidence of this may be seen in the results of the internal consistency test, which was used to assess the level of in-group agreement between members of a listener group. The results of this test indicated that there was little agreement between members of Arabic, Vietnamese, Thai, and Japanese listener groups. Secondly, it is more than likely that the slower speech rates of Speakers Three and Five would have not only impacted the intelligibility and accentedness data sets, but also the attitude data set. Chapter Seven discusses the impact of speech rate for the conclusions drawn as well as possible future research directions. Finally, the study of shared L1 advantage for the accentedness data set was limited by the low number of participants in some of the listener groups. That is, further statistical analysis, such as a Spearman’s rho, could not be calculated for the Japanese and French listener groups because of the limited data available. As a result, the reliability of conclusions drawn about the impact of a shared L1 on judgments of accentedness was hindered.

There was also a limitation concerning the data collection procedures. The data was collected in the computer laboratory of an English language centre. As a result, the participants may have viewed the survey as some form of listening test where they would
be listening to NS varieties of English, which dominate English language listening materials. This expectation may have led some of the participants to identify automatically the first speech sample, which was Chinese-English, as a NS variety of English. The results of the present study indicated that a person being perceived as a NS had a profound influence on an L2 users’ judgment of accentedness and their emotional attitudes towards Speech Quality and the Speaker. This issue could have been addressed by mixing the first five intonation units in order to dilute the impact of such an expectation. Alternatively, the survey should have been conducted in a location more authentic of an everyday academic setting, such as one of the students’ regular tutorial or seminar rooms.

Thirdly, the classification of attributes by the researcher may have been another limitation. The category of Status and Solidarity probably needed to be divided into two distinct subcategories. From the data analysis, it appeared that the attributes of Career Success, Wealth, and Education loaded more heavily towards either Status or Solidarity. That is, the Career Success and Wealth attributes would more likely to be weighted towards a Status category, while the Education attribute would belong to the Solidarity category when investigating the emotional attitudes of ELF users towards L2 speech in a tertiary setting. The loading of each attribute is likely to be strongly influenced by the (perceived) identity of the speaker.

The final limitation related to face validity. Speakers identified as teachers were rated differently to those identified as students. Moreover, the attributes to describe the Academic Competence of a student may also vary to those for the professional competences of teachers. This is a shortcoming regarding face validity, as the current researcher did not expect the participants to assign such specific identities to each
speaker. Thus, research investigating attitudes towards language variation needs to take into account speaker identity, and the impact this will have on theoretical perspectives, such as the loading of attributes, as well as methodological considerations, including data collection tools and procedures.

3.2 Methods

The methods section discusses a number of factors that will need to be considered when constructing the tools to gather information about intelligibility, judgments of accentedness, and emotional attitudes in ELF interactions.

3.2.1 Speech Materials

The matched-guise technique (MGT) is a popular method for studying people’s reactions to accented speech (Liebscher & Dailey- O’Cain, 2009 p. 195). The ingenuity of the MGT, as stated by Jenkins (2007, p. 66), is that “respondents are… led to believe that each speech sample is the voice of a different speaker, whereas each one is the same speaker under different ‘guises’… [such as accents, thus]… any variation in the informants’ evaluations of the [accent] must be the result of the stereotype that they associate with the linguistic cues”. However, there are a number of criticisms of the MGT method. Firstly, the MGT is only reliable when looking at language attitudes towards accent variety. Moreover, it may be possible for a speaker to feign convincingly two or even three accents; however, this becomes virtually impossible in studies that are looking at large numbers of dialects or accents (Bresnahan et al., 2002; Cavallaro & Chin, 2009).
The limitations of the MGT were succinctly put by Garrett, Coupland, and Williams (2003), who described, “the inconveniences of the matched guise technique, especially its salience, perception, accent-authenticity, mimicking-authenticity, community-authenticity, style-authenticity, and neutrality problems” (p. 469).

In light of the aforementioned limitations to the MGT, the present study adopted the VGT (Cavallaro & Chin, 2009). In this technique, different speakers produce a speech sample using their normal accent, and participants are asked to respond to evaluative statements about the speaker. Though the VGT runs the risk of producing imperfect voice qualities between speech samples, there is also the issue of speaker specific voice characteristics influencing participant responses, (both of which were discussed in 3.1.3 Validity issues) but “it has the advantage of employing natural rather than feigned accents” (Nesdale & Rooney, 1990, p 311).

Five selection criteria were used to select the speech samples for the present study. Firstly, speakers were selected according to the prosodic properties of their first language. More specifically, a speaker’s accent was classified according to one of four language typologies, namely Tone, Syllable, Mora, or Stress. Two speakers of each accent variety were sourced. Table 5 shows the typology, language family, and accent of each speaker.

Table 5

*Speakers’ First Language Backgrounds*

<table>
<thead>
<tr>
<th>Speakers</th>
<th>Typology</th>
<th>Family</th>
<th>Accent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 &amp; 5</td>
<td>Tone</td>
<td>Sino-Tibetan</td>
<td>Chinese-English</td>
</tr>
<tr>
<td>2 &amp; 6</td>
<td>Syllable</td>
<td>Latin</td>
<td>French-English</td>
</tr>
</tbody>
</table>
Gender was the second criterion used to select the speakers. It was preferred that speakers of the same sex produce the speech materials because gender differences in speech quality are the “only consistent finding in the past 20 years” (Trudgill, 1983). Despite the claim that NNSs may have more difficulty understanding female voices owing to the higher pitch of female voices (Renoud, 2007, p. 41), female speakers produced all the speech materials. Therefore, all the speakers were female in order to address the reliability issue associated with the measurement of intelligibility. The third criterion also relates to methodological considerations. Two speakers of each accent type were selected so that the responses were more likely to be based on the accent type rather than the idiosyncratic phonological features of an individual speaker. The fourth selection criterion was related to the proficiency of the speaker. In order to be eligible for selection, the speakers had to have been working for three or more years in English-speaking media, thus addressing the issue of proficiency. Finally, the speech samples were sourced from speakers ranging in age between 28-32 years old. This was done to address a construct validity issue associated with the language attitude measure. Thus, five selection criteria guided the selection of speech samples for the Verbal Guide method used in the present study.
3.2.2 Listeners

3.2.2.1 Sample Selection

The listeners were randomly invited to participate voluntarily in the survey held at a predetermined time in one of the CALL rooms at the ELICOS Centre at Latrobe University, Melbourne, Australia. All listeners identified themselves as L2 users and were asked to self-report any hearing impairments as part of the participant recruitment process. As the participants were current university students, all had to passed an English language entry requirement with an advanced English score, such as an overall International English Language Testing System (IELTS) score of 6.5 with a minimum listening score of 6.5, or equivalent. In total, 100 students took the survey. Moreover, the intelligibility, accentedness, and attitude data sets were collected from the same participants. That is, the same group of participants completed the on-line survey for these three dependent variables. The data for the Shared First Language and Shared Typology was used as independent variables. Given below is the bio data on the survey participants:
Figure 3. Gender percentages for 100 participants.

- Males: 49%
- Females: 51%

Figure 4. Percentage of each age range for 100 participants.

- 18-22 yrs: 31%
- 23-27 yrs: 50%
- 28-32 yrs: 11%
- 33 yrs or above: 8%
Figure 5. Percentage of each listener group for 100 participants.

3.2.3 Data Collection

3.2.3.1 Instruments and Procedures

3.2.3.1.1 Intelligibility

An on-line survey software called Qualtrics Web Application was used to collect the intelligibility, accentedness, and attitude data sets. The participants were emailed the
plain language statement and consent form prior to the day of the survey. After answering any questions about the Plain Language Statement and Consent Form (See Appendix F) the students were asked to click on a hyperlink added to the email. In doing so, the student gave their consent to participate in the study. Refer to Appendix G for the Plain Language Statement and Consent Form. The Qualtrics on-line survey was designed as a test battery consisting of four sections. The first section was items relating to the bio data, such as participant’s, age, first language background, and gender. Section two was designed to collect the intelligibility data. This section consisted of data entry boxes for the participants to transcribe the words recognized in five intonation units from each of the eight speakers. The intonation units consisted of 30 words in total per speaker. The third section contained an equal-interval rating scale for participants to record their judgments about the strength of each speaker. The final section of the on-line survey consisted of 23 semantic differential scales designed to measure the participants’ emotional attitudes towards four accent varieties. Refer to Appendix D for a sample of the survey items. Given below are the procedures used to collect the three quantitative data sets: intelligibility, accentedness, and attitudes.

To investigate the intelligibility, five excerpts from each speaker were played once using QuickTime software and projected over two speakers in a Computer Assisted Language Laboratory (CALL) classroom. Participants were instructed to listen to each excerpt and record every word they recognized into the survey. For example, the first excerpt from Speaker One was played and then the students were then given time to type every word they recognized into the survey in the column labeled Speaker 1A. This procedure was repeated for all eight speakers. Each excerpt was played only once to address the issue of construct validity mentioned in 3.1.3.2 Accentedness Judgments.
3.2.3.1.2 Judgments of Accentedness

After the intelligibility component of the instrument, participants were asked to judge the strength of the speaker’s accent on a 9-point equal-interval rating scale. The participants were instructed to look at the accentedness rating scale and rate the accent using the slider bar on a continuum from “no accent” to “very strong accent”. It became apparent that some may have been unfamiliar with this type of survey question. This was evident after examining the results of the pilot study. Some participants were treating the scale as a two-interval scale and sliding the rating bar to the extreme left or extreme right. Perhaps unaware that they could place the slider anywhere on the scale, the participants were inadvertently producing nominal data rather than providing an estimate of strength. The instructions at this stage of the survey were carefully explained so that the participants knew the purpose of the slider bar. The participants were given a moment to judge the accent strength of the speaker. The participants repeated section two (intelligibility) and three (accentedness) for all eight speakers.

3.2.3.1.3 Emotional Attitudes

The last section of the on-line survey was emotional attitude. The attitude component of the on-line survey required participants to rate 23 attributes (5 = Speech Quality, 3 = Status and Solidarity, 6 = Social Attractiveness and Personal Integrity, 10 = Competence). The Chinese-English accent was the first accent to be rated, followed by the French-English accent, Japanese-English accent, and lastly, the German-English accent. The intonation units from both the Chinese speakers, for example, were played randomly on a continuous cycle for 20 minutes. The aim of this was to address construct
validity issues mentioned in Section 3.1.3.3.1. The attributes of each accent variety were rated using a 9-point semantic differential scale. Similar to the accentedness test item, the pilot study revealed the novelty of this question type to some participants. The pilot study also raised concerns regarding the meaning of some attributes, such as ‘intelligibility’ and ‘autonomy’ Once again, the instructions given to the participants at the beginning of Section Four carefully explained how to rate an attribute using the slider bar. The instructions also clarified the meaning of ambiguous attributes.

3.2.4 Data Analysis

The quantitative data was analyzed using Excel and SPSS software packages. Though parametric measures have been used to compute intelligibility and accentedness data, the current researcher believes that intelligibility scores and ratings from accentedness and attitude are types of ordinal data (Andrich, 1978; Hustad, Schueler, Schultz, & DuHadway, 2012). Therefore, non-parametric tests were considered the most appropriate analytical tool despite their reduced power. The data was analysed using median frequencies, Spearman’s rank correlation coefficient, box plots, Wilcoxon signed rank test, intraclass correlation coefficient, and Principal Component Analysis. Moreover, the data was presented in a number of formats, including tables, figures, and text.

In section 5.1, the quantitative data for intelligibility is analyzed and discussed. The section starts by analyzing the intelligibility scores of 100 listeners. Then, the analysis shows the results for the independent variables of Shared First Language and Shared Typology. Lastly, between-group correlations were run, which can be seen in Table 13. The same set of analysis was done for the accentedness data, but the between-
group correlations for the accentedness data is presented in Table 25. Before the results for emotional attitudes are discussed, there is an investigation of a possible relationship between intelligibility and accentedness in ELF. The third data set analyzed in section 5.1 is the emotional attitudes data. These results are presented according to the four categories of emotional attitude, which are Speech Quality, Status and Solidarity, Social Attractiveness & Personal Integrity, and Academic Competence.
CHAPTER FOUR

Interpretative Research Methodology

This study employed a quantitative approach to investigate intelligibility, accentedness, and emotional attitudes in the ELF context of an Australian university. However, it may also be argued that an interpretative research methodology is the most suitable approach for studying emotional attitudes towards linguistic variation. Therefore, this study adopted a mix-methods approach to the investigation of emotional attitudes in an Australian ELF context. Section 4.1 details the methodological perspectives and approaches used to investigate emotional attitudes towards language variation as well as reliability issues and limitations. Section 4.2 explains the methods used to source the speech samples, recruit listeners, collect the data, and analyze the data.

4.1 Research Design

4.1.1 Methodological Perspectives and Approaches

Traditionally, studies have taken a quantitative approach to the investigation of language attitudes. For example, numerous studies have “tended to rely exclusively on statistics-based methods of analysis, such as the [MGT]” (Liebscher & Dailey- O’Cain,
2009, p. 195). However, some researchers have started to question this dependence on quantitative data. Some of the criticisms aimed at quantitative methods include:

...difficulty in applying these findings to real-life situations; suppression of variability of the findings; separation of the attitude from the language and its speakers; pressure on participants to respond along a scale that has been worked out by researchers; variability in participants’ interpretation of and responses to data collection instruments, such as a semantic-differential scale. (Liebscher & Dailey- O’Cain, 2009, p. 195)

To address these concerns, many researchers in applied linguistics field employ a mixed-methods approach. Many researchers now acknowledge that qualitative methods, which often produce “rich, insightful data for analysis and interpretation”, can afford empirical research greater scientific rigor (Lochland, 2008, p. 28). The present study hoped that the employment of a mix-methods approach would help the researcher manage the shortcoming of one approach by complementing it with the strengths of another.

The following section gives a detailed account of the dependability issues concerning the interpretive methods, the limitations of using qualitative methods for the measurement of language attitudes, as well as the instruments and procedures used to study L2 users’ emotional attitudes towards foreign accented speech.

4.1.2 Reliability Issues

The reliability of qualitative research findings depends on two conditions: consistency and dependability. Firstly, consistency implies that inferences are consistent
with what one might expect from the data collected and the consistency with which instances might be assigned to the same category by a different researcher or by the current author on a different occasion. Regarding the current study, consistency may refer to the assignment of attributes to the different categories of emotional attitudes, such as Status and Solidarity, Social Attractiveness or Competence. Secondly, dependability implies that the researcher’s personal and theoretical perspectives about the study are apparent, and the report gives a detailed explanation of the research process, such as how data was collected and the categories derived (Merriam, 1998; Silverman, 2000).

Moreover, it is highly likely that participants, in addition to the attributes targeted by the interviewer, will discuss attributes or even categories that deviate from the scope of the study. For example, participants may discuss their emotional attitudes towards their own L2 variety, for example. If a study is not designed with the flexibility to accommodate such tangential discussions, the dependability of its inferences may be brought into question. In addition, the final product is deprived of the qualitative aspects sought in this approach to research. To address this issue, Altheide and Merriam (as cited in Merriam, 1998, p. 160) recommend the use of a flexible reporting framework. The reporting framework relies on four approaches to classify attributes during the data analysis process. Firstly, the data analysis is comprehensive in that all pieces of data can be assigned to a particular category. Secondly, all attributes are mutually exclusive, which means a piece of data (i.e. attribute) cannot be allocated to more than one category. Thirdly, each category and subcategory is specific so that the reader can easily determine its nature. Lastly, the framework is conceptually congruent in the manner that categories and subcategories are formulated (Merriam, 1998, p. 157). Thus, the current study used a semi-structured interview based on a flexible reporting framework. The interview
investigated the emotional attitudes of ELF users to accented speech. A semi-structured interview style was chosen to allow for a discussion of attributes associated with Speech Quality, Status and Solidarity, Social Attractiveness and Personal Integrity, and Academic Competence as well as any others the participants may raise during the conversation.

4.1.2.1 Flexible Reporting Framework

To address the issue of dependability, the current study used a flexible reporting framework to guide the data collection and analysis. The flexibility of the framework allowed it to be structured on categories identified in the literature, but also change to incorporate “themes, topics, anomalies, and events evident during the interviews” (Yin, 2003, p. 105). The categories in the present study refer to the categories and subcategories of the emotional component of language attitudes. Refer to Table 3 for a list of the attributes assigned to the categories of Speech Quality, Status and Solidarity, Social Attractiveness and Personal Integrity, and Academic Competence.

4.1.2.2 Research Protocols

A research protocol was used to guide the research process and address reliability issues associated with qualitative data collection and analysis. Some procedures were repeated in a cyclic manner throughout the research whilst others were specific to a particular stage in the research. Refer to Appendix A for a list of the research protocols and procedures that guided the collection and analysis of the interpretive data.
4.1.3 Limitations

As with the quantitative methods, a number of limitations concerned the interpretative methodology, such as data triangulation, interview skills, research transparency, and ethnocentrism. Firstly, the scope of the research did not allow a triangulation technique to be employed (Merriam, 1998). In this technique, data is collected from a variety of sources, such as interviews and observations. In doing so, the triangulation of data helps to ensure the findings are dependable and consistent. Instead, data from one interpretative method were collected.

Secondly, the quality of research methods and the comprehensiveness of narratives may have been hindered by this researcher’s interviewing skills. It takes a unique set of skills to be an apt interviewer. A researcher’s experience and ability to collect and analyze data will have an impact on conclusions drawn. Therefore, researchers should take a number of steps to address this limitation. It is important that a large-scale study should be preceded by a pilot study to tune the interviewer’s skills, especially those dealing with affective aspects of the interview. For example, humor and slight clumsiness can be used to develop a rapport with participants and put them at ease. By addressing the affective component of the interview, it is hoped that the participants will be encouraged to provide responses that are more candid during the interview.

The third limitation is concerned with the transparency of research methods. There is always the danger in interpretative approaches to research that the narratives, such as those presented in Chapter Six Narratives, are a true representation of the participants’ ideas, opinions, and beliefs. Therefore, it is important that the data collection and transcription of the interview recordings are conducted in a transparent manner. It is
recommended that a flexible reporting framework and research protocols be used to guide
the categorization of attributes and operational procedures, respectively; thus, the
narratives and subsequent inferences will represent as closely as possible the opinions of
the participants.

The final limitation involved the transition from data analysis to interpretation. All
researchers employing interpretive approaches need to acknowledge the danger of
moving beyond the concepts presented by the data and into a realm of invalid and
incredible inferences. This transition period, in part, may be influenced by Ethnocentrism,
or a researcher’s lack of awareness of preconceived views about a cultural group and
inability to be self-critical of personal experiences and agendas (Hujala & Puroila, 1998,
p. 220; Merriam, 1998, p. 188). This was not a limitation in the current study as the
researcher was well aware of the need to be impartial.

4.2 Methods

4.2.1 Speech Materials

Four accent varieties were used to investigate the intelligibility and accentedness
of L2 speech from a NNS’s perspective. The same four accent varieties were used to
study L2 users’ emotional attitudes towards accented speech. The four accent varieties
included Chinese-English (Speaker One and Five), French-English (Speaker Two and
Six), Japanese-English (Speaker Three and Seven), and German-English (Speaker Four
and Eight). These types were chosen according to their typology, which enabled the
investigation of a Shared First Language Advantage and its possible impact on the
intelligibility and accentedness of L2 speech. Five excerpts were sourced from two speakers of each accent variety. Thus, there were ten excerpts for each accent type, which made a total of 40 excerpts. An excerpt was selected based on an intonation unit. The total number of words for each speaker was 30. All the utterances were produced in higher education institutions in Australia, Germany, and Finland. The speech materials consisted of both student and lecturer talk. The Japanese-English and Chinese-English accent samples were recorded at La Trobe University, Melbourne, Australia. The French-English and German-English accent varieties were sourced from the ELFA and VOICE corpora, respectively. Refer to Appendix H for the data license agreements for the corpora.

4.2.2 Listeners

4.2.2.1 Sample Selection

Participants were selected to partake in a semi-structured thematic interview based on the responses they gave in the attitudes section of the quantitative survey. While focus groups are a popular tool in mixed-methods research, students in the present study were asked to rate the speech of other NNSs. To ensure the interview participants could speak freely about their emotional attitudes towards L2 speech, one-to-one interviews were used as the qualitative data collection tool. The efficacy of this decision became abundantly clear when participants were asked to discuss their negative ratings for the intelligence or friendliness of a speaker.
Fifteen participants were recruited to participate in the semi-structured interview. The participants were selected according to a number of selection criteria. Firstly, participants were selected so that there would be an even representation of both genders. As a result, eight of the participants were male and seven were female. Secondly, the interviewees were chosen based on their first language background so that a diverse array of language backgrounds would make up the participant cohort. Finally, and most importantly, participants were selected based on the ratings they gave to each of the attributes of emotional attitude. That is, 15 survey participants were invited to participate in a semi-structured interview because they rated the attributes of the Chinese-English, Japanese-English, French-English, and German-English accents more positively or negatively than their fellow survey participants.

These questions would have been ethically impossible to ask in a focus group if one of the participants had had the same accent type as one of the speech sample. To exemplify, it was not possible to ask a participant why they thought the Chinese-English speaker sounded unintelligent if there had been a Chinese national present in the focus group. Therefore, private interviews were the preferred data collection instrument.

4.2.2.1.1 Participants

In accordance with the ethics of social research, pseudonyms were used for each of the participants. The participants were encouraged to choose their own pseudonym. The biographic details of each participant are given below in Table 6.
Table 6

*Biodata of 15 Interview Participants*

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Gender</th>
<th>Nationality</th>
<th>Age</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mark</td>
<td>Male</td>
<td>Thai</td>
<td>26</td>
<td>Master of International Business</td>
</tr>
<tr>
<td>Kylie</td>
<td>Female</td>
<td>Indonesian</td>
<td>22</td>
<td>Bachelor of Commerce</td>
</tr>
<tr>
<td>David</td>
<td>Male</td>
<td>Vietnamese</td>
<td>26</td>
<td>Master of Computer Systems</td>
</tr>
<tr>
<td>Mel</td>
<td>Female</td>
<td>Vietnamese</td>
<td>24</td>
<td>Master of International Relations</td>
</tr>
<tr>
<td>John</td>
<td>Male</td>
<td>Lebanese</td>
<td>27</td>
<td>Master of Genetic Engineering</td>
</tr>
<tr>
<td>Andrew</td>
<td>Male</td>
<td>Chinese</td>
<td>21</td>
<td>Bachelor of Commerce</td>
</tr>
<tr>
<td>Rick</td>
<td>Male</td>
<td>Mexican</td>
<td>25</td>
<td>Master of Accounting</td>
</tr>
<tr>
<td>Shane</td>
<td>Male</td>
<td>Chinese</td>
<td>24</td>
<td>Master of Finance</td>
</tr>
<tr>
<td>Barry</td>
<td>Male</td>
<td>French</td>
<td>28</td>
<td>Master of Business Administration</td>
</tr>
<tr>
<td>Emma</td>
<td>Female</td>
<td>Chinese</td>
<td>24</td>
<td>Master of International Business</td>
</tr>
<tr>
<td>Steve</td>
<td>Male</td>
<td>Indonesian</td>
<td>27</td>
<td>Master of Education</td>
</tr>
<tr>
<td>Name</td>
<td>Gender</td>
<td>Ethnicity</td>
<td>Age</td>
<td>Course</td>
</tr>
<tr>
<td>-------</td>
<td>--------</td>
<td>-----------</td>
<td>-----</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>Helen</td>
<td>Female</td>
<td>Chinese</td>
<td>21</td>
<td>Bachelor of Commerce</td>
</tr>
<tr>
<td>Tricia</td>
<td>Female</td>
<td>Pakistani</td>
<td>26</td>
<td>Master of Health Administration</td>
</tr>
<tr>
<td>Liz</td>
<td>Female</td>
<td>French</td>
<td>19</td>
<td>Bachelor of Health Science</td>
</tr>
<tr>
<td>Jamie</td>
<td>Female</td>
<td>Japanese</td>
<td>28</td>
<td>Master of TESOL</td>
</tr>
</tbody>
</table>

4.2.3 Data Collection

4.2.3.1 Instruments

Semi-structured interviews were chosen as the most pertinent interpretive instrument to study the emotional attitudes of L2 users toward language variety. Some may argue that there is considerably more depth and complexity to the attitudes one has towards language variation than what might be revealed by a participant during an interview. However, there are a number of reasons why interviews were considered an appropriate data collection method for the present study. Firstly, Silverman (2000, p. 123) believed that interviews are a “culturally rich [method] through which interviewers and interviewees, in concert, generate plausible accounts of the world”. Moreover, the situated nature of a narrated reality was particularly relevant to the current investigation for several reasons. Firstly, it was the emotional attitudes of L2 users situated in an Australian tertiary setting that was the focus of this thesis. Secondly, the knowledge bases used to form emotional attitudes develop over time, which renders other interpretive methods less appropriate.
methods, such as observation, impossible. Thirdly, there is only a weak correlation between language attitudes and overt behavior, again restricting the use of observation as a data collection tool. Finally, Silverman (2000) adds support to this choice when he said that interviews were, “a culturally rich (method) through which interviews and interviewees, in concert, generate plausible accounts of the world”. Thus, semi-structured thematic interviews were used to collect data on the emotional attitudes of L2 users towards different varieties of L2 speech.

The interview questions were semi-structured to allow for the emergence of new categories within the 4.1.2.1 Flexible Reporting Framework. In addition, the interview questions were formulated in such a way that they not only addressed each of the attributes of emotional attitude under investigation, but also corresponded to each of Merriam’s (1998) question types: Hypothetical, Ideal Position, Devil’s Advocate and Interpretive (p. 77). Firstly, Hypothetical questions were used to elicit descriptions of a participant’s actual experience. In addition, Ideal Position questions facilitated a comparison between positives and negatives opinions. Furthermore, Devil’s Advocate questions encouraged participants to discuss their opinions of controversial issues. Lastly, interpretive questions were used throughout an interview to clarify misunderstanding and provide an opportunity for participants to elaborate upon their responses.

The Devil’s Advocate question type was particularly useful with some of participants in the present study as the participants came from cultures where value face-saving behavior is expected on the part of themselves and their interlocutor. Since the Devil’s Advocate questions asked participants to challenge the opinions of a third, unknown person, it was quite effective in promoting a discussion of embarrassing or
antagonizing issues that may have otherwise been taboo according to the sociocultural norms of a participant with a Confucian heritage background, for example.

4.2.3.2 Procedures

The interviews were on average 20 minutes in duration, digitally recorded to an Audacity audio file using an external microphone connected to a laptop. The interviews were conducted in a staff office at La Trobe University at the participants’ discretion. The participants were sent an email with the Plain Language Statement and Consent Form prior to the day of the survey. After answering any questions about the Plain Language Statement and Consent Form, the students were asked to sign the Consent Form. Refer to Appendix G for the Plain Language Statement and Consent Form. In the next step, the researcher looked at a participant’s survey and identified ratings of particular interest for the Chinese speakers. Following this, the participants were played samples of the Chinese-English accent before being asked to discuss the rating they gave on the survey. However, the excerpts from both speakers were played at random so that the participants were not exposed to one speaker more so than the other was, and thus, not likely to be influenced by the idiosyncratic features of either speaker. This was the same technique discussed in 3.1.3.3.1 Construct Validity

Before asking any questions about the responses given on their survey, the participants were played each accent type in order to stimulate emotional attitudes towards that particular accent variety. The intonation units of both Chinese speakers, for example, were alternated when stimulating a response from participants. The excerpts were alternated on a continuous cycle from one speaker to the next until the participants
indicated verbally that they had heard enough and were able to discuss their responses to
the Chinese-English accent on the attitude section of the survey. This process was
repeated for the French-English, Japanese-English, and German-English accent varieties.
The interview explored the participants’ attitudes towards each accent by asking
questions connected to the themes of Speech Quality, Status and Solidarity, Social
Attractiveness and Personal Integrity, and Academic Competence. Refer to Appendix C
for a list of the interview questions. The interviews were semi-structured so that they
allowed the participants to express freely their opinions as well as afforded the researcher
with an opportunity to prompt for further information if deemed necessary.

4.2.4 Data Analysis

In order to investigate the emotional attitudes ELF users have towards L2 speech,
the present study adopted a constant comparative method for its analysis of the interview
data (Merriam, 1998, p. 159). This method has an inductive, concept building orientation
where the researcher identifies an incident from an interview that is of particular interest,
and compares it with other incidents that appear in the data set. Moreover, it is a
comprehensive approach because it allows the researcher to investigate themes identified
in the literature as well as new ones. Guided by the flexible reporting framework, the
present study compared the students’ responses for each attribute of emotional attitude. It
was hoped that the constant comparative method would improve the consistency of the
qualitative results and facilitate the drawing of insightful conclusions about ELF users’
emotional attitudes towards L2 speech in an Australian tertiary setting.
This method consisted of three procedures. The first procedure involved a within-category and between-category comparison of the attributes. The second procedure compared the degree to which an attribute was rated either negatively or positively. The third procedure compared the frequency in which participants referred to either their systemic knowledge of the English language and language universals, such as its phonology, lexicon, and syntax, or their schematic knowledge of the world.

A number of steps were taken to address the reliability of interpretive research. Firstly, the present study constantly compared the data produced by participant to the reporting framework to guide the data analysis process. Secondly, all the interviews and transcriptions were recorded on digital files to facilitate a comprehensive treatment of the data. Secondly, the qualitative data was presented as a narrative. It was hoped that this approach would not only give the readers an opportunity to assess the accuracy of the comparisons made between and within each category of emotional attitudes but also allow the reader to develop a vicarious experience of the interview process and make judgments about the dependability of inferences given in 7.3 Emotional Attitudes.
Quantitative Results

5.1 Intelligibility

It was hypothesized that the intelligibility of L2 speech may be affected by a number of factors, such as a Shared First Language or Shared Typology between interlocutors. Therefore, the intelligibility data set was analyzed according to Shared First Languages between the listener groups and the speaker’s accent type. Because the data was also examined for possible influences of a Shared Typology on the intelligibility of L2 speech, the listener groups were categorized as being a Tone language, a Syllable language, a Mora language, or a Stress language. This was done to correspond to the typologies of the Chinese-English, French-English, Japanese-English, and German-English accent types, respectively. Unfortunately, there was not enough data collected from Japanese listeners, for example, to investigate the impact of a Shared First Language for the Mora languages. Thus, results were only generated for listener groups corresponding to the Tone, Syllable, and Stress typologies. Moreover, it has been recommended that a minimum of ten values are needed to calculate a Spearman’s rank correlation coefficient (Harding University, 2017). Because the number of values for the Indonesian, Japanese, and French listener groups fell below this figure, Spearman’s rank correlation tests were not conducted for these listener groups in the intelligibility data set.

There were two levels of analysis for the intelligibility data. The first level involved the analysis of the median scores for each accent type, initially by all the
participants and then by listener group. Bar charts were used to represent visually the median score of each accent type, which were colour coded for easy interpretation. If a bar chart reveals identical medians between two or more accent types, another level of analysis was used to investigate the relationship between the speaker pairs. A Spearman’s rank correlation coefficient, or *rho*, was performed in order to assess the degree of correlation between speakers with identical median ratings (Linebach, Kovacsiss, & Tesch, 2014). Given below are the overall intelligibility scores of 100 L2 listeners for each accent type.

*Figure 6.* Median intelligibility scores of 100 L2 listeners for Chinese-English, French-English, Japanese-English, and German-English accents.

Figure 6 shows the median intelligibility scores of 100 L2 listeners from eight linguistic backgrounds. Overall, the majority of the accent types were equally intelligible.
Three of the accent varieties, including the Chinese-English, Japanese-English, and the German-English accents were moderately intelligible. The Japanese speakers were the most intelligible, with an average intelligibility score of 22 out of a possible 58 words accurately recognised and recorded in the survey. Similarly, the Chinese speakers were quite intelligible when compared to the Japanese and German speakers. However, the L2 listeners could only recognise eleven out of a possible 58 words spoken by the French speakers. This was the lowest score for any of the four accent varieties.

The results for the Chinese and Japanese speakers were quite similar. In order to draw more robust conclusions about the intelligibility of each accent type, further analysis was needed. Therefore, a Spearman’s rho and their p-values were calculated for all pairs of results, which are shown in Table 7. Note that this is for all listeners.

<table>
<thead>
<tr>
<th>Language 1</th>
<th>Language 2</th>
<th>Rho</th>
<th>Strength</th>
<th>p Value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinese</td>
<td>French</td>
<td>.121</td>
<td>Very Weak</td>
<td>.087</td>
<td>Not Sig.</td>
</tr>
<tr>
<td>Chinese</td>
<td>Japanese</td>
<td>.640</td>
<td>Strong</td>
<td>.000</td>
<td>Significant</td>
</tr>
<tr>
<td>Chinese</td>
<td>German</td>
<td>.216</td>
<td>Weak</td>
<td>.002</td>
<td>Significant</td>
</tr>
<tr>
<td>French</td>
<td>Japanese</td>
<td>.134</td>
<td>Very Weak</td>
<td>.059</td>
<td>Not Sig.</td>
</tr>
<tr>
<td>French</td>
<td>German</td>
<td>.024</td>
<td>Very Weak</td>
<td>.733</td>
<td>Not Sig</td>
</tr>
</tbody>
</table>
Table 7 shows the $\rho$ and $p$-values for all the listeners about each speaker combination. In general, there was no significant relationship between the majorities of the accent varieties. However, the results of the Spearman’s $\rho$ did indicate a strong correlation between the Chinese and Japanese speakers. Moreover, there was a weak correlation between the Chinese-English and German-English accents, which was significant at the .05 level. The remaining speaker pairs showed a weak correlation between their intelligibility scores and none were at a .05 level of significance.

5.1.1 Shared First Language

It has been suggested that a Shared First Language between interlocutors, also known as the Interlanguage speech intelligibility benefit, has an influence on the intelligibility of L2 speech (Hayes-Harb, Smith, Bent, & Bradlow, 2008). More specifically, sharing a first language background with an interlocutor could make speech more intelligible. Figure 7 has the intelligibility score given by the Chinese listeners for each accent type.
Figure 7 shows the median intelligibility scores of the Chinese listeners for each accent variety. Overall, it can be seen that the Japanese speakers, with a median intelligibility score of 21, were the most intelligible speakers according to the Chinese listeners. Similarly, the Chinese-English accent was highly intelligible when compared to the European accent varieties. The French and German speakers were the least intelligible for the Chinese listeners, at ten and 16, respectively. Moreover, there was more of a disparity between the intelligibility scores of the European varieties than the Asian varieties.

Similar to Table 7, the scores for the Chinese and Japanese speakers were quite close. Once again, further analysis was needed. A set of Spearman’s rho was calculated using the Chinese listeners. Table 8 contains the results of the Spearman’s rho for the Chinese listeners with respect to all speaker combinations with a two-tailed test.
Table 8

Spearman’s Rho Values for Chinese Listeners with Respect to All Speaker Combinations

<table>
<thead>
<tr>
<th>Listener</th>
<th>Mother Speaker Languages</th>
<th>Rho&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Strength</th>
<th>p Value</th>
<th>Significance&lt;sup&gt;c&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinese</td>
<td>Chinese and French</td>
<td>-.414</td>
<td>Moderate</td>
<td>.000</td>
<td>Significant</td>
</tr>
<tr>
<td>Chinese</td>
<td>French and Japanese</td>
<td>.275</td>
<td>Weak</td>
<td>.016</td>
<td>Significant</td>
</tr>
<tr>
<td>Chinese</td>
<td>Japanese and German</td>
<td>.187</td>
<td>Very Weak</td>
<td>.105</td>
<td>Not Sig.</td>
</tr>
<tr>
<td>Chinese</td>
<td>Chinese and Japanese</td>
<td>.749</td>
<td>Strong</td>
<td>.000</td>
<td>Significant</td>
</tr>
<tr>
<td>Chinese</td>
<td>Chinese and German</td>
<td>.177</td>
<td>Very Weak</td>
<td>.125</td>
<td>Not Sig.</td>
</tr>
<tr>
<td>Chinese</td>
<td>French and German</td>
<td>.416</td>
<td>Moderate</td>
<td>.000</td>
<td>Significant</td>
</tr>
</tbody>
</table>

<sup>a</sup> N = 80 in all instances.

<sup>b</sup> df (degrees of freedom) is 158 in all instances.

<sup>c</sup> α = 0.05 in all instances.

Table 8 details the rho and p-values for the Chinese listeners about each speaker combination. There was a strong correlation between the Chinese and Japanese speakers. Moreover, there was also moderate correlation between the intelligibility scores for the Chinese and French speakers, which was negative, and a positive correlation between the French and German speakers. However, there was no significant correlation between the Chinese-English and German-English accents or the Japanese and German speakers. It
should be noted that a positive correlation is a correlation in the same direction. More specifically, if one variable increases, the other variable also increases. On the other hand, if one variable decreases, then the other also decreases. For example, the \( \rho \) value for the Chinese and Japanese speakers was positive because both speakers received scores that moved in the same direction, or increased. A negative correlation signifies intelligibility scores that moved in opposite directions. More specifically, if one variable increases, the other decreases. For example, there was a negative \( \rho \) value for the Chinese and French speakers because the intelligibility scores for the Chinese speakers tended to increase while the scores for the French speakers tended to decrease in comparison.

Figures 8 and 9 illustrate the intelligibility scores for the French and Japanese listener groups, respectively. Due to a lack of data, Spearman’s \( \rho \) values could not be calculated for French and Japanese listener groups. As a result, an analysis of the data could only be conducted on the median intelligibility scores for each group. The first figure details the median intelligibility scores for the four accent types according to the French listeners.
Figure 8. Median intelligibility scores of French listeners for Chinese-English, French-English, Japanese-English, and German-English accents.

Figure 8 shows the median intelligibility scores of the French listeners for each accent variety. Overall, the French listeners found all the accent varieties quite intelligible. The German speakers scored the highest for intelligibility with a total of 28 out of 58 words recognised. The Japanese and Chinese speakers were quite similar in their intelligibility scores at 25 and 24, respectively. The least intelligible accent variety, according to the French listeners, was the French-English accent.

The final figure to investigate the possible impact of a Shared First Language on the intelligibility of L2 speech shows the intelligibility scores of Japanese listeners for the four accent types.
Figure 9. Median intelligibility scores of Japanese listeners for Chinese-English, French-English, Japanese-English, and German-English accents.

Figure 9 shows the median intelligibility scores of Japanese listeners for the Chinese French, Japanese, and German speakers. Generally, the Asian accent varieties have higher intelligibility scores than the European varieties. The Japanese listeners found the Japanese-English to be the most intelligible at 28. The Chinese-English accent was also quite intelligible according to the Japanese listeners. However, the German and French speakers, especially the French ones, posed considerable issues for the Japanese listeners.

In summary, there seemed to be little evidence of a positive or negative impact on the intelligibility of L2 speech when interlocutors shared a first language background. The Chinese listener group found the Japanese-English accent, which had a strong correlation with the Chinese-English accent, as the most intelligible of the four L2 varieties. Similarly, the Japanese listeners also found Japanese-English accent followed
closely by the Chinese-English accent types as the most intelligible accent type. However, the French listeners found the German-English accent to be the most intelligible. Apart from this exception, the rest of the results for the French listeners were very similar to the Chinese and Japanese listener groups. All in all, the results for each listener group in section 5.1.1 Shared First Language and tended to mirror the results for all the listener groups seen in Figure 6 rather than support the notion that a shared background between two NNSs has a positive impact on the intelligibility of L2 speech.

5.1.2 Shared Typology

Lehiste (1977) noted that little is known about the possible advantage afforded to L2 listeners whose first languages are typologically similar. Over a decade later, Bradlow and Bent (2008) took this question one step further by asking if the intelligibility benefits of sharing language typology could be “generalize[d] to a typologically-related novel accent” (p. 722). The following sections investigate the possible impact of a Shared Typology on the intelligibility of L2 speech. Listeners were grouped as being either a Tone language, a Syllable language, a Mora language, or a Stress language according to their first language background. The first typology to be discussed is the Tone languages.

5.1.2.1 Tone Languages

The Thai and Vietnamese languages have been classified as having a Tone typology (Burnham & Francis, 1996; Le, Tran, Castelli, Besacier, & Serignat, 2004). Their intelligibility scores were collated and compared to see if these Tone language
listeners found the Chinese speakers to be more intelligible than the other speakers. The first figure details the median intelligibility scores for the four accent types according to the Thai listeners.

Figure 10 illustrates the median intelligibility scores of Thai listeners for each accent variety. The Thai listeners found the Asian accent varieties to be the most intelligible, with the Japanese speakers scoring the highest at 23, followed closely by the Chinese speakers with a score of 22. The German-English accent was slightly less intelligible than the Chinese-English accent. Finally, the Thai listeners found the French-English accent to be half as intelligible as the Japanese-English accent.

Because the intelligibility scores for the Chinese and Japanese speakers were very close, it was still unclear as to whether the Thai listeners found the Tone language to be
more intelligible than the Mora language. Therefore, a set of Spearman’s \( \rho \) was calculated using Thai listeners. The table below contains the results of the Spearman’s \( \rho \) for the Thai listeners with respect to all speaker combinations with a two-tailed test.

Table 9

*Spearman’s \( \rho \) Values for Thai Listeners with Respect to All Speaker Combinations*

<table>
<thead>
<tr>
<th>Listener Mother Tongue (^a)</th>
<th>Speaker Languages</th>
<th>( \rho ) (^b)</th>
<th>Strength</th>
<th>( p ) Value</th>
<th>Significance (^c)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thai</td>
<td>Chinese and French</td>
<td>-.489</td>
<td>Moderate</td>
<td>.029</td>
<td>Significant</td>
</tr>
<tr>
<td>Thai</td>
<td>French and Japanese</td>
<td>.430</td>
<td>Moderate</td>
<td>.058</td>
<td>Not Sig.</td>
</tr>
<tr>
<td>Thai</td>
<td>Japanese and German</td>
<td>.136</td>
<td>Very Weak</td>
<td>.568</td>
<td>Not Sig.</td>
</tr>
<tr>
<td>Thai</td>
<td>Chinese and Japanese</td>
<td>.689</td>
<td>Strong</td>
<td>.001</td>
<td>Significant</td>
</tr>
<tr>
<td>Thai</td>
<td>Chinese and German</td>
<td>.194</td>
<td>Very Weak</td>
<td>.413</td>
<td>Not Sig.</td>
</tr>
<tr>
<td>Thai</td>
<td>French and German</td>
<td>.228</td>
<td>Weak</td>
<td>.334</td>
<td>Not Sig.</td>
</tr>
</tbody>
</table>

\(^a\) \( N = 22 \) in all instances.

\(^b\) df (degrees of freedom) is 42 in all instances.

\(^c\) \( \alpha = 0.05 \) in all instances.

Table 9 shows the \( \rho \) and \( p \)-values for the Thai listeners about each speaker combination. According to the Table 9, the strongest correlation between any two of the accent types was between the Chinese-English and Japanese-English accents with a \( \rho \) value of .689. The Chinese-English and French-English accent varieties also had a
moderate correlation with a \textit{rho} value of -.489. There was no significant correlation between any of the remaining combinations of speakers.

The other Tone language to be investigated was the Vietnamese listeners. Figure 11 showed the Vietnamese listeners’ intelligibility scores for the Chinese, French, Japanese, and German speakers.

![Figure 11. Median intelligibility scores of Vietnamese listeners for Chinese-English, French-English, Japanese-English, and German-English accents.](image)

Figure 11 gives the median intelligently scores of Vietnamese listeners for each accent variety. In general, the Vietnamese listeners found the Asian accents to be the most intelligible. The Japanese-English accent scored the highest of any of the four accent varieties with a median score of 19. The Chinese speakers also scored highly according to the Vietnamese listeners with a median score of eighteen. Despite the Asian accent varieties having similar median scores, there was a disparity between the European
varieties. For example, the German speakers received a median of sixteen, while the French speakers’ scores were much lower with a median intelligibility score of just ten.

Similar to the patterns seen in Figure 10, further analysis was required. A set of Spearman’s rho was calculated to assess the association between the accent types with similar intelligibility scores, such as the Chinese-English and Japanese-English accents. Table 10 shows the results of the Spearman’s rho for the Vietnamese listeners with respect to all speaker combinations with a two-tailed test.

Table 10
Spearman’s Rho Values for Vietnamese Listeners with Respect to All Speaker Combinations

<table>
<thead>
<tr>
<th>Listener</th>
<th>Mother Tongue</th>
<th>Speaker Languages</th>
<th>Rho&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Strength</th>
<th>p Value</th>
<th>Significance&lt;sup&gt;c&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vietnamese</td>
<td>Chinese and French</td>
<td>-.515</td>
<td>Moderate</td>
<td>.002</td>
<td>Significant</td>
<td></td>
</tr>
<tr>
<td>Vietnamese</td>
<td>French and Japanese</td>
<td>-.480</td>
<td>Moderate</td>
<td>.004</td>
<td>Significant</td>
<td></td>
</tr>
<tr>
<td>Vietnamese</td>
<td>Japanese and German</td>
<td>.191</td>
<td>Very Weak</td>
<td>.279</td>
<td>Not Sig.</td>
<td></td>
</tr>
<tr>
<td>Vietnamese</td>
<td>Chinese and Japanese</td>
<td>.843</td>
<td>Very strong</td>
<td>.000</td>
<td>Significant</td>
<td></td>
</tr>
<tr>
<td>Vietnamese</td>
<td>Chinese and German</td>
<td>.232</td>
<td>Weak</td>
<td>.187</td>
<td>Not Sig.</td>
<td></td>
</tr>
<tr>
<td>Vietnamese</td>
<td>French and German</td>
<td>-.359</td>
<td>Weak</td>
<td>.037</td>
<td>Significant</td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup> N = 36 in all instances.
<sup>b</sup> df (degrees of freedom) is 70 in all instances.
<sup>c</sup> α = 0.05 in all instances.
Table 10 reports the rho and p-values for the Vietnamese listeners concerning each speaker combination. Of all the speaker combinations, the most significant correlation existed between the Chinese and Japanese speakers, who had a rho value of .843. According to the analysis, there was also a weak correlation between the Chinese and French speakers. The correlations between the French and Japanese speakers, as well as the French and German speakers, were rather weak. Finally, the analysis showed no significant correlation between the Japanese and German speakers or the Chinese and German speakers.

In summary, the results for the Tone typology suggested that there was not a clear advantage or disadvantage of sharing a first language typology with an interlocutor. For example, the Thai and Vietnamese listener groups found the Japanese-English and Chinese-English accents to be the most intelligible. In addition, the results of the Spearman’s correlation coefficient showed a strong and very strong relationship between these two accent types for the Thai and Vietnamese listeners, respectively. Finally, the results for the Tone listeners tend to reflect the intelligibility scores of all listeners, which can also be seen in 5.1.1 Shared first language. Therefore, the findings suggest that there was neither an advantage nor disadvantage to the intelligibility of L2 speech when interlocutors’ first languages were Tone.

5.1.2.2 Syllable Languages

The Indonesian and Spanish languages have been classified as having a Syllable typology (Visceglia, Chiu-Yu, Kondo, Meng, & Sagisaka, 2009). Therefore, the students
whose first languages were Indonesian or Spanish became the listeners for the Syllable group. The first listener group to be discussed is the Indonesian listeners.

Figure 12. Median intelligibility scores of Indonesian listeners for Chinese-English, French-English, Japanese-English, and German-English accents.

Figure 12 illustrates the median intelligibility scores of the Indonesian listeners for each accent type. Overall, most of the accent types received similar intelligibility scores. For example, the Chinese, Japanese, and German speakers had intelligibility scores of 23, 26, and 21, respectively. However, the Indonesian listeners found the French speakers to be somewhat more intelligible than the other three speakers. Due to a lack of data, Spearman’s rho values could not be calculated for the Indonesian listeners. In sum, the Syllable-timed Indonesian listeners found the Syllable-timed French speakers to be more intelligible than the other language typologies.
Figure 13 shows the intelligibility scores of the Spanish listeners for each of the accent types.

**Figure 13.** Median intelligibility scores of Spanish listeners for Chinese-English, French-English, Japanese-English, and German-English accents.

Figure 13 details the median intelligibility scores of Spanish listeners for each accent type. In contrast to all other listener groups, it appeared that the Spanish listeners found the Chinese-English and the German-English accents to be similarly intelligible. Moreover, the Spanish listeners found the French and Japanese speakers to be the least intelligible. Finally, there was a significant difference between the most intelligible and least intelligible accent types. For instance, the Chinese-English accent received a score of 20, while the Spanish listeners could only recognise 12 out of a possible 58 words spoken by the French speakers.
Similar to the results for the Indonesian listeners, the Spanish listeners found neither the Chinese nor the Japanese speakers as the most intelligible. Instead, one of the European varieties was the most intelligible. Further analysis was needed to investigate a possible relationship between the two most intelligible accent varieties and the two least intelligible varieties. Therefore, a set of Spearman’s rho was calculated for the Spanish listeners. Table 11 contains the results of the Spearman’s rho for the Spanish listeners with respect to all speaker combinations with a two-tailed test.

Table 11

Spearman’s Rho Values for Spanish Listeners with Respect to All Speaker Combinations

<table>
<thead>
<tr>
<th>Listener Mother Tongue</th>
<th>Speaker Languages</th>
<th>Rho b</th>
<th>Strength</th>
<th>p Value</th>
<th>Significance c</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spanish</td>
<td>Chinese and French</td>
<td>.337</td>
<td>Weak</td>
<td>.284</td>
<td>Not Sig.</td>
</tr>
<tr>
<td>Spanish</td>
<td>French and Japanese</td>
<td>.336</td>
<td>Weak</td>
<td>.286</td>
<td>Not Sig.</td>
</tr>
<tr>
<td>Spanish</td>
<td>Japanese and German</td>
<td>.283</td>
<td>Weak</td>
<td>.372</td>
<td>Not Sig.</td>
</tr>
<tr>
<td>Spanish</td>
<td>Chinese and Japanese</td>
<td>.618</td>
<td>Strong</td>
<td>.032</td>
<td>Significant</td>
</tr>
<tr>
<td>Spanish</td>
<td>Chinese and German</td>
<td>.216</td>
<td>Weak</td>
<td>.500</td>
<td>Not Sig.</td>
</tr>
<tr>
<td>Spanish</td>
<td>French and German</td>
<td>-.833</td>
<td>Very Strong</td>
<td>.001</td>
<td>Significant</td>
</tr>
</tbody>
</table>

Notes:

a N = 12 in all instances.
b df (degrees of freedom) is 22 in all instances.
c α = 0.05 in all instances.
Table 11 shows the \( \rho \) and \( p \)-values for the Spanish listeners concerning each speaker combination. The majority of the speaker combinations showed no significant correlation. However, there was a very strong, albeit negative correlation, between the French and German-English accent types with a \( \rho \) value of -.833. Likewise, the scores for the Chinese and Japanese speakers also showed a strong relationship with a \( \rho \) value of .618.

To summarize, the Syllable listener groups had mixed results. The Indonesian listeners found the French speakers to be the most intelligible L2 accent variety, whereas the Spanish listeners did not. In fact, the Spanish listeners gave the French speakers to lowest intelligibility scores. Moreover, they found the German speakers to be the most intelligible. For both listener groups, the Chinese and Japanese speakers were in second and third place for intelligibility. These results echo those of the French listeners because a European variety was more intelligible than both the Asian varieties. Moreover, the results for the Syllable listeners were quite similar to those of the Tone listeners because they reflect trends seen in the intelligibility scores for all listeners. Hence, the results for section 5.1.2 Shared Typology continue to indicate that ELF users who share a language typology may not experience less intelligibility issues in ELF interactions.

### 5.1.2.3 Stress Languages

Arabic languages have been classified as having a Stress typology (Stockmal, Muljani, & Bond, 1996). Therefore, the students whose first language was Arabic became
the listeners for the Stress group. Figure 14 shows the intelligibility scores of the Arabic listeners for each of the accent types.

![Figure 14. Median intelligibility scores of Arabic listeners for Chinese-English, French-English, Japanese-English, and German-English accents.](image)

It can be seen in Figure 14 that the Arabic listeners considered the Japanese-English accent to be the most intelligible, followed closely by the Chinese-English accent. The third most intelligible accent was the German-English accent with a median of 17 recognizable words. The French speaker had the lowest intelligibility score, with just a median of 11 words recognised out of a possible 58 words. Thus, the Asian speakers, and not the Stress speakers, were the most intelligible according to the Arabic listeners.

To differentiate between the similar intelligibility scores for the Chinese and Japanese speakers, a set of Spearman’s rho was calculated. The table below contains the
results of the Spearman’s *rho* for the Arabic listeners with respect to all speaker combinations with a two-tailed test.

Table 12

**Spearman’s Rho Values for Arabic Listeners with Respect to All Speaker Combinations**

<table>
<thead>
<tr>
<th>Listener Tongue</th>
<th>Speaker Languages</th>
<th>Rho&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Strength</th>
<th><em>p</em> Value</th>
<th>Significance&lt;sup&gt;c&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arabic</td>
<td>Chinese and French</td>
<td>-.671</td>
<td>Strong</td>
<td>.000</td>
<td>Significant</td>
</tr>
<tr>
<td>Arabic</td>
<td>French and Japanese</td>
<td>-.671</td>
<td>Strong</td>
<td>.000</td>
<td>Significant</td>
</tr>
<tr>
<td>Arabic</td>
<td>Japanese and German</td>
<td>.210</td>
<td>Weak</td>
<td>.248</td>
<td>Not Sig.</td>
</tr>
<tr>
<td>Arabic</td>
<td>Chinese and Japanese</td>
<td>.759</td>
<td>Strong</td>
<td>.000</td>
<td>Significant</td>
</tr>
<tr>
<td>Arabic</td>
<td>Chinese and German</td>
<td>.321</td>
<td>Weak</td>
<td>.073</td>
<td>Not Sig.</td>
</tr>
<tr>
<td>Arabic</td>
<td>French and German</td>
<td>-.524</td>
<td>Moderate</td>
<td>.002</td>
<td>Significant</td>
</tr>
</tbody>
</table>

<sup>a</sup> N = 34 in all instances.

<sup>b</sup> df (degrees of freedom) is 66 in all instances.

<sup>c</sup> α = 0.05 in all instances.

Table 12 shows the *rho* and *p*-values for the Arabic listeners concerning each speaker combination. The results of a Spearman’s *rho* analysis demonstrated that there was only a weak association between the Chinese and German speakers, which was not significant. Moreover, the data in Figure 14 appeared to suggest that the intelligibility of
the Chinese-English accent might be more closely related to that of the German-English accent rather than the Japanese-English accent. This conclusion would be in direct contrast to the results for most of the other listener groups. However, Table 12 showed that this was not the case. Once again, the relationship between the intelligibility scores for Chinese and Japanese speakers was the strongest with a $p$-value of .000.

In summary, the results for the Stress typology were similar to the other language typologies. The Arabic listeners found the Japanese and Chinese-English accents to be the most intelligible followed by the German-English accent and then the French-English accent. These findings were the same as the Tone group, which included the Thai and Vietnamese listeners. However, the Syllable listeners did not follow this trend. The Indonesian listeners found the French-English accent to be the most intelligible, but the Spanish listeners thought the German-English accent was the most intelligible. Therefore, of the five listener groups, only the results for the Indonesian listeners clearly support the notion that Sharing Typology between NNSs may have a positive impact on the intelligibility of L2 speech in ELF interactions.

In conclusion, sections 5.1.1 Shared First Language and 5.1.2 Shared Typology investigated the possibility of a Shared First Language or Shared Typology advantage on the intelligibility of L2 speech from a NNSs’ perspective. The findings suggested that L2 users who share a first language background do not experience more or less intelligibility issues than those who do not. The results for a Shared Typology also indicate that language typology has neither positive nor a negative influence on the intelligibility of L2 speech in ELF interactions. It appeared that both these factors, for the most part, do not influence the intelligibility of L2 speech. However, there were exceptions. To exemplify, the results for the Chinese and Japanese listeners indicated that sharing a first language
background might have a positive impact on intelligibility. Moreover, the Indonesian listeners found the Syllable speakers to be the most intelligible than the other typologies. In sum, other aspects of L2 phonology besides a Shared First Language or Shared Typology may influence intelligibility in ELF interactions.

5.1.3 Between-Group Correlations

The impact of a Shared Typology on the intelligibility of L2 speech was not clear-cut. While the Spanish and Arabic listeners did not find their respective typologies to be the most intelligible, the Thai and Vietnamese listeners did find the Tone speakers to be one of the most intelligible along with the Mora speakers. Only the Indonesian listeners clearly found the Syllable speakers to be the most intelligible. The next step in the analysis process was a comparison between the listener groups of each typology to assess the level of agreement between their intelligibility scores. It was hoped the analysis would shed further light on the notion of a Shared Typology advantage. More specially, Table 13 investigated a possible relationship between the listeners of the same typology (highlighted in yellow) rather than a relationship between speakers and listeners of the same typology. A Spearman’s rho was calculated to compare the intelligibility scores between the Chinese and Arabic listeners, for example. Given below are the between-group correlations for all listener group combinations.
Table 13

*Intergroup Spearman Correlations between All Listener Group Combinations for Intelligibility*

<table>
<thead>
<tr>
<th>Language 1 \ Language 2</th>
<th>Rho</th>
<th>Strength</th>
<th>p Value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arabic</td>
<td>Chinese</td>
<td>.136</td>
<td>Very Weak</td>
<td>.126</td>
</tr>
<tr>
<td>Arabic</td>
<td>French</td>
<td>.433</td>
<td>Moderate</td>
<td>.094</td>
</tr>
<tr>
<td>Arabic</td>
<td>Indonesian</td>
<td>-.059</td>
<td>Very Weak</td>
<td>.785</td>
</tr>
<tr>
<td>Arabic</td>
<td>Japanese</td>
<td>.005</td>
<td>Very Weak</td>
<td>.981</td>
</tr>
<tr>
<td>Arabic</td>
<td>Spanish</td>
<td>-.164</td>
<td>Very Weak</td>
<td>.266</td>
</tr>
<tr>
<td>Arabic</td>
<td>Thai</td>
<td>-.134</td>
<td>Very Weak</td>
<td>.236</td>
</tr>
<tr>
<td>Arabic</td>
<td>Vietnamese</td>
<td>.250</td>
<td>Weak</td>
<td>.004</td>
</tr>
<tr>
<td>Chinese</td>
<td>French</td>
<td>.350</td>
<td>Weak</td>
<td>.184</td>
</tr>
<tr>
<td>Chinese</td>
<td>Indonesian</td>
<td>-.181</td>
<td>Very Weak</td>
<td>.397</td>
</tr>
<tr>
<td>Chinese</td>
<td>Japanese</td>
<td>-.096</td>
<td>Very Weak</td>
<td>.657</td>
</tr>
<tr>
<td>Chinese</td>
<td>Spanish</td>
<td>-.082</td>
<td>Very Weak</td>
<td>.578</td>
</tr>
<tr>
<td>Chinese</td>
<td>Thai</td>
<td>.095</td>
<td>Very Weak</td>
<td>.403</td>
</tr>
<tr>
<td>Chinese</td>
<td>Vietnamese</td>
<td>-.050</td>
<td>Very Weak</td>
<td>.562</td>
</tr>
<tr>
<td>French</td>
<td>Indonesian</td>
<td>.612</td>
<td>Strong</td>
<td>.012</td>
</tr>
<tr>
<td>French</td>
<td>Japanese</td>
<td>.532</td>
<td>Moderate</td>
<td>.034</td>
</tr>
<tr>
<td>French</td>
<td>Spanish</td>
<td>-.327</td>
<td>Weak</td>
<td>.216</td>
</tr>
<tr>
<td>Language 1</td>
<td>Language 2</td>
<td>r</td>
<td>Association</td>
<td>p</td>
</tr>
<tr>
<td>-----------</td>
<td>-----------</td>
<td>----</td>
<td>--------------</td>
<td>-----</td>
</tr>
<tr>
<td>French</td>
<td>Thai</td>
<td>.186</td>
<td>Very Weak</td>
<td>.490</td>
</tr>
<tr>
<td>French</td>
<td>Vietnamese</td>
<td>.185</td>
<td>Very Weak</td>
<td>.493</td>
</tr>
<tr>
<td>Indonesian</td>
<td>Japanese</td>
<td>.521</td>
<td>Moderate</td>
<td>.009</td>
</tr>
<tr>
<td>Indonesian</td>
<td>Spanish</td>
<td>-.072</td>
<td>Very Weak</td>
<td>.737</td>
</tr>
<tr>
<td>Indonesian</td>
<td>Thai</td>
<td>-.101</td>
<td>Very Weak</td>
<td>.638</td>
</tr>
<tr>
<td>Indonesian</td>
<td>Vietnamese</td>
<td>-.114</td>
<td>Very Weak</td>
<td>.596</td>
</tr>
<tr>
<td>Japanese</td>
<td>Spanish</td>
<td>-.108</td>
<td>Very Weak</td>
<td>.615</td>
</tr>
<tr>
<td>Japanese</td>
<td>Thai</td>
<td>-.340</td>
<td>Weak</td>
<td>.104</td>
</tr>
<tr>
<td>Japanese</td>
<td>Vietnamese</td>
<td>-.232</td>
<td>Weak</td>
<td>.276</td>
</tr>
<tr>
<td>Spanish</td>
<td>Thai</td>
<td>.044</td>
<td>Very Weak</td>
<td>.767</td>
</tr>
<tr>
<td>Spanish</td>
<td>Vietnamese</td>
<td>-.063</td>
<td>Very Weak</td>
<td>.972</td>
</tr>
<tr>
<td>Thai</td>
<td>Vietnamese</td>
<td>-.063</td>
<td>Very Weak</td>
<td>.578</td>
</tr>
</tbody>
</table>

Table 13 shows the rho and p-values of 28 listener group combinations. Overall, the vast majority of the listener group pairs had very weak associations between their intelligibility scores. In fact, only one listener group pair had a strong correlation that was the French and Indonesian listener combination. Finally, only three listener group pairs show a moderate correlation between their intelligibility scores for the Chinese-English, French-English, Japanese-English, and German-English accent types. Therefore, the

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\( ^a \text{N = Arabic 136, Chinese 320, French 16, Indonesian 24, Japanese 24, Spanish 48, Thai 88, Vietnamese 144.} \)

\( ^b \text{df (degrees of freedom) are 270, 30, 46, 46, 94, 174, 186, 30, 46, 46, 94, 174, 186, 30, 30, 30, 30, 46, 46, 46, 46, 46, 22, 22, 22, 94, 94, 174, respectively.} \)

\( ^c \alpha = 0.05 \text{ in all instances.} \)
results seen on Table 13 suggest that there was considerable disagreement between the listener groups about the intelligibility of the Chinese-English, French-English, Japanese-English, and German-English accent types. The other five listener group pairs that shared language typology, such as the Chinese and Thai listeners, the Chinese and Vietnamese listeners, the French and Spanish listeners, the Indonesian and Spanish listeners, and the Thai and Vietnamese listeners showed very weak to weak correlations between their intelligibility scores for each accent type. Therefore, the listeners groups belonging to the same typology did not have similar experiences about the intelligibility of L2 speech.

This result, seen in Section 5.1.2 Shared Typology, indicates the Syllable listeners, which included the French, Indonesian, and Spanish listener, found one of the European accent varieties to be more intelligible than both the Asian varieties. However, the rho values given in Table 13 indicated that there was a weak correlation between the French and Spanish listeners and a very weak relationship between the intelligibility scores of the Indonesian and Spanish listeners, respectively.

5.2 Judgements of Accentedness

The majority of studies have investigated judgments of accentedness from the perspective of NSs. However, some researchers have questioned the assumption that a NS’s perception of L2 speech sounds is the same as NNSs (Lochland, 2011). If there are differences between NSs and NNSs in their perception of L2 speech, perhaps, the disparities are due to the listener’s linguistic experiences. For example, a Shared First Language background or Shared Typology between L2 interlocutors may positively affect judgments of accentedness in ELF interactions. More specifically, the sharing of a
first language or typology between NNSs may lead to weaker rating of accentuatedness. Therefore, this study investigated, firstly, the impact of a Shared First Language between interlocutors. The influence of a Shared Typology on ratings of accentuatedness was also examined. In order to conduct the latter analysis, the listeners were grouped once again according to typology. In order to calculate a Spearman’s rank correlation coefficient, it has been recommended that a minimum of ten values are needed (Harding University, 2017). Because the number of values for the Indonesian, Japanese, and French listener groups fell below this figure, Spearman’s rank correlation tests were not conducted for these listener groups in the intelligibility data set.

There were four stages to the analysis of the accentuatedness data set. The first stage involved the analysis of the median rating for each accent type/speaker, initially by all the participants and then by listener group. Bar charts visually represented the median score of each accent type, which were colour coded for easy interpretation. If a bar chart revealed identical medians between two or more accent types, another level of analysis was used to investigate the relationship between the speaker pairs. A Spearman’s rank correlation coefficient, or rho, was performed in order to assess the degree of correlation between speakers with identical median ratings. In some instances, the Spearman’s rho revealed a weak correlation between the ratings for each speaker. If this were the case, the distribution of ratings for each speaker was visually represented using box plots (Higgins, 2003). The final stage of analysis, which was a related-samples Wilcoxon signed rank test, investigated the significance of difference between similar median positions evident in the box plots (Hollander, Chicken, & Wolfe, 2013). Consequently, the results should provide some insight into L2 users’ judgments about the accentuatedness
of four varieties of L2 speech. Given below are the accentedness ratings of 100 L2 listeners for each accent type.

![Bar chart showing accentedness ratings of four accent varieties](image)

**Figure 15.** Median accentedness rating of 100 L2 listeners for Chinese-English, French-English, Japanese-English, and German-English accents.

Figure 15 shows the median Accentedness ratings of all the L2 listeners for each of the four accent varieties. Overall, there was a high degree of similarity in the accentedness ratings between the four speaker groups. The French speakers were rated as having a stronger accent than the other three accent types with a median accentedness rating of seven. The Chinese-English, Japanese-English, and German-English accents all received accent ratings of five. To sum up, the survey participants rated most of the accent types the same.

The results for the Chinese-English, Japanese-English, and German-English accents were identical. Therefore, further analysis was needed. A Spearman’s rho was
calculated for three accent combinations, along with rho values and their p-values, which are shown in the Table 14. Note that this is for all listeners.

Table 14

*Spearman’s Rho Values for All Listeners with respect to Three Speaker Combinations*

<table>
<thead>
<tr>
<th>Language 1(^a)</th>
<th>Language 2</th>
<th>Rho(^b)</th>
<th>Strength</th>
<th>p Value</th>
<th>Significance(^c)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinese</td>
<td>Japanese</td>
<td>.255</td>
<td>Weak</td>
<td>.000</td>
<td>Significant</td>
</tr>
<tr>
<td>Chinese</td>
<td>German</td>
<td>.129</td>
<td>Weak</td>
<td>.070</td>
<td>Not Sig.</td>
</tr>
<tr>
<td>Japanese</td>
<td>German</td>
<td>.146</td>
<td>Very Weak</td>
<td>.039</td>
<td>Significant</td>
</tr>
</tbody>
</table>

\(^a\) N = 200 in all instances.
\(^b\) df (degrees of freedom) is 398 in all instances.
\(^c\) \(\alpha = 0.05\) in all instances.

Table 14 shows the rho and p-values for all the participants concerning three accent combinations. The accentedness ratings of the Chinese-English and Japanese-English accents, and the Japanese-English and German-English accents, were weakly correlated with a rho values of .255 and .146, respectively. The correlations for both of these speaker pairs were significant. However, the weak correlation between the Chinese-English and German-English accents was not significant. In order to investigate the significance of differences among the distributions of ratings of these accent types, an additional level of analysis was required. The box plots in Figure 16 illustrate the
distribution of ratings given by all the participants for the Chinese-English and German-English accents.

Figure 16. Rating distributions of 100 L2 listeners for Chinese-English and German-English accents.

Figure 16 shows the distribution of ratings of all listeners for the Chinese-English and German-English accent types. Overall, the distributions were quite similar. The interquartile ranges of each box plot were between three and six. The upper and lower whiskers on each box plot were also the same. However, there was a difference in the median position for the ratings given by the Chinese-English and German-English accents.
accents as well as the distribution of ratings in the lower and upper quartiles. For example, there was a greater distribution of ratings in the third quartile group for the Chinese-English accent, but the ratings vary more so in the second quartile group for the German-English accent.

The results shown in Figure 16 indicate a difference between the median positions of the Chinese-English and German-English accents. Therefore, a third level of analysis was needed. A related- samples Wilcoxon signed rank test, which measured the significance of difference between the median positions of each accent, was performed. Table 15 shows the related- samples Wilcoxon signed rank test for one pair of results, and their $p$-value.

Table 15

*Wilcoxon Signed Rank Test Value for All Listeners with Respect to One Speaker Combination*

<table>
<thead>
<tr>
<th>Speaker 1$^a$</th>
<th>Speaker 2</th>
<th>$p$ Value$^b$</th>
<th>Significance$^c$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinese</td>
<td>German</td>
<td>.015</td>
<td>Significant</td>
</tr>
</tbody>
</table>

$^a$ N = 200 in all instances.
$^b$ CILevel = 95 in all instances.
$^c$ $\alpha = 0.05$ in all instances.

Table 15 shows the Wilcoxon signed rank test $p$-value for all listeners concerning the Chinese-English and German-English accent types. The result indicated that there was a significant difference in the median positions for the Chinese-English and German-English accents. Therefore, the participants found the German-English accent to be stronger than the Chinese-English accent.
These results suggest that the survey participants judged the French-English accent as the strongest. The German-English accent received the second highest accentedness rating. Finally, the L2 users judged the Chinese-English and Japanese-English accents as having the same degree of accentedness, which was somewhat weaker than the German-English accent and considerably weaker than the French-English accent. Perhaps, the differences between the accentedness judgments of each speaker were due to listener-related factors. It has been suggested that judgments of accentedness may be weaker when ELF users shared a first language or have similar language typology. Hence, the following sections compared listener groups to see if a Shared First Language or Shared Typology has any influence on L2 users’ judgments about the accentedness of L2 speech.

5.2.1 Shared First Language

The first factor that may influence the accentedness rating of an ELF user towards foreign accented speech was a Shared First Language. It has been argued that a Shared First Language between interlocutors may lead to weaker ratings of accentedness. Figure 17 has the accentedness ratings of the Chinese listeners for each accent type.
Figure 17. Median accentedness ratings of Chinese listeners for Chinese-English, French-English, Japanese-English, and German-English accents.

Figure 17 illustrates the median accentedness ratings given by the Chinese listeners to each of the four accent varieties. In general, the bar chart showed a bimodal trend. The French-English and Japanese-English accents had the strongest accentedness rating. Both accent types were rated seven out of nine for their accent strength. On the other hand, both the Chinese-English and German-English accents had a rating of five, which was somewhat less than the French-English and Japanese-English accent types. Thus, the Chinese listeners were divided in their judgements about the accentedness of the Chinese-English, French-English, Japanese-English, and German-English accent types.

Similar to the overall accentedness ratings for each speaker, the Chinese listeners rated the French-English accent the strongest. However, the Chinese listeners also thought the Japanese-English accent was quite strong, also giving it a rating of seven. The
Chinese-English and German-English accents were judged the weakest. These accent types each received median accentedness ratings of five.

The results for the Chinese-English and German-English accents were identical, as were the ratings for the French-English and Japanese-English accents. To fully understand the relationship (or lack thereof) between judgments of accentedness and a Shared First Language, further analysis was warranted. A set of Spearman’s *rho* was calculated using Chinese listeners. The table below contains the results of the Spearman’s *rho* for the Chinese listeners with respect to two-speaker combinations with a two-tailed test.

**Table 16**

*Spearman’s Rho Values for Chinese Listeners with Respect to Two Speaker Combinations*

<table>
<thead>
<tr>
<th>Listener</th>
<th>Mother Tongue</th>
<th>Speaker Languages</th>
<th>Rho^b</th>
<th>Strength</th>
<th>p Value</th>
<th>Significance^c</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinese</td>
<td>French and Japanese</td>
<td>.035</td>
<td>Very Weak</td>
<td>.761</td>
<td>Not Sig.</td>
<td></td>
</tr>
<tr>
<td>Chinese</td>
<td>Chinese and German</td>
<td>.251</td>
<td>Weak</td>
<td>.029</td>
<td>Significant</td>
<td></td>
</tr>
</tbody>
</table>

^a N = 80 in all instances.

^b df (degrees of freedom) is 158 in all instances.

^c α = 0.05 in all instances.

Table 16 reports the *rho* and p-values for the Chinese listener group concerning two-speaker combinations. The Chinese-English and German-English accents types show
a significant correlation in their ratings for accentedness, but the correlation was weak. The relationship between the French and Japanese-English accents was very weak and not a significant result.

In order to investigate the significance of differences among the distributions of ratings of the French and Japanese-English accents, a third level of analysis was required. The box plots given in Figure 18 illustrate the distribution of ratings given by the Chinese participants for the French-English and Japanese-English accent varieties.

![Figure 18. Rating distributions of Chinese listeners for French-English and Japanese-English accents.](image-url)
Figure 18 shows the distribution of accentedness ratings of the Chinese listeners for the French-English and Japanese-English accents. In general, there were slight differences in distribution of ratings for each speaker. For example, the French-English accent has a lower quartile of four, while the Japanese-English accent has a lower quartile value of three. Moreover, the upper quartiles for the French and Japanese speakers were seven and six, respectively. Differences between the whiskers of both box plots also indicate that the Chinese listeners varied more so in their judgment of the Japanese speakers’ accent strength more so than the French-English accent. Finally, there was a slight difference in the median position between the two box plots; therefore, further analysis was needed to measure the significance of difference between the two median positions.

The results shown in Figure 18 indicated a difference between the median positions of the French and Japanese-English accents. Therefore, a fourth level of analysis was needed. A related-samples Wilcoxon signed rank test, which measured the significance of difference between the median positions of each speaker, was performed. Table 17 shows the related-samples Wilcoxon signed rank test for one pair of results, and their \( p \)-value.
Table 17

*Wilcoxon Signed Rank Test Value for Chinese Listeners with Respect to One Speaker Combination*

<table>
<thead>
<tr>
<th>Speaker 1&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Speaker 2</th>
<th>p Value&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Significance&lt;sup&gt;c&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>French</td>
<td>Japanese</td>
<td>.018</td>
<td>Significant</td>
</tr>
</tbody>
</table>

<sup>a</sup> N = 200 in all instances.
<sup>b</sup> CILevel = 95 in all instances.
<sup>c</sup> α = 0.05 in all instances.

Table 17 shows the Wilcoxon signed rank test $p$-value for Chinese listeners concerning the French and Japanese-English accent types. The result indicated that there was a significant difference in the median positions for the French and Japanese-English accents. Therefore, the Chinese listeners found the French-English accent to be strongest, followed by the Japanese-English accent. The Chinese and German speakers were equally the weakest of the four accent varieties.

Figure 19 shows the median accentedness ratings of the French listeners for each accent type.
Figure 19. Median accentedness ratings of French listeners for Chinese-English, French-English, Japanese-English, and German-English accents.

In general, most of the accent types were rated in a similar fashion. For example, the Chinese-English, French-English, and Japanese-English accents were all given the same rating of seven. However, there was one exception to this trend. German-English accent had a rating that was significantly less than the other three accent types. The median accentedness rating for the German-English accent was four. Thus, the French listeners found most of the L2 accent varieties to have similar accent strength.

The results presented in Figure 19 were somewhat different to the results of the Chinese listeners in Figure 16. Both the Chinese and French listeners found the French-English and Japanese-English accents to be the strongest, rating them seven out of nine. As well, these listener groups rated the German-English accent one of the weakest
accents. However, the French listeners found the Chinese-English accent to be quite strong, which were different judgments to those given by the Chinese listeners.

The results for the Chinese-English, French-English, and Japanese-English accents were identical. To fully understand the relationship (or lack thereof) between judgments of accentedness and a Shared First Language, further analysis was warranted. A Spearman’s rho, or related-samples Wilcoxon signed rank test, could not be calculated due to the limited number of French listeners. Therefore, box plots were created to investigate the characteristics of the French listeners’ ratings of the Chinese-English, Japanese-English, and French–English accents. Refer to Figure 20 for the distribution of ratings given by the French participants for three accent varieties.
Figure 20. Rating distributions of French listeners for Chinese-English, Japanese–English, and French-English accents.

Figure 20 illustrates the distribution of ratings given by the French listeners for the Chinese-English, Japanese-English, and German-English accents. Overall, there were a number of differences between the three box plots. Firstly, the inter-quartile ranges for the Japanese-English accent were quite different to those of the Chinese-English and French-English accents. Secondly, a comparison of the whiskers between the three accent types suggested that the French listeners’ views about the accent strength of the Japanese speakers vary among the lower quartile group, as do the ratings for the Chinese-English
accent. However, the ratings were very similar for the fourth quartile group. There were also differences in the median positions of each speaker. For example, the Japanese-English accent had the highest median rating of seven. The Chinese-English accent had the second highest median position of 6.5, and the French-English accent has the lowest median position of 5.5.

The bar chart and box plots suggested that the French listeners found the Japanese-English accent to be the strongest, but there was a considerable amount of variation in the French listeners’ ratings of this accent type according to the box plot. Furthermore, the French listeners found the Chinese-English accent to be the second strongest, followed by the French-English accent. The German-English accent was clearly rated the weakest by the French listeners.

In summary, the results for the French listeners varied to those for the overall accentedness ratings and the ratings given by the Chinese listeners. For example, the French listeners found the Japanese and Chinese-English accents to be the strongest, which was the exact opposite to the overall results. Moreover, the French listeners found the French and German-English accent types to be the weakest of the four varieties, yet the overall results indicated that these were the heaviest of the four accents. On the other hand, a comparison between the results for the French listeners and the Chinese listeners revealed a mixture of differences and similarities between the two listener groups. For example, the French listeners found the Chinese-English accent to be one of the heaviest, while the Chinese listeners rated it to be one of the weakest accents. In addition, the French listeners found the French-English accent to be one of the weakest, yet the Chinese listeners judged the French-English accent as one of the strongest. However,
both the French listeners and the Chinese listeners found the German-English accent to be one of the weakest.

Figure 21 shows the median accentedness ratings of the Japanese listeners for each accent type.

![Bar chart showing median accentedness ratings for Japanese listeners for each accent type: Chinese accent 5, French accent 6, Japanese accent 5, German accent 3.](image)

Figure 21. Median accentedness ratings of Japanese listeners for Chinese-English, French-English, Japanese-English, and German-English accents.

Figure 21 illustrates the accentedness ratings given by the Japanese listeners for each accent type. The results may be categorized into three groups. Firstly, the French speakers were judged as having the strongest accent with a rating of six. Secondly, the Chinese-English and Japanese-English accents were rated the same, each with a rating of five. Finally, the German-English accent had the lowest rating of all the accent types, which was half that of the French speakers. The German-English accent also received an
accentedness rating that was considerable lower than the Chinese-English and Japanese-English accent types. Thus, the Japanese listeners seemed to make distinct judgments about the four L2 varieties of English.

The results for the Chinese-English and Japanese-English accents were identical. To fully understand the relationship (or lack thereof) between judgments of accentedness and a Shared First Language, further analysis was warranted. A Spearman’s rho or related-samples Wilcoxon signed rank test could not be calculated due to the limited number of Japanese listeners. Therefore, box plots were created to investigate the distributional characteristics of the Japanese listeners’ ratings of the Chinese-English and Japanese-English accents. Refer to Figure 22 for the distribution of ratings given by the Japanese participants for the three accent varieties.
Figure 22 illustrates the distribution of ratings for the Chinese-English and Japanese-English accents. There were some significant differences between the two box plots. For example, the ratings for the Chinese-English accent varied more in the second quartile group. However, the Japanese-English accent had an even spread of ratings for the second and third quartile groups. There were also differences in the whiskers between the two box plots. While the ratings of the Japanese listeners varied for the upper whisker of the Chinese-English accent, this was not the case for the lower whisker. On the other hand, the Japanese listeners varied in their ratings of the Japanese-English accent for both accents.
the lower and upper whiskers, more so for the lower whisker. Despite differences in the quartile groups and whiskers between the two accent types, their median positions were the same.

The results for the Japanese listeners were quite similar to the overall accentedness ratings given in Figure 15. For example, the French-English accent was rated the heaviest. Moreover, the results for the Japanese listeners also suggested there was no difference between the accented strength of the Chinese and Japanese speakers, who both received ratings of five. The Japanese listeners, however, thought the German speakers had quite a light accent, which was the same as the ratings given by the French listeners. The German-English accent received an accentedness rating of three from both the Japanese and French listeners.

In conclusion, the findings for a Shared First Language do not support the notion that interlocutors with the same first language background will find their accent to be weaker than other varieties of L2 speech. The results showed that the Japanese listeners did not find the Japanese-English accent to be the weakest. Similarly, the Chinese listeners did not definitively judge the Chinese-English accent as being the weakest. Finally, none of the listeners groups for a Shared First Language had similar results to those of all the listeners in Figure 15, which was the trend seen in the intelligibility data set. Therefore, it seems that sharing a first language with one’s interlocutor may negatively affect judgments of accentedness in ELF.
5.2.2 Shared Typology

The second factor thought to influence the accentedness rating of ELF users towards foreign accented speech was a Shared Typology. It has been argued that a Shared Typology between interlocutors may lead to weaker ratings of accentedness. The speakers and listener groups were classified according to the prosodic properties of their mother tongue. Unfortunately, there were not enough Japanese listeners to conduct an analysis of their ratings. Therefore, a Shared Typology advantage could not be considered from the perspective of interlocutors with Mora languages. The following three figures have the accentedness ratings of the Thai and Vietnamese listener groups, both of which are Tone languages.

5.2.2.1 Tone Languages

Figure 23 has the accentedness ratings of the Thai listeners for the four accent varieties.
Figure 23. Median accentedness ratings of Thai listeners for Chinese-English, French-English, Japanese-English, and German-English accents.

Figure 23 presents the accentedness ratings of the Thai listeners for each accent type. Overall, half the accent types were rated as being very strong while the other half has quite low ratings. Both the Chinese-English and Japanese-English accent types had very high accentedness ratings, each with a rating of six. In contrast, the French and German-English accent types were given very low accentedness ratings. For example, the German-English accent was rated three out of nine for accent strength. Moreover, the French-English accent was given the low rating of two. Hence, the Thai listeners were divided in their judgments about the accentedness of L2 speech.

The results for the Thai listeners were dissimilar to most of the other listener groups because they judged the Chinese-English and Japanese-English accents as the strongest. The only other listener group to have a similar result was the French listeners, who also rated the Chinese-English and Japanese-English accents as being quite strong.
They also thought the German-English accent was quite weak. On the other hand, the Thai listeners have one of the lowest ratings of accentedness of any listener group with a rating of two for the French-English accent. This was in stark contrast to the other listener groups who thought that the French-English accent was the strongest of the four L2 varieties.

The results for the Chinese-English and Japanese-English accents were identical. To fully understand the relationship (or lack thereof) between judgments of accentedness and a Shared Typology, further analysis was warranted. A set of Spearman’s rho was calculated using the Thai listeners. Table 18 contains the results of the Spearman’s rho for the Thai listeners with respect to a one-speaker combination with a two-tailed test.

Table 18

*Spearman’s Rho Value for Thai Listeners with respect to Chinese-English and Japanese-English accents*

<table>
<thead>
<tr>
<th>Listener Mother Tongue</th>
<th>Speaker Languages</th>
<th>Rho</th>
<th>Strength</th>
<th>p Value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thai</td>
<td>Chinese and Japanese</td>
<td>.139</td>
<td>Very Weak</td>
<td>.171</td>
<td>Not Sig.</td>
</tr>
</tbody>
</table>

\(^a\) N = 22 in all instances.

\(^b\) df (degrees of freedom) is 42 in all instances.

\(^c\) \(\alpha = 0.05\) in all instances.
Table 18 shows the \( \rho \) and \( p \)-values for the Thai listener group concerning Chinese-English and Japanese-English accents. Despite Figure 19 indicating that there may be a significant correlation between the Chinese-English and Japanese-English accents, the results of a Spearman’s \( \rho \) analysis showed no significant correlation between the two accent types.

The third level of analysis investigated the distribution of the ratings for each of these accent types. The box plots given in Figure 24 illustrate the distribution of ratings given by the Thai participants for the Chinese-English and Japanese-English accents.

*Figure 24. Rating distributions of Thai listeners for Chinese-English and Japanese-English accents.*
Figure 24 shows the distribution of accentedness ratings of the Thai listeners for the Chinese-English and Japanese-English accent types. Generally, the box plots for the Chinese-English and Japanese-English accents were rather similar. For instance, the inter-quartile ranges were the same. Moreover, the spread of the lower and upper whiskers for the Chinese-English accent was the same, which was also the case for the Japanese-English accent. The only difference between the two box plots was the amount of spread when comparing the whiskers between the two box plots. It appeared that the Thai listeners were more variable in their ratings of the Chinese-English accent because the spread of ratings in the first and fourth quartile groups was greater for the Chinese-English accent than the Japanese-English accent. Finally, there appeared to be no difference in the median position between the two box plots, therefore, further analysis was not needed.

The other listener group belonging to the Tone typology is the Vietnamese listeners. Figure 25 shows the accentedness ratings of the Vietnamese listeners of four accent varieties.
Figure 25. Median accentedness ratings Vietnamese listeners for Chinese-English, French-English, Japanese-English, and German-English accents.

Generally, there were both differences and similarities between the ratings. For example, the French-English accent had the strongest accentedness rating of all the four accent types. In addition, the Chinese-English accent had the lowest rating, which was half that of the French-English accent. On the other hand, the Japanese and German-English accents were rated the same; each had a score of five. Thus, the Vietnamese listeners had quite definitive judgments about the accent types they considered similar and those they did not.

According to the Vietnamese listeners, the Japanese and German-English accent types were quite similar. To fully understand the relationship (or lack thereof) between judgments of accentedness and a Shared Typology, further analysis was warranted. A set
of Spearman’s rho was calculated using Vietnamese listeners. Table 19 contains the results of the Spearman’s rho for the Vietnamese listeners with respect to a one-speaker combination with a two-tailed test.

Table 19

*Spearman’s Rho Values for Vietnamese Listeners with respect to Japanese and German-English accents*

<table>
<thead>
<tr>
<th>Listener</th>
<th>Speaker Languages</th>
<th>Rho&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Strength</th>
<th>p Value</th>
<th>Significance&lt;sup&gt;c&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vietnamese</td>
<td>Japanese and German</td>
<td>.048</td>
<td>Very Weak</td>
<td>.788</td>
<td>Not Sig.</td>
</tr>
</tbody>
</table>

<sup>a</sup> N = 36 in all instances.
<sup>b</sup> df (degrees of freedom) is 70 in all instances.
<sup>c</sup> α = 0.05 in all instances.

The data given in Table 19 detail the rho in p-values for the Vietnamese listeners concerning a one-speaker combination. The results of the Spearman’s rho analysis indicated that no significant correlation exists between the Japanese and German-English accents.

In order to investigate the significance of differences among the distributions of ratings of these accent types, an additional level of analysis was required. The box plots given in Figure 26 illustrated the distribution of ratings given by the Vietnamese listeners for the Japanese and German-English accent varieties.
Figure 26. Rating distributions of Vietnamese listeners for Japanese and German-English accents.

Figure 26 shows the distribution of accentedness ratings of the Vietnamese listeners for the Japanese and German-English accent types. Overall, there were a few differences between the two box plots. Firstly, there was a difference in the inter-quartile ranges between the two accent varieties. The ratings for the Japanese-English accent had an inter-quartile range of three, while the range for the German-English accent was only two. There was also a greater spread of the whiskers for the Japanese-English accent when compared to the German-English accent. The box plots indicated that the Thai
listeners might have had less agreement regarding the accent strength of the Japanese-English accent. Finally, there appeared to be slight difference in the median position between the two box plots, therefore, further analysis was needed to measure the significance of difference between the two medians.

The results shown in Figure 26 indicated a difference between the median positions of the Japanese and German-English accents. Therefore, a fourth level of analysis was needed. A related-samples Wilcoxon signed rank test, which measured the significance of difference between the median positions of each speaker, was performed. Table 20 shows the related-samples Wilcoxon signed rank test for one pair of results, and their $p$-value.

Table 20

*Wilcoxon Signed Rank Test Value for Vietnamese Listeners with Respect to One Speaker Combination*

<table>
<thead>
<tr>
<th>Speaker 1</th>
<th>Speaker 2</th>
<th>$p$ Value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japanese</td>
<td>German</td>
<td>.043</td>
<td>Significant</td>
</tr>
</tbody>
</table>

$^a$ N = 200 in all instances.
$^b$ CILevel = 95 in all instances.
$^c$ $\alpha = 0.05$ in all instances.

Table 20 shows the Wilcoxon signed rank test $p$-value for the Vietnamese listeners concerning the Japanese and German-English accent types. The results indicated that there was a significant difference in the median positions for the Japanese and
German-English accents. Therefore, the Vietnamese listeners found the German-English accent to be stronger than the Japanese-English accent.

There have been two common threads between the listener groups’ judgments of accentedness. For the majority of the groups, the French-English accent has been judged as one of the strongest of the four accent varieties. Secondly, the German-English accent has been judged as the weakest of the four types. However, the Thai listeners partially deviated from this trend, rating French-English accent as one of the weakest. The Vietnamese listeners also deviate from this trend in that the German-English accent was not rated the weakest of the four accent varieties. In fact, there was quite a significant difference between the accentedness ratings for the Chinese-English and German-English accents.

In summary, the results for the Tone listeners were inconsistent. The Thai listeners thought the Japanese-English and Chinese-English accents were the strongest, while the German and French speakers received the lowest ratings for accentedness. Another difference between the Tone listeners was the results for the Vietnamese listeners. In contrast to the Thai listeners, they found the French-English and German-English accent types to be the strongest, and therefore, the Japanese and Chinese speakers were considered as having the weakest accents. Hence, the Tone listener did not agree about the accentedness of the Asian and European accent types.

5.2.2.2 Syllable Languages

The second typology to be examined is the Syllable languages. There are two listener groups belonging to this typology. The first group to be discussed is the
Indonesian listeners. Figure 27 has the accentedness ratings of the Indonesian listeners for the four accent types.

Figure 27. Median accentedness ratings of Indonesian listeners for Chinese-English, French-English, Japanese-English, and German-English accents.

Figure 27 gives the accentedness ratings of the Indonesian listeners for the Chinese-English, French-English, Japanese-English, and German-English accent types. In general, all the accent types were rated quite highly. For example, the Indonesian listeners rated the Japanese-English accent as being very strong with a rating of seven out of a possible nine for their accent strength. The French-English and German-English accents also have very high ratings for accentedness. Both the French and German-English accents were rated six out of nine. The Chinese-English accent had the lowest accentedness rating, which was five out of nine. Therefore, the Indonesian listeners found all the L2 varieties of English to be heavily accented.
The results for the French and German-English accents were identical. To fully understand the relationship (or lack thereof) between judgments of accentedness and a Shared Typology, further analysis was warranted. A Spearman’s rho or related-samples Wilcoxon signed rank test could not be calculated due to the limited number of Indonesian listeners. Therefore, box plots were created to investigate the distributional characteristics of the Indonesian listeners’ ratings of the French and German-English accents. Refer to Figure 28 for the distribution of ratings given by the Indonesian participants for the two accent varieties.

Figure 28. Rating distributions of Indonesian listeners for French and German-English accents.
Figure 28 shows the box plots for the French and German-English accents. It was quite clear there was a difference in the distribution of ratings between these two accent varieties. According to the Indonesian listeners, the inter-quartile group ranged between five and seven. However, the German-English accent has an upper quartile of six and a lower quartile of three. There were also differences between the whiskers of each box plot. For example, the Indonesian listeners varied somewhat in their ratings for the first and fourth quartile groups, as indicated by the lower and upper whiskers of the French box plot. In contrast, the ratings of the Indonesian listeners showed greater range for the first quartile group of the German-English accent, which suggested that the Indonesian listeners varied the most at the weaker end of the scale when judging of the German-English accent. Finally, there was a clear difference in the median positions between the box plots, with the French-English accent being judged the stronger of the two.

The accentedness ratings of the Indonesian listeners were similar to the Vietnamese listeners in two ways. Firstly, the Chinese-English accent was judged the weakest of the four accent types. Secondly, the French-English accent was judged as one of the strongest accents. However, the strongest accent, according to the Indonesian listeners, was the Japanese-English accent. This was the first instance that the Japanese-English accent was clearly rated the strongest of the four varieties.

The second group belonging to the Tone typology is the Spanish listeners. Figure 29 has the accentedness ratings of the Spanish listeners for each accent type.
Figure 29. Median accentedness ratings of Spanish listeners for Chinese-English, French-English, Japanese-English, and German-English accents.

Figure 29 gives the median accentedness ratings of the Spanish listeners for each accent variety. Overall, all four accent varieties were rated quite highly by the Spanish listeners, especially the Japanese-English and French-English accents. The French-English and Japanese-English accent types each had a rating of eight out of nine. The Chinese-English accent also received quite a high accentedness rating with a rating of six. However, the Spanish listeners judged the German-English accent to be the weakest of the four accent varieties with a rating of five. In sum, the Spanish listeners found all four L2 varieties of English to be heavily accented.

The results for the Japanese and French-English accents were alike. To fully understand the relationship (or lack thereof) between judgments of accentedness and a Shared Typology, further analysis was warranted. A set of Spearman’s rho was
calculated using Spanish listeners. Table 21 shows the results of the Spearman’s rho for a one-speaker combination with a two-tailed test.

Table 21

Spearman’s Rho Values for Spanish Listeners with Respect to French and Japanese-English accents

<table>
<thead>
<tr>
<th>Listener</th>
<th>Mother Tongue</th>
<th>Speaker Languages</th>
<th>Rho</th>
<th>Strength</th>
<th>p Value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spanish</td>
<td>French and Japanese</td>
<td>.235</td>
<td>Weak</td>
<td>.462</td>
<td>Not Sig.</td>
<td></td>
</tr>
</tbody>
</table>

aN = 12 in all instances.
bdf (degrees of freedom) is 22 in all instances.
cα = 0.05 in all instances.

Table 21 illustrates the rho and p-values for the Spanish listeners concerning the French and Japanese-English accent types. The results of the Spearman’s rho calculation show no significant correlation between the two accents.

A third level of analysis investigated the distribution of ratings for each of these accent types. The box plots given in Figure 30 illustrate the distribution of ratings given by the Spanish participants for the French and Japanese-English accents.
Figure 30. Rating distributions of Spanish listeners for French and Japanese-English accents.

Figure 30 shows the distribution of accentedness ratings of the Spanish listeners for the French and Japanese-English accents. Generally, the box plots for the French and Japanese-English accents were quite similar. For instance, the inter-quartile ranges were almost same. Moreover, the spread of the upper whiskers were the same for the two accent types. There was a slight difference in the spread for the lower whiskers. The only obvious difference between the two box plots was their median positions. Therefore, further analysis was needed to measure the significance of difference between the two medians.
A related-samples Wilcoxon signed rank test, which measured the significance of difference between the median positions of each speaker, was performed. Table 22 shows the related-samples Wilcoxon signed rank test for one pair of results, and their p-value.

Table 22

*Wilcoxon Signed Rank Test Value for Spanish Listeners with Respect to One Speaker Combination*

<table>
<thead>
<tr>
<th>Speaker 1&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Speaker 2</th>
<th>p Value&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Significance&lt;sup&gt;c&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>French</td>
<td>Japanese</td>
<td>.878</td>
<td>Not Sig.</td>
</tr>
</tbody>
</table>

<sup>a</sup> N = 200 in all instances.
<sup>b</sup> CILevel = 95 in all instances.
<sup>c</sup> α = 0.05 in all instances.

Table 22 shows the Wilcoxon signed rank test p-value for the Spanish listeners concerning the French and Japanese-English accent types. The results indicated that there was no significant difference in the median positions for the French and Japanese-English accents. Therefore, the Spanish listeners judged the French-English accent as having the same accent strength as the Japanese-English accent.

The results for the Spanish listeners were most similar to the ratings given by the Chinese listeners because the French-English and Japanese-English accents were rated the highest and the Chinese-English and German-English accents were rated the lowest. Interestingly, the Spanish listeners not only gave the highest rating of any listener group, but they did so for more than one accent type. Eight out of nine was the highest ratings given to a speaker by any of the listener groups.
In summary, the results for the Syllable listeners indicated that a Sharing Typology with one’s interlocutors might have a negative influence on judgments of accentedness. For instance, the Spanish listeners rated the Syllable speakers, who were the French speakers, as having the strongest accent. Moreover, the Indonesian listeners also judged the French speakers as having one of the strongest accents out of the four varieties. These results contradicted the findings for the Tone listeners, where there appeared to be both positive and negative effects of a Shared Typology on judgments of accentedness. In sum, the Syllable listeners judged the Syllable-timed French speakers to be heavily accented on more occasions than not.

5.2.2.3 Stress Languages

The last listener group used to investigate the impact of typology on ratings of accentedness were the Arabic listeners. Figure 31 has the accentedness ratings of the Arabic listeners for each accent type.
Figure 31. Median accentedness ratings of Arabic listeners for Chinese-English, French-English, Japanese-English, and German-English accents.

Figure 31 shows the median accentedness ratings of the Arabic listeners for each accent variety. The ratings given by the Arabic listeners to each accent type seem to be grouped in pairs. For example, the Chinese-English and German-English accents were rated by the Arabic listeners as being the strongest, with an accentedness rating of five. On the other hand, the French-English and Japanese-English accents were both rated the weakest with an accentedness rating of three. Therefore, the Arabic listeners seemed to be divided in their judgments about the accentedness of different NNS.

The results for the Chinese-English and German-English accent types, as well as the French-English and Japanese-English accents, were identical. To fully understand the relationship (or lack thereof) between judgments of accentedness and a Shared Typology, further analysis was warranted. A set of Spearman’s rho was calculated using Arabic
listeners. Table 23 contains the results of the Spearman’s rho for the Arabic listeners concerning two-speaker combinations with a two-tailed test.

Table 23

*Spearmans Rho Values for Arabic Listeners with Respect to Two Speaker Combinations*

<table>
<thead>
<tr>
<th>Listener</th>
<th>Speaker Languages</th>
<th>Rho&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Strength</th>
<th>p Value</th>
<th>Significance&lt;sup&gt;c&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arabic</td>
<td>Chinese and German</td>
<td>0.077</td>
<td>Very Weak</td>
<td>0.677</td>
<td>Not Sig.</td>
</tr>
<tr>
<td>Arabic</td>
<td>French and Japanese</td>
<td>0.009</td>
<td>Very Weak</td>
<td>0.590</td>
<td>Not Sig.</td>
</tr>
</tbody>
</table>

<sup>a</sup> N = 34 in all instances.  
<sup>b</sup> df (degrees of freedom) is 66 in all instances.  
<sup>c</sup> α = 0.05 in all instances.

Table 23 demonstrates the rho and p-values for the Arabic listeners concerning two-speaker combinations. Overall, there were almost no significant correlations between either one of the speaker combinations.

In order to investigate the differences between these accent types, an additional level of analysis was required. The box plots given in Figure 32 illustrate the distribution of ratings given by the Arabic participants for the Chinese-English and German-English accent varieties.
Figure 32 illustrates the distribution of ratings for the Chinese-English and German-English accents. There were noteworthy differences between the two box plots. For example, there was a greater inter-quartile range for the German-English accent. In addition, the ratings for the Chinese-English accent varied considerably in the second quartile group when compared to the third quartile group. However, the German-English accent had a much more even spread in the second and third quartile groups. There were also differences in the whiskers between the two box plots. For example, the ratings of the Arabic listeners varied for the upper and lower whiskers of the German-English
accent, while there was slightly less spread in the ratings given to the Chinese-English accent. Despite differences in the quartile groups and whiskers between the two accent types, their median positions were the same.

Figure 33 shows the distribution of ratings given by the Arabic listeners for the French and Japanese-English accent varieties.

Figure 33. Rating distributions of Arabic listeners for French and Japanese-English accents.
Figure 33 shows the distribution of accentedness ratings of the Arabic listeners for the French and Japanese-English accent types. Generally, the box plots for the French and Japanese-English accents were quite similar. For instance, the inter-quartile ranges were almost the same. As well, the spread of the upper whiskers were the same for the two accents. There was a slight difference in the spread for the lower whiskers. The most salient difference between the two box plots was their median positions. Therefore, further analysis was needed in order to measure the significance of difference between the two medians.

The results shown in Figure 33 indicated a difference between the median positions of the French and Japanese-English accents. Therefore, a fourth level of analysis was needed. A related- samples Wilcoxon signed rank test, which measured the significance of difference between the median positions of each speaker, was performed. Table 24 shows the related- samples Wilcoxon signed rank test for one pair of results, and their $p$-value.

Table 24

*Wilcoxon Signed Rank Test Value for Arabic Listeners with Respect to One Speaker Combination*

<table>
<thead>
<tr>
<th>Speaker 1(^a)</th>
<th>Speaker 2</th>
<th>$p$ Value(^b)</th>
<th>Significance(^c)</th>
</tr>
</thead>
<tbody>
<tr>
<td>French</td>
<td>Japanese</td>
<td>.444</td>
<td>Not Sig.</td>
</tr>
</tbody>
</table>

\(^a\) N = 200 in all instances.
\(^b\) CILevel = 95 in all instances.
\(^c\) $\alpha = 0.05$ in all instances.
Table 24 shows the Wilcoxon signed rank test $p$-value for the Arabic listeners concerning the French and Japanese-English accent types. The results indicated that there was no significant difference in the median positions for the French and Japanese-English accents. Therefore, the Arabic listeners judged the French-English accent as having the same accent strength as the Japanese-English accent.

The results for the Arabic listeners deviated considerably from the other listener groups’ judgments about the strength of the French-English accent. That is, the majority of the other listener groups judged the French-English accent as being quite strong, and usually equal to or stronger than any of the other accent varieties. However, the Arabic listener judged the French-English accent to be one of the weakest accents, the other being the Japanese-English accent. Moreover, the German-English accent was rated one of the strongest. These results matched those of the Vietnamese and Indonesian listener groups. Finally, the Arabic listeners rated the Chinese-English accent as being quite heavy, which was similar to the results for the French and Thai listeners.

In summary, there were a number of findings concerning a Shared Typology between interlocutors and the accentedness of L2 speech. At first, the results for the Tone listeners indicated that a Shared Typology between interlocutors might reduce judgments of accentedness. For instance, the Vietnamese listeners thought the Chinese speakers had the weakest accent. However, this trend did not extend to the Thai listeners, who thought the Chinese-English accent was one of the strongest. Moreover, the Stress listeners, which included the Arabic students, did not rate the Stressed-timed German speakers as having the weakest accent. In fact, the Arabic listeners rated the German-English accents as the strongest. In addition, the Syllable listeners, such as the Indonesian and Latin American students, thought the French speakers had one of the heaviest accents. Thus,
the vast majority of the listeners did not find speakers with the same typology to have the weakest accent.

In conclusion, the listeners generally rated the European accent varieties, such as the French and German-English accent types, as the strongest. The Asian varieties, which were Japanese-English and Chinese-English accents, were rated the weakest, respectively. These results were not reflected in Section 5.2.1 Shared First Language. The majority of these listener groups did not judge European accent varieties as having the strongest accent. Moreover, there were limited similarities between the results for a Shared First Language and Shared Typology, especially in the ranking of the accents from strongest to weakest. Perhaps, the only commonality between the factors of a Shared First Language and Shared Typology was a tendency for the French and Japanese-English accents to be rated the strongest, while the Chinese-English and German-English accents were generally rated the weakest. To sum up, a Shared First Language or Shared Typology between interlocutors may have neither a positive nor a negative influence on judgments of accentedness in ELF interactions.

5.2.3 Between-Group Correlations

There were mixed results concerning a Shared Typology between interlocutors and its impact on judgments of accentedness. While the Thai, Spanish, and Arabic listener groups did not find their respective typologies to have the weakest accent, the Vietnamese and Indonesian listener groups did judge the Chinese speakers as having the weakest accent. To shed further light on the possibility that a Shared Typology between interlocutors may influence judgments of accentedness, further analysis was conducted.
A set of intergroup correlations was calculated in order to investigate the level of agreement between the different listener groups in their judgments of accentedness. It was hoped the analysis would shed further light on the notion of a Shared Typology advantage. More specially, Table 25 investigated possible similarities in the perception of convergent varieties of English between listeners with the same typology (highlighted in yellow). Thus, the following investigation is looking at relationships between listener groups of the same typology rather than a relationship between speakers and listeners. Given below are the between-group correlations for all combinations of listener groups.

Table 25

*Intergroup Spearman Correlations between All Listener group Combinations for Accentedness*

<table>
<thead>
<tr>
<th>Language 1</th>
<th>Language 2</th>
<th>Rho</th>
<th>Strength</th>
<th>p Value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arabic</td>
<td>Chinese</td>
<td>-.027</td>
<td>Very Weak</td>
<td>.763</td>
<td>Not Sig.</td>
</tr>
<tr>
<td>Arabic</td>
<td>French</td>
<td>-.112</td>
<td>Very Weak</td>
<td>.679</td>
<td>Not Sig.</td>
</tr>
<tr>
<td>Arabic</td>
<td>Indonesian</td>
<td>.129</td>
<td>Very Weak</td>
<td>.549</td>
<td>Not Sig.</td>
</tr>
<tr>
<td>Arabic</td>
<td>Japanese</td>
<td>.014</td>
<td>Very Weak</td>
<td>.950</td>
<td>Not Sig.</td>
</tr>
<tr>
<td>Arabic</td>
<td>Spanish</td>
<td>.211</td>
<td>Weak</td>
<td>.149</td>
<td>Not Sig.</td>
</tr>
<tr>
<td>Arabic</td>
<td>Thai</td>
<td>-.187</td>
<td>Very Weak</td>
<td>.096</td>
<td>Not Sig.</td>
</tr>
<tr>
<td>From Language</td>
<td>To Language</td>
<td>Correlation Coefficient</td>
<td>Relationship</td>
<td>Significance</td>
<td></td>
</tr>
<tr>
<td>---------------</td>
<td>-------------</td>
<td>--------------------------</td>
<td>--------------</td>
<td>--------------</td>
<td></td>
</tr>
<tr>
<td>Arabic</td>
<td>Vietnamese</td>
<td>.101</td>
<td>Very Weak</td>
<td>.258 Not Sig.</td>
<td></td>
</tr>
<tr>
<td>Chinese</td>
<td>French</td>
<td>.409</td>
<td>Moderate</td>
<td>.054 Not Sig.</td>
<td></td>
</tr>
<tr>
<td>Chinese</td>
<td>Indonesian</td>
<td>-.412</td>
<td>Moderate</td>
<td>.045 Significant</td>
<td></td>
</tr>
<tr>
<td>Chinese</td>
<td>Japanese</td>
<td>.316</td>
<td>Weak</td>
<td>.133 Not Sig.</td>
<td></td>
</tr>
<tr>
<td>Chinese</td>
<td>Spanish</td>
<td>-.293</td>
<td>Weak</td>
<td>.043 Significant</td>
<td></td>
</tr>
<tr>
<td>Chinese</td>
<td>Thai</td>
<td>.085</td>
<td>Very Weak</td>
<td>.453 Not Sig.</td>
<td></td>
</tr>
<tr>
<td>Chinese</td>
<td>Vietnamese</td>
<td>-.043</td>
<td>Very Weak</td>
<td>.622 Not Sig.</td>
<td></td>
</tr>
<tr>
<td>French</td>
<td>Indonesian</td>
<td>-.087</td>
<td>Very Weak</td>
<td>.749 Not Sig.</td>
<td></td>
</tr>
<tr>
<td>French</td>
<td>Japanese</td>
<td>.006</td>
<td>Very Weak</td>
<td>.981 Not Sig.</td>
<td></td>
</tr>
<tr>
<td>French</td>
<td>Spanish</td>
<td>-.097</td>
<td>Very Weak</td>
<td>.720 Not Sig.</td>
<td></td>
</tr>
<tr>
<td>French</td>
<td>Thai</td>
<td>.260</td>
<td>Weak</td>
<td>.331 Not Sig.</td>
<td></td>
</tr>
<tr>
<td>French</td>
<td>Vietnamese</td>
<td>.552</td>
<td>Moderate</td>
<td>.027 Significant</td>
<td></td>
</tr>
<tr>
<td>Indonesian</td>
<td>Japanese</td>
<td>.124</td>
<td>Very Weak</td>
<td>.564 Not Sig.</td>
<td></td>
</tr>
<tr>
<td>Indonesian</td>
<td>Spanish</td>
<td>.003</td>
<td>Very Weak</td>
<td>.988 Not Sig.</td>
<td></td>
</tr>
<tr>
<td>Indonesian</td>
<td>Thai</td>
<td>-.222</td>
<td>Weak</td>
<td>.297 Not Sig.</td>
<td></td>
</tr>
<tr>
<td>Indonesian</td>
<td>Vietnamese</td>
<td>.228</td>
<td>Weak</td>
<td>.285 Not Sig.</td>
<td></td>
</tr>
<tr>
<td>Japanese</td>
<td>Spanish</td>
<td>-.062</td>
<td>Very Weak</td>
<td>.755 Not Sig.</td>
<td></td>
</tr>
<tr>
<td>Japanese</td>
<td>Thai</td>
<td>.104</td>
<td>Very Weak</td>
<td>.628 Not Sig.</td>
<td></td>
</tr>
<tr>
<td>Japanese</td>
<td>Vietnamese</td>
<td>.438</td>
<td>Moderate</td>
<td>.032 Significant</td>
<td></td>
</tr>
<tr>
<td>Spanish</td>
<td>Thai</td>
<td>.003</td>
<td>Very Weak</td>
<td>.983 Not Sig.</td>
<td></td>
</tr>
<tr>
<td>Spanish</td>
<td>Vietnamese</td>
<td>.015</td>
<td>Very Weak</td>
<td>.919 Not Sig.</td>
<td></td>
</tr>
</tbody>
</table>
Similar to the intergroup Spearman correlations calculated for the intelligibility data set, there only a handful of significant correlations between any of the listener group combinations. Only four out of the 28 possible listener group combinations showed a significant correlation. In addition, the relationship between those four pairs of listener groups was quite weak. Thus, it appeared that there was no Shared Typology benefit between listener groups or interlocutors.

5.3 The Relationship between Intelligibility and Accentedness

It is suggested that a person’s accent may affect the intelligibility of their speech. More specifically, the stronger a person’s accent, the less intelligible they become. However, research by Munro and Derwing (2010) demonstrated quasi-independence between accentedness and intelligibility when investigating NNSs’ perceptions of L2 speech. Only a handful of studies have investigated this relationship from the perspective of NNSs. The following analysis investigates the relationship between intelligibility and accentedness for ELF users.

As seen in Figure 6, the median intelligibility scores of 100 L2 listeners showed that the Chinese-English, Japanese-English, and German-English accents were relatively intelligible. Moreover, the French-English accent was the least intelligible of the four

<table>
<thead>
<tr>
<th>Thai</th>
<th>Vietnamese</th>
<th>df (degrees of freedom)</th>
<th>α = 0.05 in all instances.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Thai</th>
<th>Vietnamese</th>
<th>df (degrees of freedom)</th>
<th>α = 0.05 in all instances.</th>
</tr>
</thead>
</table>

\[ N = \text{Arabic 136, Chinese 320, French 16, Indonesian 24, Japanese 24, Spanish 48, Thai 88, Vietnamese 144.} \]

\[ \text{df (degrees of freedom) are 270, 30, 46, 46, 94, 174, 186, 30, 46, 46, 94, 174, 186, 30, 30, 30, 30, 46, 46, 46, 46, 22, 22, 22, 94, 94, 174, respectively.} \]

\[ \alpha = 0.05 \text{ in all instances.} \]
types. On the other hand, the accentedness ratings of 100 L2 listeners given in Figure 15 showed that the Chinese-English, Japanese-English, and German-English accents were the weakest. In addition, the French-English accent was judged as being the strongest of the four accent types. Hence, there seemed to be a relationship between the intelligibility scores and judgments of accentedness according to all the listeners.

A comparison of the intelligibility scores and the accentedness ratings for each listener group may shed further light on the dependence of intelligibility and accentedness in ELF interactions. Despite the fact that the Indonesian listeners found the French-English accent to be the most intelligible but also one of the most accented, the remaining listener groups did not share this view. For instance, the Chinese listeners found the Chinese-English accent to be the most intelligible and the weakest. Similarly, the French listeners found the German-English accent to be the most intelligible and the weakest. Likewise, the Vietnamese listeners found the Chinese speakers to be one of the most intelligible and judged them as having the weakest accents. Moreover, the Spanish listeners found the German-English accent to be the most intelligible and the weakest. In addition, the Arabic listeners found the Japanese-English accent to the most intelligible and one of the weakest accents. Vice versa, the Chinese found the French-English accent to be the least intelligible and the most accented. In addition, the Japanese listeners found the French speakers to be the most unintelligible and rated them as having the strongest accent. Thus, the majority of the listener groups judged the most intelligible accent as being the weakest of the four accent varieties. Conversely, most of the listeners rated the least intelligible accent as the heaviest.
5.4 Emotional Attitudes

Numerous studies have investigated the emotional attitudes of NSs towards L2 speech, or investigated NNSs’ emotional attitudes towards divergent varieties of English, such as General American (GA) or Received Pronunciation (RP). In comparison, very few studies have investigated the emotional attitudes of NNSs towards other NNSs, especially during ELF interactions. Therefore, the final section of the survey asked students to give their emotional attitudes towards four varieties of L2 speech. More specifically, the participants were asked to evaluate the Speech Quality, Status and Solidarity, Social Attractiveness and Personal Integrity, and Academic Competence of Chinese-English, French-English, Japanese-English, and German-English users.

There were four stages to the analysis of the emotional attitude data set. The first stage involved the analysis of the median ratings of each speaker. Bar charts visually represented the median score of each speaker. Once again, the bar charts were color coded according to each accent type. If the bar charts revealed identical medians between two or more accent types, another level of analysis was used to investigate possible difference between speaker pairs. Box plots visually represented the distribution of ratings for each speaker. The third stage, which was a related-samples Wilcoxon signed rank test, investigated the significance of difference between similar median positions evident in the box plots. Whether or not the final stage of analysis was needed depended on the results of the Wilcoxon signed rank test. If this test indicated a significant difference in the participant’s attitudes towards the Speech Quality of the Chinese and German speakers, for example, then a fourth level of analysis was conducted to see where the differences lied. In the fourth level of analysis, bar chart visually represented the
median rating for all the attributes belonging to a particular category of emotional attitude. Using the same example as above, the bar chart would show the median rating for the attributes of Nice, Natural, Fluent, and Native.

Before the quantitative data for emotional attitudes is analyzed, it should be mentioned that there was a limitation to the construct validity for the categories of Social Attractiveness and Personal Integrity and Academic Competence. It is argued that the attributes used to measure one’s knowledge or opinion of language variation should not be assigned to a particular dimension or category of attitude based solely on a researcher’s judgment. Instead, researcher ought to couple previous classifications of an attribute and anecdotal evidence with information from authentic sources, such as the results of a PCA. In doing so, the participants will have the final say on the categorization of the attributes. This approach reflects the notion that a person’s attitudes towards language variation are strongly influenced by situational factors, such as their attitudes towards their own speech community and others, as well as the extent to which the person identities with each of these communities.

The present study conducted a content validity test on 23 attributes across four categories investigating ELF users’ emotional attitudes towards language variation. The results of the PCA showed that the attributes of Cooperation and Helpfulness loaded closely to both the categories of Social Attractiveness and Personal Integrity and Academic Competence. However, the interview data indicated that the attributes of Cooperation and Helpfulness might have been weighted more heavily towards the category of Academic Competence. A number of interviewees made specific connections between the competence of the speaker and their willingness to Cooperate and Help others in a professional or academic setting. For example, Mel suggested that the German
speakers would be Cooperative because “they have got teamwork skills because I feel like they are very professional.” Moreover, Helen stated that the German speakers would be Cooperative because they have a “strong opinion so would be challenging in a group.” Regarding the attribute of Helpfulness, John referred to professional knowledge of a speaker when discussing their level of Helpfulness, saying, “They will help you to find, or in meeting, to know other companies, for example, because of their experience.” In addition, Jamie made a direct reference to the Academic Competence of a speaker when discussing her options about the efficacy of a speaker’s Helpfulness. She stated, “not help with my English because their English is not native like. They don’t have to be a native speaker, just native-like.” As the students referred to the attributes of Cooperation and Helpfulness in an academic and, or, professional context, these attributes continued to be classified as qualities of Academic Competence. On the other hand, the attribute of Honesty was clearly loaded more so to the category of Academic Competence than Social Attractiveness and Personal Integrity. In addition, there were very few instances where the participants were able or willing to discuss their opinions about the Honesty of the speakers. Therefore, the attribute of Honesty is included in discussions about the Academic Competence of ELF users in an Australian tertiary setting.

The following results show the overall emotional attitudes of 100 L2 listeners towards the four accent types.
Figure 34. Median rating of 100 L2 listeners for Chinese-English, French-English, Japanese-English, and German-English accents.

Figure 34 shows the results of 100 participants, which equates to 2300 separate rating of emotional attitude towards L2 speech. It was evident that the Chinese speakers received the poorest evaluations from the survey participants. Moreover, there was a definite contrast in the participants’ attitudes towards the Chinese-English accent and their attitude towards the other three accent types. The participants gave quite positive evaluations of the French, Japanese, and German speakers. While the Japanese and French speakers were evaluated equally with a rating of five, the L2 users had the most favorable attitude towards German speakers. Therefore, the NNSs surveyed in this study positively evaluated some of the L2 varieties yet held quite negative opinions about others.

As the French and Japanese-English accent types were rated the same, further analysis was needed to assess any significant difference in the Speech Quality ratings between these two speakers. For the second stage of analysis, box plots visually
represented the distribution of ratings for each speaker sample as well as identify any outliers. Figure 35 shows the distribution of ratings of all the participants for the French and Japanese-English accents.

*Figure 35. Rating distributions of 100 L2 listeners for the French and Japanese speakers.*

Figure 35 shows the distribution of ratings of 100 L2 listeners for the Chinese-English and German-English accent types. Overall, the distributions were identical. The inter-quartile ranges of each box plot were between three and six. The upper and lower
whiskers on each box plot were also the same. Finally, there appears to be no difference in the median positions or inter-quartile ranges between the two box plots, therefore, further analysis was not needed.

5.4.1 Speech Quality

It was hypothesized that the attributes of Niceness, Naturalness, Fluency, and Nativeness belong to the dimension of Speech Quality. Figure 36 has the overall median ratings of 100 L2 users towards the Speech Quality of four L2 accent.

![Bar chart showing median Speech Quality ratings](image)

Figure 36. Median Speech Quality ratings of 100 L2 listeners for Chinese-English, French-English, Japanese-English, and German-English accents.

Figure 36 gives the median ratings of Speech Quality for all the accent types. The results showed a bimodal trend. For instance, the participants have positive attitudes
towards the Speech Quality of Chinese-English and German-English accents, but hold quite negative opinions about the Speech Quality of the French and Japanese-English accents, which have a median rating of three. Thus, half of the L2 varieties received positive evaluations from L2 users, while the other half did not.

Since the Chinese-English and German-English accent types were rated equally, as were the French-English and Japanese-English accents, further analysis was needed to see if there was any significant difference in the Speech Quality ratings between these speaker combinations. For the second stage of analysis, box plots visually represented the distribution of ratings for each speaker sample as well as identify any outliers. Figure 37 shows the distribution of ratings of 100 L2 listeners regarding the Speech Quality of the Chinese and German speakers.
Figure 37. Rating distributions of Speech Quality for Chinese and German speakers.

Figure 37 shows the distribution of Speech Quality ratings for the Chinese-English and German-English accent types. Overall, the distributions were quite similar. The lower quartile for both accent types was approximately three. However, there was a difference between the upper quartiles, the German-English accent having a value slightly higher than six, which was the upper quartile for the Chinese-English accent. Furthermore, the upper and lower whiskers on each box plot were relatively the same. The most salient difference between the two box plots was the difference in median
positions. Subsequently, there was also a difference in the distribution of ratings in the lower and upper quartiles. For example, there was a greater distribution of ratings in the third quartile group for the Chinese speakers, but the ratings varied more so in the second quartile group for the German speakers. Due to the differences in median position and inter-quartile range, further analysis was needed to measure the significance of this difference.

The results shown in Figure 37 indicated a difference between the median positions of the Chinese and German speakers. Therefore, a third level of analysis was needed. A related- samples Wilcoxon signed rank test, which measured the significance of difference between the median positions of each speaker, was performed. Table 26 shows the related- samples Wilcoxon signed rank test for one pair of results, and their p-value.

Table 26

*Wilcoxon Signed Rank test Value for Speech Quality with Respect to One Speaker Combination*

<table>
<thead>
<tr>
<th>Speaker 1(^a)</th>
<th>Speaker 2</th>
<th>(p) Value(^b)</th>
<th>Significance(^c)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinese</td>
<td>German</td>
<td>.000</td>
<td>Significant</td>
</tr>
</tbody>
</table>

\(^a\) N = 200 in all instances.
\(^b\) CI level = 95 in all instances.
\(^c\) \(\alpha = 0.05\) in all instances.

The data given in Table 26 details the Wilcoxon signed rank test \(p\)-value for the Chinese and German speaker combination. The results indicated that there was a
significant difference in the participants’ attitudes towards the Speech Quality of the Chinese and German speakers. Therefore, a fourth level of analysis was needed to identify which traits of Speech Quality differ. Figure 38 compared the traits of Speech Quality for the Chinese and German speakers.

Figure 38. Median ratings of four Speech Quality traits for Chinese and German speakers.

Figure 38 depicts the median ratings for four attributes of Speech Quality for the Chinese-English and German-English accents. In general, the two accent types were rated quite positively by the participants for each attribute of Speech Quality. In particular, both accents received quite positive evaluations about their Niceness and Naturalness. The German-English accent did have a slightly lower median rating for Niceness in comparison to the Chinese-English accent. The participants also had positive opinions
about the Fluency and Nativeness of the German-English accent. In fact, the German-English accent was rated a seven out of a possible nine for Fluency. On the other hand, the Chinese-English accent did not receive such positive evaluation for its Fluency or Nativeness. The Chinese-English accent received a rating of five for Fluency, which was slightly less than the German-English accent. However, the Chinese-English accent received a rating of three for Nativeness, which was half that of the German-English accent. To sum up, the participants had mostly positive opinions about the Speech Quality of the Chinese-English and German-English accents with the one exception being the Nativeness of the Chinese-English accent.

Figure 36 also showed the same medians for the French and Japanese speakers. Therefore, box plots were again used to investigate the distributions of Speech Quality for the French and Japanese speaker samples. Figure 39 shows the distribution of ratings of 100 L2 listeners towards the Speech Quality of the French and Japanese speakers.
Figure 39. Rating distributions of Speech Quality for French and Japanese speakers.

Figure 39 shows the distribution of Speech Quality ratings for the French and Japanese-English accent types. Overall, there were subtle differences in the distributions of ratings for each accent type. Firstly, the lower quartile for both accent types was two. However, there was a difference between the upper quartiles. The Japanese-English accent had a value of six, while the upper quartile for the French-English accent was five. As a result, there was a greater variability in the distribution of ratings for the Japanese speakers’ third quartile group. On the other hand, the French speakers had less variability in the third quartile group. Furthermore, the upper whisker for the French-English accent...
had more of a spread than the Japanese-English accent. Both accents had the same spread for the lower whiskers. Despite some differences, it was clear that the median positions were the same; therefore, further analysis was not needed.

In summary, the students had the most positive opinions about the Speech Quality of the German-English accent, especially its Fluency and Nativeness. The Chinese-English accent was also rated quite positively for its Niceness when compared to the German-English accent. The participants had the same opinions about the Speech Quality of the Japanese and French-English accent types with no significant difference found between the ratings for these two accent types. Therefore, the German-English accent received the most positive evaluations for Speech Quality according to 100 ELF users.

In conclusion, the results for the Speech Quality of the four accent types contrasted with the overall ratings seen in Figure 34. While the Speech Quality of the Chinese-English and German-English accent types were rated rather positively. This trend does not hold true for the overall ratings for the Chinese-English accent. Instead, the Chinese-English accent was rated quite poorly. Another difference between the two charts relates to the rating of the French and Japanese-English accent types. In both charts, these accent types were rated equally by the participants. However, the rating for the Speech Quality of the French and Japanese speakers was not as positive as the participants’ overall attitudes towards these accent types.

### 5.4.2 Status and Solidarity

Regarding the dimension of the Speaker, there are three attributes that belong to the category of Status and Solidarity, which are Successfulness, Wealth, and Education.
Figure 40 has the median ratings of 100 L2 users towards the Status and Solidarity of four L2 accent.

![Bar chart showing median Status and Solidarity ratings for Chinese, French, Japanese, and German accents.]

**Figure 40.** Median Status and Solidarity ratings of 100 L2 listeners for Chinese-English, French-English, Japanese-English, and German-English accents.

Figure 40 gives the median ratings of Status and Solidarity for all four accent types. Overall, the participants had similar opinions about the Status and Solidarity of three speakers. The Chinese, French, and German speakers all received a median attitude rating of five. However, the NNSs did not have such a positive opinion about the Status and Solidarity of the Japanese speakers, who had median rating of three. Therefore, the participants had a positive opinion about most of the L2 speakers’ Status and Solidarity.

The results shown in Figure 40 were more similar to the overall attitude ratings for each accent type than the Speech Quality rating because three of the speakers were
given quite positive evaluations. However, the Japanese speakers were rated as poorly just as the French speakers in Figure 35. The Status and Solidarity ratings were similar to those given for Speech Quality because the Chinese and German speakers were again evaluated quite favorably. At this point in time, no distinction can be made between the accent types based on region. For instance, there was no difference between the Asian and European accent varieties in their ratings of Speech Quality or Status and Solidarity.

As the Chinese-English, French-English, and German-English accent types were rated the same, further analysis was needed to assess any significant difference in the Status and Solidarity ratings between these speakers. For the second stage of analysis, box plots visually represent the distribution of ratings for each speaker sample as well as identify possible outliers. Figure 41 shows the distribution of ratings of 100 L2 listeners towards the Status and Solidarity for the Chinese, French, and German speakers.
Figure 41. Rating distributions of Status and Solidarity for Chinese and German speakers.

Figure 41 shows the distribution of Status and Solidarity ratings for the Chinese-English and German-English accent types. Overall, there were both similarities and differences between the three box plots. Firstly, the inter-quartiles for the three accent types were the same with a range of two. Secondly, a whisker spread of three was the same for all the three accent types, except for the upper whisker for the German speakers. However, there were also a few differences in the ratings of Status and Solidarity between the three speakers. For example, the lower quartiles for each accent type
increased by a value of one sequentially from the Chinese speakers to the German
speakers. As the inter-quartile ranges were the same for each box plot, the upper quartiles
followed the same trend as the lower quartiles. Another difference was the position of
outliers, with the Chinese speakers having outliers concentrated at the positive end of the
scale, while the outliers for the Status and Solidarity of the French and German speakers
were concentrated towards the negative end of the scale. Finally, the most obvious
difference between the three box plots was their median positions. Therefore, further
analysis was needed in order to measure the significance of difference between the two
medians.

The results shown in Figure 41 indicate a difference between the median positions
of the Chinese, French, and German speakers. Therefore, a third level of analysis was
needed. A related- samples Wilcoxon signed rank test, which measured the significance
of difference between the median positions of each speaker, was performed. Table 27
shows the related- samples Wilcoxon signed rank tests for three pairs of results, and their
$p$-values.

Table 27

Wilcoxon Signed Rank test Values for Status and Solidarity with Respect to Three
Speaker Combinations

<table>
<thead>
<tr>
<th>Speaker 1(^a)</th>
<th>Speaker 2</th>
<th>$p$ Value(^b)</th>
<th>Significance(^c)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinese</td>
<td>French</td>
<td>.000</td>
<td>Significant</td>
</tr>
</tbody>
</table>
Table 27 shows Wilcoxon signed rank test $p$-values for the three-speaker combinations. The results indicated a significant difference between all three-speaker combinations. Therefore, a fourth level of analysis was needed to identify which attributes of Status and Solidarity differ between the Chinese and German speakers.

Figure 42 compared the traits of Status and Solidarity for the Chinese, French, and German speakers.

<table>
<thead>
<tr>
<th></th>
<th>Chinese</th>
<th>German</th>
<th>$p$-value</th>
<th>Significant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinese</td>
<td></td>
<td>German</td>
<td>.000</td>
<td>Significant</td>
</tr>
<tr>
<td>French</td>
<td></td>
<td>German</td>
<td>.000</td>
<td>Significant</td>
</tr>
</tbody>
</table>

\[ a \text{ N} = 200 \text{ in all instances.} \]
\[ b \text{ CILevel} = 95 \text{ in all instances.} \]
\[ c \alpha = 0.05 \text{ in all instances.} \]
Figure 42 illustrates the median ratings for three attributes of Status and Solidarity for the Chinese, French, and German speakers. Overall, the chart showed quite positive evaluations for the attributes of Career Success, Wealth, and Education. There was a difference, however, between the three speakers for their level of Career Success and Wealth. While the French and German speakers both received ratings of six for Career Success and Wealth, the Chinese speakers had a slightly lower rating for these attributes of Status and Solidarity. Regarding the attribute of Education, the Chinese and French speakers had the same score of five, while the participants evaluated the German speaker as having achieved a higher level of Education. In sum, the participants were of the opinion that minimal differences existed between the speakers for their Career, Success, Wealth, and level of Education.

In summary, the results for these Status and Solidarity share similarities and differences with results for all listeners. For example, the German speakers received positive evaluations in both cases. In contrast, the Japanese speaker received positive evaluations by all listeners, yet they received the poorest ratings for Status and Solidarity. In addition, the Chinese speakers received evaluations more positive for their Status and Solidarity when compared to the overall results for all listeners. Thus, the German speakers continued to receive positive evaluations by the ELF users, while there was some disagreement about the evaluations for the remaining three accent types.

The participants’ opinions about the Status and Solidarity of the Chinese and German speakers were similar to their attitudes towards the Speech Quality of these accent types, but that was where the similarities ended. For the categories of Speech Quality and Status and Solidarity, the Chinese speakers received less positive ratings than the German speakers for eight-six percent of the attributes. The only attribute where the
Chinese speakers received a more positive evaluation than the German speakers was for the Speech Quality attribute of Niceness. For the remainder of the attributes, the participants rated the German speaker more favorably. Thus, the participants seemed to have more positive attitudes towards the Speech Quality and Status and Solidarity of the German speakers than the Chinese speakers.

5.4.3 Social Attractiveness and Personal Integrity

For the Speaker category of Social Attractiveness and Personal Integrity, there are six attributes, which include Kindness, Patience, Friendliness, Interest, and Confidence. Figure 43 has the median ratings of 100 L2 users towards the Status and Solidarity of four L2 accent.
Figure 43. Median Social Attractiveness and Personal Integrity ratings of 100 L2 listeners for Chinese-English, French-English, Japanese-English, and German-English accents.

Figure 43 shows the students’ attitudes towards the Social Attractiveness and Personal Integrity of the Chinese, French, Japanese, and German speakers. Generally, the students positively rated all the speakers. There were two groupings evident in Figure 43. For example, the Chinese and German speakers can be grouped together as can the French and Japanese speakers. Of the two groups, the Chinese and German group received the most positive evaluations for Social Attractiveness and Personal Integrity. On the other hand, the students found the Social Attractiveness and Personal Integrity of the French and Japanese speakers to be slightly less than of the first group. Both French and Japanese-English accents received a median attitude rating of five. Thus, the participants found the Social Attractiveness and Personal Integrity of two accent types to be slightly higher than the other two varieties.
Since the Chinese-English and German-English accent types were rated equally, as were the French-English and Japanese-English accents, further analysis was needed to see if there was any significant difference in the Social Attractiveness and Personal Integrity ratings between these two pairs of speakers. For the second stage of analysis, box plots were used to visually represent the distribution of ratings for each speaker sample as well as identify possible outliers. Figure 44 shows the distribution of ratings of 100 L2 listeners towards the Social Attractiveness and Personal Integrity for the Chinese and German speakers.

Figure 44. Rating distributions of Social Attractiveness and Personal Integrity for Chinese and German speakers.
Figure 44 shows the distribution of ratings for the Social Attractiveness and Personal Integrity of the Chinese and German speakers. Overall, the distributions were almost identical. The inter-quartiles of each box plot ranged between three and six. The upper and lower whiskers on each box plot were practically the same, and there appeared to be a little difference in the median positions between the two box plots. However, such a difference, though minor, was still worthy of further analysis.

The results shown in Figure 44 indicated a difference between the median positions of the Chinese and German speakers. Therefore, a third level of analysis was required. A related-samples Wilcoxon signed rank test, which measured the significance of difference between the median positions of each speaker, was performed. Table 28 shows the related-samples Wilcoxon signed rank test for one pair of results, and their p-value.

Table 28

*Wilcoxon Signed Rank Test Value for Social Attractiveness and Personal Integrity with Respect to One Speaker Combination*

<table>
<thead>
<tr>
<th>Speaker 1&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Speaker 2</th>
<th>p Value&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Significance&lt;sup&gt;c&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinese</td>
<td>German</td>
<td>.009</td>
<td>Significant</td>
</tr>
</tbody>
</table>

<sup>a</sup> N = 200 in all instances.
<sup>b</sup> CILevel = 95 in all instances.
<sup>c</sup> α = 0.05 in all instances.
Table 28 shows Wilcoxon signed rank test p-values for a one-speaker combination. The result indicated a significant difference between the speakers. Therefore, a fourth level of analysis was needed to identify which attributes of Social Attractiveness and Personal Integrity differ between the Chinese and German speakers.

Figure 45 compares the traits of Social Attractiveness and Personal Integrity for the Chinese and German speakers.

Figure 45. Median ratings of six Social Attractiveness and Personal Integrity traits for Chinese and German speakers.

Figure 45 demonstrates the median ratings for six attributes of Social Attractiveness and Personal Integrity for the Chinese and German speakers. Overall, the chart showed a number of similarities and differences between the Chinese and German speakers for the traits belonging to Social Attractiveness and Personal Integrity. There were number of similarities between the speakers. For example, both speakers were rated
five out of nine for the attribute of Friendliness. Furthermore, the participants also thought the Chinese and German speakers were equally Kind and Patient. Both speakers have a rating of six for these attributes. Despite some similarities between the speakers, a couple of differences also existed. For example, there was a significant difference between the ratings for Interest and Confidence. More specifically, the participants found the German speakers twice as Interesting and Confident as the Chinese speakers. To conclude, the participants were evenly divided in their opinions about the Social Attractiveness and Personal Integrity of the Chinese and German speakers. More specifically, the participants held equal or more favorable attitudes towards the German speakers compared to the Chinese speakers for all the attributes of Social Attractiveness and Personal Integrity.

Box plots were also used to investigate the distributions of Social Attractiveness and Personal Integrity for the French and Japanese speaker samples. Figure 46 shows the distribution of ratings of 100 L2 listeners towards the Social Attractiveness and Personal Integrity for the French and Japanese speakers.
Figure 46. Distributions of Social Attractiveness and Personal Integrity ratings for French and Japanese speakers.

Figure 46 shows the distribution of ratings for the French and Japanese speakers. Overall, there were a couple of differences between the two box plots. Firstly, there appeared to be a slight difference in the median position between the two box plots. Secondly, there was a difference in the inter-quartile ranges between the speakers. The inter-quartile range for the French speakers was three, while the German speakers have a range of two. Despite these differences, there was a similarity in the distribution of ratings between the two speakers. The upper and lower whiskers of each box plot had the
same spread. Therefore, the ratings for the first and fourth quartile groups of both
speakers had similar variability, which does not hold true for the second and third quartile
groups. In the second and third quartile groups, the participants varied more in their
ratings of the French speakers’ Social Attractiveness and Personal Integrity than the
Japanese speakers, where the participants have a higher level of agreement. In sum,
further analysis was needed due to the difference in median positions.

The results shown in Figure 46 indicated a difference between the median
positions of the French and Japanese speakers. Therefore, a third level of analysis was
warranted. A related- samples Wilcoxon signed rank test, which measured the
significance of difference between the median positions of each speaker, was performed.
Table 29 shows the related- samples Wilcoxon signed rank test for one pair of result, and
their $p$-value.

Table 29

Wilcoxon Signed Rank test Value for Social Attractiveness and Personal Integrity
with Respect to One Speaker Combination

<table>
<thead>
<tr>
<th>Speaker 1$^a$</th>
<th>Speaker 2</th>
<th>$p$ Value$^b$</th>
<th>Significance$^c$</th>
</tr>
</thead>
<tbody>
<tr>
<td>French</td>
<td>Japanese</td>
<td>.000</td>
<td>Significant</td>
</tr>
</tbody>
</table>

$^a$ N = 200 in all instances.
$^b$ CILevel = 95 in all instances.
$^c$ $\alpha = 0.05$ in all instances.

The data given in Table 29 details the Wilcoxon signed rank test $p$-value for a
one-speaker combination. The results indicated a significant difference between the
speakers. Therefore, a fourth level of analysis was needed to identify where the speakers differ for the traits of Social Attractiveness and Personal Integrity.

Figure 47 compares the traits of Social Attractiveness and Personal Integrity for the French and Japanese speakers.

![Bar chart comparing Social Attractiveness and Personal Integrity traits for French and Japanese speakers.]

**Figure 47.** Median ratings of six Social Attractiveness and Personal Integrity traits for French and Japanese speakers.

Figure 47 demonstrates the median ratings for six attributes of Social Attractiveness and Personal Integrity for the French and Japanese speakers. Generally, the chart showed a number of similarities and differences between the French and Japanese speakers for the traits of Social Attractiveness and Personal Integrity. There was a similarity between the speakers. For example, both speakers were rated five out of nine for the attribute of Interest. Despite some similarities between the speakers, the
participants also differed in their attitudes towards the Social Attractiveness and Personal Integrity of the French and Japanese speakers. For instance, the Japanese speakers were rated quite positively for the attribute of Patience and Kindness, while the French speakers were not rated as positively, especially for their Patience. The most significant differences between the two speakers related to the attributes of Friendliness and Confidence. The Japanese speakers had a rating of six for Friendliness, while the French speakers only had a median rating of three. The exact opposite was the case for the attribute of Confidence. The participants evaluated the Confidence of the French speakers quite positively, but did not have the same opinion of the Japanese speakers, who received quite poor ratings for the Confidence attribute. To sum up, the participants rated the French speakers equally or less favorably than the Japanese speakers for Social Attractiveness and Personal Integrity with the one exception being the Confidence of the Japanese speakers.

To summarize, the results for Social Attractiveness and Personal Integrity of the Chinese and German speakers were somewhat similar in their results for the category of Speech Quality. That is, the Chinese and German speakers received the same median ratings for some attributes, but there were significant differences between the two speakers for other attributes of each category. For example, the Chinese and German speakers both received positive rating of six for Kindness and Patience. These speakers also had the same rating for Friendliness, which was slightly less positive than the Kindness and Patience attributes. Similarly, the participants found the Naturalness of the Chinese-English and German-English accents to be the same with a median rating of six. Furthermore, the German speakers were rated highly for the attribute of Interest and Confidence. Regarding the category of Speech Quality, the German speakers also
received quite high ratings for Fluency and Nativeness. However, the Chinese speakers received moderate to poor ratings for all these attributes. Thus, the participants appeared to have equal or more positive attitudes towards the Speech Quality and Social Attractiveness and Personal Integrity of the German speakers than the Chinese speakers.

The results for the Social Attractiveness and Personal Integrity of the Japanese and French speakers were also quite similar to those for the category of Speech Quality. The similarities lay in the association of the speakers. For example, the Chinese and Germans were closely related in the evaluations, as were the Japanese and French speakers. Regarding the latter, the Japanese and French speakers were rated equally for the attributes of Speech Quality. However, the Japanese speakers received equal to or more positive ratings for the attributes of Social Attractiveness and Personal Integrity. For example, the Japanese speakers received more positive evaluations for the attributes of Kindness, Patience, and Friendliness. However, the French speakers did receive a more positive rating for one of the attributes, which was Confidence.

The results for the Social Attractiveness and Personal Integrity of the Chinese and German speakers were quite different to those for Status and Solidarity. There was a distinct divide between the two speakers for their Social Attractiveness and Personal Integrity. For instance, the participants positively evaluated the Chinese and German speakers equally for the attribute of Kindness, Patience, and Friendliness, but evaluated the German speakers more favorably for the attribute of Interest and Confidence. In contrast, there were only slight differences in the participants’ opinions about the Career, Success, Wealth, and Education level of the Chinese and German speakers. Despite there being a couple of differences between the categories of Social Attractiveness and Personal Integrity, and Status and Solidarity, there was one noteworthy similarity. The
results for the category of Social Attractiveness and Personal Integrity were similar to those for Status and Solidarity because the German speakers were positively evaluated more frequently than the Chinese speakers were even though the differences were slim for some traits. Regarding the Status and Solidarity of the French speakers, they too were rated more positively than the Chinese speakers were. Thus, the participants have more positive opinions about the Social Attractiveness and Personal Integrity, and Status and Solidarity of the German speakers, and to a lesser extent the French speakers, than the Chinese speakers.

The results for the Social Attractiveness and Personal Integrity of the Japanese and French speakers were quite different to those for Status and Solidarity. The main contrast was the amount of difference between the French speakers and the other L2 speakers. For example, there were only minor differences between the French speakers and the other speakers for Status and Solidarity. However, the participants had quite different opinions about the Social Attractiveness and Personal Integrity of the French speakers and the Japanese speakers. Another difference was the number of traits for each category that received equal or different median ratings. For example, the French speakers received lower median ratings for over half the traits for Social Attractiveness and Personal Integrity. The other hand, the French speaker received the same median ratings as the other L2 speakers for all the traits of Status and Solidarity. Therefore, the participants had more positive attitudes towards the Status and Solidarity of the French speakers when compared to the other L2 accents but poorer evaluations regarding their Social Attractiveness and Personal Integrity.

In conclusion, the Chinese and German speakers consistently received the highest ratings. Moreover, the attitudes towards the Japanese and French speakers tended to be
similar, particularly concerning Speech Quality. The only consistency between the results for Speech Quality, Status and Solidarity and Social Attractiveness and Personal Integrity was that the Japanese speakers received one of the poorest evaluations for these three categories of emotional attitude. Despite the Japanese speakers having some of the lowest ratings, the participants had quite positive attitudes about their Social Attractiveness and Personal Integrity.

5.4.4 Academic Competence

The Speaker category of Academic Competence originally had ten attributes. However, the attribute of Honesty was shifted from the category of Social Attractiveness and Personal Integrity to Academic Competence because of a content validity test. Therefore, the category of Academic Competence has the attributes of Flexibility, Intelligence, Hard-working, Helpfulness, Participation, Cooperation, Leadership, Creativity, Organization, Independence, and Honesty. Figure 48 has the median ratings of 100 L2 users towards the Status and Solidarity of four L2 accent.
Figure 48. Median Academic Competence ratings of 100 L2 listeners for Chinese-English, French-English, Japanese-English, and German-English accents.

Figure 48 demonstrates the L2 users’ opinions about the Academic Competence of Chinese, French, Japanese, and German speakers. Overall, the participants had positive opinions about the Academic Competence of the speakers. However, there was a significant difference in the ratings between the Asian varieties of English. While the students rated the Chinese speakers as below average in Academic Competence, they thought the Academic skills of the Japanese speakers were twice as Competent. The European varieties, which included the French and German speakers, received equal rating of five a piece. Thus, the there was quite a difference between the Asian Englishes for Academic Competence.

As the French and German-English accent types were rated the same for Academic Competence, further analysis was needed to assess any significant difference in the distribution of ratings between these speakers. For the second stage of analysis, box
plots were used to visually represent the distribution of ratings for each speaker sample as well as identify possible outliers. Figure 49 shows the distribution of ratings of 100 L2 listeners towards the Academic Competence for the French and German speakers.

![Box plot showing distribution of ratings](image)

**Figure 49.** Rating distributions of Academic Competence for French and German speakers.

Figure 9 shows the distribution of ratings for the Academic Competence of the French and German speakers. Overall, there were subtle differences in the distributions of ratings for each speaker. In spite of the lower quartiles for each speaker being the same,
there was a difference between the upper quartiles. The French-English accent had a value of six, while the upper quartile for the German-English accent was seven. As a result, there was greater variability in the rating distribution for the third quartile group of the German speakers. On the other hand, both the French and German speakers had less variability in their third quartile groups. Furthermore, the upper whisker for the French speakers had more of a spread compared to the German speakers, but it was the exact opposite for the spread of the lower whisker. Despite some differences, it was apparent that the median positions were the same; consequently, further analysis was not needed.

In summary, the ratings for the European accent varieties were the same, however, there was a stark contrast between the Asian varieties. The participants thought the Japanese speakers had the most Academic Competence. Further analysis showed that there was no significant difference between the ratings for the French and German speakers. Finally, the Chinese speakers received the poorest rating for Academic Competence, which was half as positive as the Japanese Speakers. Thus, there seemed to be an association between regional varieties of English and the students’ opinions towards the Academic Competence of the speaker.

The students’ opinions about the Academic Competence of the Chinese, French, Japanese, and German speakers were quite different to their opinions about the other three categories of emotional attitudes. For example, the Japanese and French-English accents were rated quite positively for the attributes of Academic Competence. However, the French speakers received quite poor evaluations for all but one of the other categories, which was Status and Solidarity. For this category, the French speakers were rated quite positively for Success and Wealth. The Japanese speakers were also evaluated quite poorly for the categories of Status and Solidarity, Social Attractiveness and Personal
Integrity and Speech Quality. Another difference between the results for Academic Competence and the other categories was the rating for the Chinese speakers. The Chinese speakers received the lowest rating for Academic Competence but were evaluated rather positively for the categories of Social Attractiveness and Personal Integrity, and Speech Quality, especially for the Niceness attribute. The final difference concerned the German speakers. Except for the Academic Competence, the German speakers received the most positive evaluations for all the other categories of emotional attitudes, including the results for all listeners. Finally, the participants positively evaluated the European accent varieties more frequently than the Asian variety for the categories of Speech Quality, Social Attractiveness and Personal Integrity and Status and Solidarity. Therefore, the NNSs surveyed in this study had different opinions about the Academic Competence of the Chinese, French, Japanese, and German speakers when compared to the other categories of emotional attitudes.

To conclude, there seemed to be a general trend regarding the emotional attitudes of the ELF users towards three of the accent types. That is, the participants had consistent opinions about an accent type across all the categories of emotional attitudes except for one. For example, the Japanese-English accent received poor evaluations for all the categories bar one, which was Academic Competence. Moreover, the Chinese-English accent received positive evaluations for all the categories except one, which was Academic Competence. Finally, the participants had positive attitudes towards the Status and Solidarity, Social Attractiveness and Personal Integrity, and Academic Competence of the French speakers, but not the Speech quality of the French-English accent. The only speakers to receive positive evaluations across all four categories of emotional attitudes
were the German speakers. Thus, ELF users generally rate L2 speech and speakers positively for some categories of emotional attitude and negatively for others.

5.4.5 Between-Group Correlations

Table 30

*Intergroup Spearman Correlations between All Listener group Combinations for Emotional Attitudes*

<table>
<thead>
<tr>
<th>Language 1</th>
<th>Language 2</th>
<th>Rho</th>
<th>Strength</th>
<th>p Value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arabic</td>
<td>Chinese</td>
<td>.034</td>
<td>Very Weak</td>
<td>.635</td>
<td>Not Sig.</td>
</tr>
<tr>
<td>Arabic</td>
<td>French</td>
<td>.191</td>
<td>Very Weak</td>
<td>.008</td>
<td>Significant</td>
</tr>
<tr>
<td>Arabic</td>
<td>Indonesian</td>
<td>.047</td>
<td>Very Weak</td>
<td>.516</td>
<td>Not Sig.</td>
</tr>
<tr>
<td>Arabic</td>
<td>Japanese</td>
<td>.148</td>
<td>Very Weak</td>
<td>.039</td>
<td>Significant</td>
</tr>
<tr>
<td>Arabic</td>
<td>Spanish</td>
<td>.148</td>
<td>Weak</td>
<td>.039</td>
<td>Significant</td>
</tr>
<tr>
<td>Arabic</td>
<td>Thai</td>
<td>-.061</td>
<td>Very Weak</td>
<td>.398</td>
<td>Not Sig.</td>
</tr>
<tr>
<td>Arabic</td>
<td>Vietnamese</td>
<td>.091</td>
<td>Very Weak</td>
<td>.206</td>
<td>Not Sig.</td>
</tr>
<tr>
<td>Chinese</td>
<td>French</td>
<td>.071</td>
<td>Very Weak</td>
<td>.325</td>
<td>Not Sig.</td>
</tr>
<tr>
<td>Language 1</td>
<td>Language 2</td>
<td>Correlation</td>
<td>Relatedness</td>
<td>Significance</td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>-----------</td>
<td>-------------</td>
<td>-------------</td>
<td>--------------</td>
<td></td>
</tr>
<tr>
<td>Chinese</td>
<td>Indonesian</td>
<td>0.035</td>
<td>Very Weak</td>
<td>0.632</td>
<td>Not Sig.</td>
</tr>
<tr>
<td>Chinese</td>
<td>Japanese</td>
<td>0.060</td>
<td>Very Weak</td>
<td>0.404</td>
<td>Not Sig.</td>
</tr>
<tr>
<td>Chinese</td>
<td>Spanish</td>
<td>-0.025</td>
<td>Very Weak</td>
<td>0.730</td>
<td>Not Sig.</td>
</tr>
<tr>
<td>Chinese</td>
<td>Thai</td>
<td>0.023</td>
<td>Very Weak</td>
<td>0.745</td>
<td>Not Sig.</td>
</tr>
<tr>
<td>Chinese</td>
<td>Vietnamese</td>
<td>0.086</td>
<td>Very Weak</td>
<td>0.233</td>
<td>Not Sig.</td>
</tr>
<tr>
<td>French</td>
<td>Indonesian</td>
<td>0.022</td>
<td>Very Weak</td>
<td>0.763</td>
<td>Not Sig.</td>
</tr>
<tr>
<td>French</td>
<td>Japanese</td>
<td>0.227</td>
<td>Weak</td>
<td>0.001</td>
<td>Significant</td>
</tr>
<tr>
<td>French</td>
<td>Spanish</td>
<td>0.314</td>
<td>Weak</td>
<td>0.000</td>
<td>Significant</td>
</tr>
<tr>
<td>French</td>
<td>Thai</td>
<td>0.157</td>
<td>Weak</td>
<td>0.029</td>
<td>Significant</td>
</tr>
<tr>
<td>French</td>
<td>Vietnamese</td>
<td>0.038</td>
<td>Weak</td>
<td>0.599</td>
<td>Not Sig.</td>
</tr>
<tr>
<td>Indonesian</td>
<td>Japanese</td>
<td>0.270</td>
<td>Weak</td>
<td>0.000</td>
<td>Significant</td>
</tr>
<tr>
<td>Indonesian</td>
<td>Spanish</td>
<td>0.246</td>
<td>Weak</td>
<td>0.001</td>
<td>Significant</td>
</tr>
<tr>
<td>Indonesian</td>
<td>Thai</td>
<td>-0.067</td>
<td>Very Weak</td>
<td>0.355</td>
<td>Not Sig.</td>
</tr>
<tr>
<td>Indonesian</td>
<td>Vietnamese</td>
<td>0.101</td>
<td>Very Weak</td>
<td>0.162</td>
<td>Not Sig.</td>
</tr>
<tr>
<td>Japanese</td>
<td>Spanish</td>
<td>0.219</td>
<td>Weak</td>
<td>0.002</td>
<td>Significant</td>
</tr>
<tr>
<td>Japanese</td>
<td>Thai</td>
<td>0.018</td>
<td>Very Weak</td>
<td>0.807</td>
<td>Not Sig.</td>
</tr>
<tr>
<td>Japanese</td>
<td>Vietnamese</td>
<td>0.139</td>
<td>Very Weak</td>
<td>0.053</td>
<td>Not Sig.</td>
</tr>
</tbody>
</table>
Similar to the intergroup Spearman correlations calculated for the intelligibility and accentedness data sets, there only a handful of significant correlations between any of the listener group combinations. Only ten out of the 28 possible listener group combinations showed a significant correlation. In addition, the relationships between those ten pairs of listener groups ranged from very weak to weak. Thus, it appeared that the different listener groups did not have similar emotional attitudes towards L2 speech.

<table>
<thead>
<tr>
<th>Language 1</th>
<th>Language 2</th>
<th>Correlation</th>
<th>Significance</th>
<th>Nature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spanish</td>
<td>Thai</td>
<td>.257</td>
<td>.000</td>
<td>Significant</td>
</tr>
<tr>
<td>Spanish</td>
<td>Vietnamese</td>
<td>.133</td>
<td>.065</td>
<td>Not Sig.</td>
</tr>
<tr>
<td>Thai</td>
<td>Vietnamese</td>
<td>.044</td>
<td>.545</td>
<td>Not Sig.</td>
</tr>
</tbody>
</table>

\( ^a \) N = Arabic 1564, Chinese 3680, French 184, Indonesian 276, Japanese 276, Spanish 552, Thai 1012, Vietnamese 1656.


\( ^c \) \( \alpha = 0.05 \) in all instances.
Narratives

The emotional attitudes people have towards L2 speech are a complicated phenomenon influenced by a listener’s experience with foreign speech, the linguistic make up of the speech community, the perceived identity of the speaker, and the listener’s beliefs about language universals. The emotional attitudes NNSs have towards foreign accents, such as Chinese-English, French-English, Japanese-English, and German-English accents were investigated using semi-structured interviews. Moreover, the interview data was then analyzed using the constant comparative method. Finally, the attributes, such as Confident and Participate, were capitalized to distinguish between an adjective used to describe an attribute of emotional attitude and one used in general discussion.

In order to investigate emotional attitudes of ELF users towards L2 speech, three questions guided the comparison process. Firstly, why was one accent rated negatively for the attribute of Nativeness, for example, whilst another accent type was given a more positive rating? Secondly, why did participants have positive opinions about the French-English accent for one attribute of Status and Solidarity but not the others? Finally, were the emotional attitudes towards each accent type based on the participant’s systemic knowledge of the English language and language universals, or their schematic knowledge about the perceived identity of the speaker? The analysis of a person’s systemic knowledge of language was further subdivided into phonology, syntax, and
lexicon. Given below are samples of the emotional attitudes of 15 L2 users towards Chinese, French, Japanese, and German varieties of spoken English.

In order to facilitate the analysis of NNSs’ emotional attitudes towards L2 speech, especially those based on their assumptions about the speaker’s identity, it would be helpful to consider some data from the surveys. Overall, 100 participants were unable to identify the accent variety of the Chinese-English, French-English, Japanese-English, and German speakers. Only seven percent of the accents types were correctly identified. Moreover, 30% of the accents were identified by region. For example, some participants did not know from where the Chinese speakers originated but thought they might be from Asia. Finally, 13% of the L2 speech samples were identified as NSs. It should be noted that none of the speakers participated in the data collection process, nor were they known to any of the listeners. Table 31 shows the perceived identity of each speaker according to 15 interview participants.

Table 31

*The Perceived Identity by Nationality and Region of Eight L2 Speakers According to Fifteen NNS*

<table>
<thead>
<tr>
<th>Interview Participant</th>
<th>Chinese Speakers 1 &amp; 5</th>
<th>French Speakers 2 &amp; 6</th>
<th>Japanese Speakers 3 &amp; 7</th>
<th>German Speakers 4 &amp; 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mark</td>
<td>New Zealand &amp; Vietnam</td>
<td>Europe &amp; China</td>
<td>Japan &amp; Russia</td>
<td>Latin America &amp; Middle East</td>
</tr>
<tr>
<td>Kylie</td>
<td>Australia &amp; Malaysia</td>
<td>Australia &amp; India</td>
<td>China &amp; Indonesia</td>
<td>Australia &amp; US</td>
</tr>
<tr>
<td>David</td>
<td>China &amp; France</td>
<td>Saudi Arabia &amp; India</td>
<td>Saudi Arabia &amp; India</td>
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The data given in Table 31 gives the perceived nationality of each speaker according to 15 L2 users. Overall, the results may be divided into three groups: the perceived nationality of the speakers, the speakers’ region of origin, and NS vs. NNS. Firstly, the participants were able to correctly identify the L2 accent variety of the Chinese, French, Japanese, and German speakers 20%, 17%, ten percent, and three percent of the time, respectively. Thus, the Chinese-English accent was the most recognizable according to the 15 interviewees. Secondly, the results show the perceived region of origin for each speaker. The region of origin for the Chinese-English, French-English, Japanese-English, and German-English accents was correctly identified 23%, 13%, 33%, and 23% of the time, respectively. Therefore, the interview participants were able to identify the Japanese speakers’ region of origin more frequently compared to any of the other accent varieties.

Lastly, the result indicated that a significant number of participants thought the speakers were NSs. Twenty-three percent of the interviewees thought the Chinese and German speakers were NS, ten percent of the students perceived the French speakers to be either Canadian or Australian, and three percent of the interviewees thought the Japanese speakers were using a divergent variety of English. In sum, the ELF users interviewed in this study accurately identify a speaker’s region of origin more frequently than their nationality or language background. Interestingly, the participants thought the speakers were NSs on more occasions than they were able to identify correctly the speakers’ nationality. Inferences about these results as well as the comments made during the interviews are presented in the Discussion.
6.1 Speech Quality

The following sections provide a narrative of ELF user’s emotional attitudes towards L2 speech in an Australian university setting. Section 6.1 looks at the Speech Quality of the Chinese-English speakers, French-English speakers, Japanese-English speakers, and German-English speakers. Section 6.2 presents the students’ attitudes towards the Status and Solidarity of the four speaker types. Section 6.3 shows the students’ attitudes towards the Social Attractiveness and Personal Integrity of each speaker type. Finally, section 6.4 gives a narration of the listeners’ attitudes towards the Academic Competence of the four speaker types.

The participants’ names and quotes are typed in bold and presented separately to the main body of the text to emphasize the voices of the participants, show research transparency, and encourage the reader to compare the opinions given for the different categories, attributes, and accent types.

6.1.1 Chinese-English accent

6.1.1.1 Nativeness

Four survey responses for the Nativeness item were interesting because they were overly negative. As a result, the four participants were asked to elaborate on their response to this survey item during the interviews. It quickly became apparent that all the opinions given about the Nativeness of the Chinese-English accent were based on the
phonological characteristics of the speaker. The first sample from the interviews showed that David, who accurately identified the Chinese speakers, focused on a segmental feature of English difficult for some Asian learners to articulate. His response was:

I think they are not a native speaker because of the ‘r’ pronunciation.

(David)

Another participant, Liz, thought the Chinese speakers sounded Native to a degree, though it was unclear as to whether the participant was referring to the phonology or lexiogrammar of the speech excerpt,

Some parts native like. (Liz)

It also became apparent that not all the participants considered the Chinese speakers to possess Native like speech qualities.

Not really native sounding. (Mel)

When asked to elaborate on her response, Mel could not give a reason for this opinion.

6.1.1.2 Fluency

There were seven notable ratings from the survey data about the Fluency of the Chinese-English accent. All were comments made during the interviews and were based
on the participants’ systemic knowledge. More specifically, the participants’ opinions about the Fluency of the Chinese-English accent were centered round their attitudes towards the phonology of English.

They speak without stopping or pausing in between. (Mark)

No, they not using very high vocab, so I think accent is the reason. (Kylie)

I think she was pretty fluent but then I recognized some grammatical errors and realized she wasn’t a native speaker. (Jamie)

Speaks slowly so must need to think before she speaks. (Tricia)

6.1.1.3 Naturalness

In general, there were four noteworthy evaluations made about the Naturalness of the Chinese-English accent. From the samples given below, it can be seen that two evaluations were based on the participants’ schematic knowledge,

Because they are native speaker, so their English is very natural. (Kylie)

A little bit, yeah, that person who spoke in the survey was proficient, a good speaker. (John)
while Tricia’s opinion was phonologically orientated.

**Doesn’t sound natural, sounds accented.** (Tricia)

### 6.1.1.4 Niceness

Only two significant ratings were given about the Niceness of the Chinese-English accent. During the interviews, both participants mentioned the phonological characteristics of the speakers when giving opinions about the Niceness of the Chinese-English accent.

**It was soft and clear.** (David)

**Pleasant sound, flat, unemotional, nervous.** (Helen)

To conclude, the participants tended to have positive attitudes towards the Niceness and Naturalness of the Chinese-English accent. However, their attitudes towards the Fluency and Nativeness of the Chinese-English accent were mostly negative.
6.1.2 French-English accent

6.1.2.1 Nativeness

Compared with the Chinese-English accent, there were twice as many negative ratings given for the Nativeness of the French-English accent. Similarly, all the opinions given during the interviews were based on the phonology of the speaker.

No very. The accent from their first language is very strong. (Jamie)

Not native like, they have a strong accent. (Barry)

Not close to native speaker, they have very noticeable accent. (Steve)

6.1.2.2 Fluency

From the surveys, there were four noteworthy responses given about the Fluency of the French-English accent. From the samples given below, the participants relied on their systemic knowledge of phonology to make their evaluations.

No, I don’t think so. Their accent is really strong, and because [English] is not their mother tongue so they think, “what is the word next after this word?” (Kylie)
Fluent, especially compared to the [Chinese] accent, speaks quickly.

(Helen)

They’re strong accent made understanding difficult. (Emma)

The latter comment seems to detail not so much with the Fluency of the French speakers but the listener’s judgments about the accentedness and perceived intelligibility of the French-English accent.

6.1.2.3 Niceness

In contrast to the Chinese-English accent, the four evaluations about the Fluency of the French-English accent made note of the speaker’s identity. Thus, these evaluations related not to linguistic features of the foreign accent but rather the personal characteristics of the speaker.

I think she is a little bit harsh and a cold person. (Mel)

Not difficult to listen to, but people understand different accents after time. (Barry)

In sum, the majority of the participants gave negative evaluations about the Speech Quality of the French-English accent.
6.1.3 Japanese-English accent

6.1.3.1 Nativesness

From the survey results, the Japanese-English accent received one of the highest numbers of notable ratings, with nine of the 15 interviewees ranking this item strongly towards either end of the scale. Similar to the French-English and Chinese-English accents, the opinions given about the Nativesness of the Japanese-English accent were based on phonology. Except for David and John’s comments,

Near native. (David)

Four out of five for native like. (John)

all the participants scored the Nativesness of the Japanese-English accent poorly.

Three [out of ten] for native like because accent was choppy. (Rick)

They’re not close, about 50%. (Mel)
6.1.3.2 Niceness

There were six survey responses of interest for the Niceness item. The responses given in the interviews show that five of the comments made refer to the phonology of the foreign speech. On the other hand, Emma said that the speaker’s

**Accent sounds just average, preferred the previous accent because I could understand better.** (Emma)

This excerpt suggests that Emma may relate the Niceness of the accent with its intelligibility. John discussed the influence of the speaker’s L1, which was a judgment of accentedness.

**No, their mother language outweighs the English, with the accent.** (John)

Finally, Mark cited prosodic features for his negative attitudes towards the Niceness of the Japanese-English accent.

**No, she sounds soft and monotone, because she pauses between the sentences, we have to stop and wait for them, so kind of interrupts when we listen to them.** (Mark)
6.1.3.3 Fluency

Only four significant ratings were given about the Fluency of the Japanese-English accent. During the transcription of the interview data, it became apparent that Jamie’s evaluation pertained not so much to the phonological characteristics of the Japanese-English accent but more to her systemic knowledge about the prosodic features of languages in general, such as speech rate.

Not very, because they have many pauses between words, but I think the faster you speak you would sound more fluent. (Jamie)

Mark and Barry made references to the vocabulary in the excerpt, which was the first instance of a participant citing this facet of language when discussing their opinions towards Speech Quality.

Used the word ‘kind of’ and ‘so’ to link the word together so not so fluent. (Mark)

Not completely fluent, vocab difficulties and some sentences sounded rehearsed. (Barry)

In general, the participants had negative opinions about the Nativeness, Niceness, and Fluency of the Japanese-English accent.
6.1.4 German-English accent

6.1.4.1 Nativeness

There were five noteworthy ratings about the Nativeness of the German-English accent, and all of the interviewees commented on the phonology of the German-English accent.

Close to the native, like Australian. (John)

Very close to native speaker, speaks every word clearly. (Mark)

You could tell they are no native speaker, international students because it doesn’t fit the American accent, British accent or Australian accent. (Jamie)

Similar to the evaluation of the Japanese-English accent, it was clearly evident that the participants had a tendency to judge the Nativeness of L2 varieties in proximity to a NS benchmark.

6.1.4.2 Fluency

The German-English accent was rated positively by all the participants, each of whom focused on the phonology of the German-English accent when giving their evaluations.
Fluent because of speed, full sentences. (Helen)

Fluent speaker, talks without stopping, just pausing. (Tricia)

The overwhelmingly positive opinions about the Fluency of the German-English accent were very similar to those given about its Nativeness.

6.1.4.3 Niceness

Five out of the 15 interview participants had more or less than neutral ratings about the Niceness of the German-English accent. Generally, the participants gave positive comments about the Niceness of this accent variety.

It not a bad accent, but not a good accent. I like the American accent. (Liz)

Yeah, I liked it. This sound I like the most [of the four accents] because it is very near the native speaker. (David)

However, Steve gave a negative evaluation of Niceness, suggesting that the German-English accent sounded harsh.
6.1.4.4 Naturalness

Only three ratings given during the surveys were of any significance. The participants thought that the German-English accent sounded more Natural than not.

Quite natural. (David)

Seven out of ten. (John)

Natural. (Andrew)

Overall, the participants held positive attitudes towards the Speech Quality of the German-English accent.

6.2 Status and Solidarity

6.2.1 Chinese-English accent

6.2.1.1 Career success

There were four noteworthy ratings for the Career Success of the Chinese speaker. The majority of the participants discussed the phonological characteristics of the speaker.
Not very successful because I think the voice is not, there is no rhythm. (David)

Not much career success, so, but not unsuccessful, about average. (Mark)

Nevertheless, one of the interviewees mentioned the speaker’s phonology as well as their personality traits.

Didn’t speak quickly so assume she doesn’t get angry quickly and hence would be better at her job, get along with other people. (Emma)

6.2.1.2 Education

Over half of the participants rated the Chinese speakers quite strongly for the attribute of Education. All eight of the interview participants made reference to the phonology of the speakers when discussing their reason for rating this attribute either positively or negatively. In the first sample, the participants thought the Chinese speakers were bachelor students.

Bachelor, not PhD, because didn’t speak confidently. (Emma)

On the other hand, a few participants thought the speakers had attained a higher level of Education. For example, Mel thought the Chinese speakers might be
post-graduate because I think they have got experience and quite old.
(Mel)

It should be noted that Mel’s comment was one of only two instances evident in the interview transcripts where a participant made a direct reference to the age of the speaker. The other reference was made by Shane and his discussion of the French speaker’s Social Attractiveness and Personal Integrity.

Mark also thought the Chinese speakers were highly educated because of

The way she speaks, she thinks before she speak. (Mark)

Interestingly, Mark associated the suprasegmental feature of pausing with a person’s level of Education rather than Speech Quality. In summary, the participants had quite a mixed bag of the opinions about the Solidarity and Status of the Chinese-English users.

6.2.1.3 Wealth

Only three of the participants had interesting ratings regarding the Wealth of the Chinese-English users. John’s opinion, which was seldom found throughout the other interviews, focused on the lexicon used by the speaker.

She mentioned she want to get much salary, middle class, not rich. (John)
The second comment was based on the listener’s schematic knowledge about the relationship between a person’s socio economic background and their level of Education.

If she is a post-graduate student so maybe she got money. (Mel)

However, Mark noted the phonology of the speaker.

Speaker sounded depressed. (Mark)

To conclude, the participants had mostly positive things to say about the Status and Solidarity of the Chinese-English users.

6.2.2 French-English accent

6.2.2.1 Career Success

There were six ratings of interest about the Career Success of the French speaker. The three samples given below represent the overall positive attitudes towards the Career Success of this speaker.

She speaks very loud and confident. (Mark)

Successful in career, which has made her a bit cold. (Rick)
She has a management job, indicated by confidence in her voice. (Emma)

The samples also show that the participants relied heavily on the Speech Quality of the French-English when giving their opinions about the attribute of Career Success.

6.2.2.2 Education

The Education level of the French speakers was of particular interest to the 15 participants as nine of them rated this attribute positively. The interview data reinforced the findings of the survey, which showed that the participants thought the French speakers were highly educated. In addition, Mark’s comment about the Education level of the French speakers was similar to the ones he made about the Career Success of this speaker. They were similar because Mark relied on his systemic knowledge of English vernacular in order to evaluate both Education and Career Success.

I listen to the content that she said, she has been high in education. (Mark)

Unfortunately, Kylie did not leave any clues as to why she thought the French speakers were highly educated.

Maybe a Master’s or something and from the people who are educated more, parents educated. (Kylie)
However, two of the participants believed the French speakers were not highly educated, citing the phonological characteristics of the speakers as the basis for their evaluation.

I would say they had done their undergrad degree because they are not as fluent as [the Chinese speaker]. They haven’t been in English speaking environment for long. (Jamie)

Bachelor students, not post grad because English wasn’t good enough.
(Andrew)

6.2.2.3 Wealth

The attribute of Wealth was also a popular survey item for the interview participants. Overall, there were mixed attitudes about the Wealth of the French speakers. Some of the participants, such as Kylie, based their evaluation on schematic knowledge. More specifically, the participants tended to give the same opinions about the Wealth of the speakers as they did for their Education level. For example, Kylie mentioned the speaker’s parent when giving her opinions about Education and Wealth of the French-English speaker.

She sound like intelligent girl, maybe a master or something and from the people who are educated more, parents educated. (Kylie)
Conversely, other participants did not make any connections between Education and Wealth. Instead, they used their schematic knowledge to guess the speaker’s profession:

No, she’s a teacher. She uses firstly, secondly, lastly, speak like a lecturer.
(David)

as well as the affluence of certain groups of people.

Not so much, again it is based on cultural stereotypes but I feel she is eastern European people, they are not very rich. (Jamie)

Overall, there seems to be a strong relationship between the level of Education, Wealth, and Career Success of the French-English speaker.

6.2.3 Japanese-English accent

6.2.3.1 Career Success

Only two interview participants made noteworthy ratings about the Career Success of the Japanese-English speaker. Interestingly, both of their evaluations were based on the content of the speech excerpts rather than their assumptions about the speaker’s identity.

Will be good at her job as flight attendant. (Steve)
Good at their job, looking for future job. (Helen)

6.2.3.2 Education

The comments made about the Education level of the Japanese speakers sourced a range of knowledge bases. For example, Helen focused on the content of the speech excerpt.

Post grad I think because they said they worked overseas. (Helen)

On the other hand, Liz based her evaluation on the phonology of the speech sample.

PhD student, her accent not too strong. (Liz)

The majority of the participants thought the Japanese speakers had a high level of Educational attainment.

6.2.3.3 Wealth

A number of the participants rated the Wealth of the Japanese speakers both positively and negatively. Similar to the other evaluations made about the Solidarity and Status of the Chinese and French speakers, the opinions about the Wealth of the Japanese
speakers were based on the vocabulary present within the speech excerpts, such as the response given by David.

No, because it’s a student… I think it is a student because the speaker said she want to go to China to study. (David)

Other participants based their evaluation on their knowledge of phonology, which was evident in the samples given below.

Yeah, I think so because they are Japanese… I think Japanese people afford to speak that much English should be rich. (Jamie)

I have a feeling of her being rich because they speak like that. (Mark)

Mark’s opinion was mirrored by a number of other participants who thought a higher level of English language proficiency could be directly attributed to socio-economic class. In summary, the participants generally made positive remarks about the Status and Solidarity of the Japanese speakers.
6.2.4 German-English accent

6.2.4.1 Career Success

Only four participants had noteworthy ratings worth mentioning for the Career Success attribute. Unlike the evaluations for the Chinese-English, French-English, and Japanese-English accent varieties, all the opinions made about the Career Success of the German speakers were founded on the participants’ knowledge of phonology.

Yes, I think they have got some skills, professional, because their voice tell me something that they are confident, the flow of their speaking is very smooth, maybe a teacher or officer. (Mel)

Could be successful in their careers, but doubt because not confident, stumbling their words. (Barry)

Is a good teacher, not a beginner teacher because doesn’t sound nervous, confident. (Helen)

6.2.4.2 Wealth

Over half of the interviewees made significant ratings about the Wealth of the German-English speaker. While some of the participants thought the speakers were upper-class,
Maybe rich, the lecturer. (David)

others believed that the speakers belong to the middle class due to the phonological features of their speech.

Middle class who wants to be upper-class, because she is a little bit aggressive when she speaks. (Emma)

Lastly, one on the participants believed that the German speakers were not from a Wealthy background, and again, the opinion was based on their evaluation on the phonology of the speakers.

Not so rich, I feel like they have done a lot of self study, that’s my impression, because their accents are not influenced by [NSs], it’s like their own accent so they probably didn’t have instructors or anyone to help them with their pronunciation. (Jamie)

6.2.4.3 Education

Thirteen out of 15 participants had significant ratings for the attribute of Education, which was highest of any attribute across the four different speakers. Despite a few participants failing to suggest why they believed the German speakers were highly
educated, the majority thought the speakers had post-graduate qualifications due to speech qualities rather than identity.

They mentioned and they talked about energy in the 70’s and personnel tasks, they are working at a university so maybe a postgraduate like PhD or something. (John)

I guess they would be post grads because they are not really confident in what they are saying but they don’t have to think about what they are saying. (Jamie)

Postgraduate level. (Andrew)

Well educated, blond, wears glasses, smart. (Rick)

The samples given above illustrate that the interviewees’ focused not only on vocabulary present in the speech excerpt and the phonology of the speakers but also their listeners’ assumptions about the identity of the speaker. To sum up, the participant’s held high opinions of the German speakers’ Status and Solidarity.
6.3 Social Attractiveness and Personal Integrity

6.3.1 Chinese-English accent

6.3.1.1 Confidence

Nine out of the 15 participants gave significant ratings for the Confidence attribute. From the samples given below, it was apparent that the participants sourced their systemic knowledge of the English language in order to answer questions about the Confidence of the speaker. For example, two interviewees discussed the phonology features of the speech samples.

No confidence, she speak very soft. (Mark)

Not assertive because self-conscious about their accent; lacks confidence. (Rick)

Another discussed speech rate and a judgment of accentedness rather than his emotional attitude towards L2 speech.

Not particularly confident, not like the other faster accent. Her accent is strong so not confident. When you know your accent is strong, you are not so confident. (Barry)
On the other hand, one of the participants discussed the content of the speech sample rather than its phonological characteristics.

Yeah, especially when she explain about this job, this type of work, she explain in detail. (John)

None of the participants had anything overly positive to say about the speaker’s Confidence.

6.3.1.2 Interest

All the interview participants cited the phonological characteristics of the Chinese-English accent as the reason for their attitude towards the Interest attribute. All the responses indicated that the Chinese speakers would not be Interesting people with whom to talk.

The tone that she speak with, very low, monotone. (Mark)

I said no [on the survey] maybe because their tone is very monotonous and they don’t sound very excited. (Jamie)

No because they are not a native speaker so the accent is not attractive. (David)
6.3.1.3 Kindness

There was quite a disparity between the negative evaluations for the Interest attribute and those given for the Kindness attribute. Overall, the Chinese speakers were considered Kind people.

She sounds like nice person. (Mel)

Sound friendly and you can talk about your problems and they will listen. (Kylie)

Furthermore, Tricia claimed that the speaker’s Kindness was directly related to their gender.

Maybe kind, partly because she’s a woman. (Tricia)

It should be noted that there were only three other instances where a participant referred to the speaker’s gender. The next two instances are also in the category of Social Attractiveness and Personal Integrity. Shane mentioned gender when giving his opinions about their level of Patience and Barry attributed the Kindness of the Japanese speakers to their gender. The final reference to a speaker’s gender was in the category of Academic Competence, where David discussed the gender stereotypes associated with specific occupations.
6.3.1.4 Friendliness

All the participants made positive evaluations about the Friendliness of the Chinese-English users. While the following two samples did not allude to the reasoning behind the listeners’ opinion,

Friendly (Rick)

Friendly (Steve)

One of the participants based their positive evaluation on their schematic knowledge about the ethnicity of the speaker.

Friendly, like all Vietnamese (Liz)

Though the speakers were Chinese nationals, the listener was able to identify correctly the region from which the speakers originated.

6.3.1.5 Patience

Only three of the survey results were of any interest in the current study. In addition, the evaluations about the speakers were equally as positive as those for the Friendliness and Kindness of the Japanese-English speaker.
Yes, because I noticed that from the speaking she has much information and ideas about what she is speaking about, what she is talking about. (John)

More patient because they are female. (Shane)

Patient person speaking. (Helen)

Once again, it appears that these evaluations were based on the listeners’ schematic knowledge of the world rather than their systematic knowledge of the English language or language universals. It is also worth mentioning that Shane and Tricia’s evaluations were alike in that they both referred to the speakers’ gender when giving their opinions about the Social Attractiveness and Personal Integrity of the Chinese speaker.

In summary, apart from the attributes of Confidence and Interest, which received quite poor assessments by the majority of the participants, the rest of the attributes regarding the Social Attractiveness and Personal Integrity of the Chinese speakers received positive evaluations.

6.3.2 French-English accent

6.3.2.1 Patience

The Patience attribute of the French speakers was of particular interest to the participants. Eleven out of 15 participants rated this attribute either negatively or
positively. Interestingly, all of the comments made during the interviews made reference to the phonology of the French-English accent.

No, I think that the girl is not patient with people because hard working. (Kylie)

No, Because of my own experience, from the accent, most of them are teachers and not very patient. (Mark)

Because Mark correctly identified the French speakers’ accent on his survey, the referent ‘them’ in the sample above could refer to people from France. In addition, Steve was also able to identify correctly both Speakers Two and Six as having French-English accents.

Ambitious person, not patient, she comes from a dominate group. (Steve)

Therefore, the word ‘group’ may refer to French people.

No, they have a very strong, solid voice so I think they are very opinionated. (Jamie)

Not patient because speaks fast. (Tricia)

It was quite clear from all the samples given above that the participants had a negative opinion of the French-English accent. These negative opinions were based on the
perception of L2 speech, such as a judgment of accentedness, as well as the phonology of the speakers, including speech rate.

6.3.2.2 Kindness

Though one of the participants felt that the French speakers were cold and selfish, (Mel)

another participant was impartial regarding the speakers’ Kindness.

Neutral. (Rick)

6.3.2.3 Friendliness

Similar to the attributes of Patience and Kindness, the French speakers were rated poorly for the Friendliness attribute. Emma and John relied on their responses to the attributes of Flexibility and Wealth in order to discuss their opinions about the Friendliness of the French speakers.

Would be friendly but may be less flexible in dealing with people because she is upper-class. (Emma)
Ahh no, not friendly because from her speaking I feel she just give orders, very direct and she is talking like a manager, not flexible. (John)

However, Mark and David based their evaluations on the phonological characteristics of the French-English accent.

No maybe because she speak very loud and she stressed the words very strongly. (Mark)

She sound a little strong, for me a good lecturer must sound strong. (David)

The next sample suggested that some attitudes, especially those toward the speakers’ perceived identity, were embedded in a schema about a social setting, which was constructed entirely from the participant’s imagination. For instance, the opinions about the Friendliness of the French speakers tended to be more positive if the participant’s schematic knowledge associated the speech act with a formal setting, such as a workplace. This was in complete contrast to the negative evaluations given to the Friendliness of French speakers when the participant placed the interaction in an informal setting.

Friendly, as people normally are at a party. (Shane)
6.3.2.4 Confidence

Even though two of the participants thought the French speakers were Confident due to the quality of their voice, and perhaps, the content of the speech excerpt

*From her voice she is ambitious, confident.* (Liz)

*Very confident, I think it’s from a presentation or something, they speak very confident.* (Kylie)

David gave a negative evaluation of the speakers based on the phonology of the French-English accent.

*Because her voice is not clear to me, she does not have enough confidence.* (David)

More specifically, David related his negative evaluation to the intelligibility of the French-English accent.

6.2.3.5 Interest

The participants varied in their opinions about the Interest attribute. Even though some participants thought the French speakers
would be interesting to talk to. (Helen)

Others said the French speakers were

not interesting person. (Andrew)

Finally, Shane was the only participant that mentioned the age of a speaker, which seemed to have a negative influence on the participants’ evaluation of the speakers.

Sounded to be 30-40 years old, with interests of an older generation. (Shane)

In summary, the participants did not hold the Social Attractiveness and Personal Integrity of French speakers in high regard. Even the Confidence attribute, which scored highly on the surveys, turned out to be a false positive. During the interviews, it quickly became clear that, unlike the other speakers, the Confidence attribute had a negative connotation when used to describe the personal characteristics of the French speakers.

6.3.3 Japanese-English accent

6.3.3.1 Kindness

All the participants rated the Japanese-English accent positively for the attribute of Kindness. Moreover, the evaluations seem to be based on the perceived identity of the
speaker. For example, Mel’s opinion about the Kindness of the speakers were based, firstly, on her assumption about the speaker’s nationality, which she thought was Chinese, and then her affiliations with this group of people.

They are very nice because my friends all sound like that. (Mel)

Kind, sometimes generous because female. (Barry)

Kind, would help strangers. (Liz)

6.3.3.2 Confidence

In contrast to the responses given for the attributes of Kindness, all the interviewees used their systemic knowledge about the phonology of English when giving opinions about the Confidence of the Japanese speakers.

When she speaks she has some hesitating so not confident. (Mark)

I don’t think so because they have pauses in their words and they don’t sound very confident in what they are saying. (Jamie)

Unlike the other participants, Liz generalized about the Confidence of NNSs, generalizing that NNSs may feel more Confident when speaking with other NNSs.
Personally more confident when speaking with international students because accent doesn’t show as much, they also have accent. (Liz)

6.3.3.3 Friendliness

There were only three significant ratings about the Friendliness of the Japanese speakers. The interviews revealed that one participant based their opinions on the phonological characteristics of the Japanese-English accent.

Friendly because they speak soft and near a native speaker. (David)

Another discussed how a person’s language proficiency could have a direct impact on their ability to develop a rapport with others.

Friendly but not fluent enough for a real relationship. (Rick)

The third opinion about the Friendliness of the Japanese speakers related to the participant’s schematic knowledge about social interaction.

Friendly to people she just meet. (Kylie)
6.3.3.4 Interest

There were two similarities in the discussions about the Interest and Confidence of the Japanese speakers. Firstly, the opinions tended to be negative. That is, the speakers were not considered interesting people, nor were they thought to be overly confident. Secondly, the participants sourced their systemic knowledge about the phonology of the speakers when discussing their opinions about the Interest and Confidence of the Japanese speakers.

Would be interesting to talk with because her voice sounds nice. (Emma)

A bit boring because she’s hesitant in speaking. (Tricia)

Some speakers are boring simply because the accent is so strong and it’s difficult to communicate with them. (Liz)

6.3.3.5 Helpfulness

Only one of the participants had anything either positive or negative to say about the Helpfulness of the Japanese speakers. Based on the phonological characteristics of this accent variety, such as speech rate, the participant gave a favorable evaluation.

Would be helpful working on project together because of voice and fast talker. (Emma)
In conclusion, all 15 participants had mostly positive opinions towards the attributes of Kindness, Friendliness, and Helpfulness of the Japanese speakers. Although, the participants did not have anything favorable to say about the Confidence of the Japanese speakers, nor did they think the Japanese speakers would have anything Interesting to say.

**6.3.4 German-English accent**

**6.3.4.1 Friendliness**

The German speakers received many ratings of note for the attribute of Friendliness. However, the majority of these ratings were negative. From the samples given below, one may suggest that these negative evaluations were based more so on the participants’ schematic knowledge of the speakers’ personality characteristics than the phonology of the German-English accent.

They are not very friendly because you know they are professors and I felt they are not friendly, they are friendly but not too much, they like to manage, to talk in lecture. (John)

Outgoing but not overly friendly. (Liz)
She wouldn’t want to be friends with me if we met at a party because she wants to link up with upper-class people. (Emma)

One of the few favorable comments made about the Friendliness of the German speakers also mentioned their phonological features. Interestingly, the following participant also related the Friendliness of the speakers with their first language.

Very friendly, it’s because they sound like a native speaker, clearly and easy to listen to. (David)

**6.3.4.2 Kindness**

Regarding the Kindness of the German speakers, Mark and Liz referred to phonology of this accent variety.

No, they speak loud, stress on every word. (Mark)

Accent sounds bossy. (Liz)

It was unclear why the following two other participants thought the German speakers were Kind people.

I think they are very kind. (Mel)
Not a mean person. (Helen)

6.3.4.3 Patience

Similar to the attribute of Kindness, there were only four noteworthy survey responses for Patience. Furthermore, there seems to be a balance in opinions about the Patience of the German speakers. Finally, many of the participants were unable to explain the reasons for their opinion.

Yep, their voice doesn’t sound very strong or pushy, more laid back.
(Jamie)

More patient than the [French] speaker. (Kylie)

Not patient. (Andrew)

Not patient. (Tricia)

6.3.4.4 Confidence

Unlike the attributes of Friendliness and Patience, the participants had stronger opinions about the Confidence of the German speakers. The majority of these comments pertained to the perceived identity of the speakers.
Is confident, very confident in public speaking. (Tricia)

Not very, but not they are not really shy. They can talk in front of class but they wouldn’t dominate discussions or anything. (Jamie)

I think she can speak with a lot of people and very easily, and make people listen to what she say. (Kylie)

On the other hand, Emma’s comment related to the phonology of the speakers, and thus, her systemic knowledge of the English language and languages in general.

Confident, because her voice is a little bit aggressive. (Emma)

6.3.4.5 Interesting

A modest number of noteworthy ratings were made about for the attribute of Interest. It became apparent during the interview process that the participant’s did not think the German speakers would be Interesting people with whom to talk. Jamie’s negative opinion was based on what the speakers said rather than how they said it. Moreover, Jamie made a direct comparison between two European accent varieties, and stated that the topic of the conversation was the reason for her negative evaluation.
Maybe not have interesting topics to talk about because I think the
[French speaker] sound like they have done lots of crazy things, well
that’s my impression, but [the German-English speaker] sound ordinary so
they may not have interesting stories. (Jamie)

However, others thought the German speakers might be Interesting people with whom to
talk if a social occasion, such as a party, provided the opportunity.

**Would be interesting at a party. (Shane)**

**Interesting, not boring, because the [Russians] I’ve met. (Barry)**

It should be pointed out that Barry said *Russian* for one of the German speakers on his
survey.

It appears that Helen’s went off topic with the following comment, discussing the
intelligibility of the German-English accent, or perhaps the complexity of the topic being
discussed, rather than her emotional attitudes towards the speakers.

**Not interesting to meet at party because I didn’t understand topic. (Helen)**

In general, there were mixed feelings about the Status and Solidarity and of the
German speakers. While the participants had an even spread of both positive and negative
opinions about the attributes of Friendliness, Kindness, Patience, and Interest, the
evaluation of the German speakers’ Confidence tipped the scales more strongly towards the positive end.

6.4 Academic Competence

6.4.1 Chinese-English accent

6.4.1.1 Flexibility

Very few of the survey results indicated neither positive nor negative attitudes towards the Flexibility of the speakers. Jamie said,

I think they are, based on their voice, they sound very passive and not very self-centered. (Jamie)

It seems her evaluation was a mix of both the speakers’ speech patterns as well as Jamie’s schematic knowledge of different personality traits.

6.4.1.2 Creative

Similar to the attribute of Flexibility, the survey contained very few examples of significant data about the Creative ability of the Chinese speakers. Emma and Helen associated the Creativity of the Chinese speakers with their prosodic features.
Not creative because not active in expressing own opinion, spoke slowly.

(Emma)

Not creative voice, a bit flat. (Helen)

6.4.1.3 Leadership

The participants had strong opinions about the Leadership qualities of the Chinese speakers, which were overwhelmingly negative. While many participants simply stated that they did not think the speakers would make a good Leader, others supported their argument. In addition, all the participants based their evaluations on the phonological characteristics of the Chinese-English accent rather than their schematic knowledge about the speaker’s identity. For example, Mel said,

She maybe in a group but not many chances for her to be a good leader. Her voice does not support the characteristic of a good leader, which is confidence because she does not speak fluently much. (Mel)

Moreover, David’s evaluation made a specific reference to a short-term vocal quality of the Chinese speakers, such as speech rate.

[She would be a good leader] if she can speak fluently and a little fast. If she speak slowly, she cannot transfer her idea or opinion to the group because in the meeting there is not enough time to discuss. (David)
Furthermore, Andrew and Emma both suggested that the speaker's proficiency in English was the reason for their negative evaluations of their Leadership skills.

**English not good enough for her to be leader. (Andrew)**

**Would prefer if speaker was a team member but only if project was not about English language. (Emma)**

In contrast to the other participants, one participant thought the Chinese speakers would make a good Leader. John thought the Chinese speakers’ proficiency in English were adequate for them to Lead a group. He also based his positive evaluation on his assumptions about the speakers’ personality traits.

**Yep, I think so, she has confident, and knowledge, she has got experience, yes, and her English is good. (John)**

### 6.4.1.4 Cooperation

There were three significant results regarding the attribute of Cooperation. The participants unanimously agreed that the Chinese speakers would Cooperate well with others in a group project. For example, Kylie believed the speakers would
Want to listen to other people, so really kind and friendly, so she will cooperate with us on an assignment or something. (Kylie)

In addition, Shane and Emma thought the Chinese speakers would be

Good at working with other students. (Shane)

and were likely to

Get along with other people (Emma)

6.4.1.5 Work Ethic

Three out of the four participants thought it was worth evaluating the Work Ethic of the Chinese speakers. Three out of the four evaluations were quite positive. Jamie based her evaluation on the perceived identity of the speakers and her stereotypes about that ethnic group.

Yes, very hard, maybe because I have this stereotype about Chinese people that they work hard, maybe it does have to do with the accent, a more cultural thing. (Jamie)

Andrew also thought the she would be very Hard-working.
She’d study very hard. (Andrew)

On the other hand, Kylie rated the Work Ethic of the speakers negatively based on their speech rate.

They speak really slowly and not for speed. (Kylie)

6.4.1.6 Participation

Similar to the comments given about the Work Ethic of the Chinese speakers, most of the participants gave positive evaluations for the attribute of Participation. It was not clear in the first two samples on what basis these evaluations were made.

Would participate in a group because she’d study very hard. (Andrew)

Would be good team member. (Liz)

However, the third sample may exemplify a common assumption among the participants that Speakers One and Five had a Chinese-English accent. If this were the case, then the participants’ opinions about the Participation attribute may have been based on their beliefs about the sociocultural characteristics of Chinese nationals. This certainly seems to be the situation for Jamie, Steve, and Barry, all of who correctly identified Speaker Five as having a Chinese-English accent. In fact, 50 of the participants identified
Speakers One and Five as originating from Asia. Moreover, 20% correctly identified Speakers One or Five as Chinese.

**Chinese students group among themselves, don’t interact but do respond. (Steve)**

The belief that Speakers One and Five was a Chinese national continued to influence the participants’ opinions about the attribute of Autonomy.

### 6.4.1.7 Autonomy

Six of the participants had noteworthy responses on their surveys about the attribute of Autonomy. The majority of the participants gave negative statements when asked to evaluate the Chinese speakers’ level of Autonomy. For example, two participants believed that the speakers

**Will need help from other student (Kylie)**

and

**Would ask for help from [other Chinese people] in their group but not from the teacher, I think culture influence here. (Steve)**
Furthermore, one participant even suggested that the Chinese speakers lacked Autonomy because she

**Have a problem something really hard in her life before. (Mark)**

On the contrary, one participant used his personal experience as an international student to evaluate positively the speaker’s level of independence.

**Yeah, especially if she is here in Australia, she works ok by herself. (John)**

**6.4.1.8 Organization**

While one participant suggested that the Chinese speakers were organized people because

**She speaks slowly and she prepares when she talks. (David)**

Another participant relied on his observations of Chinese students and their tendency towards particular learning styles.

**A good student, good at memorizing and organized. (Barry)**
It should be remembered that Barry was a French student studying a Master of Business Administration, which is a course with large numbers of Chinese students. In sum, the participants relied on both their systemic and systematic knowledge bases when giving opinions about the Autonomy of the speakers.

6.4.1.9 Intelligence

There were quite a high number of survey results that rated the Intelligence of the Chinese speakers either negatively or positively. Some participants measured the Intelligence of the speakers according to their level of Education. For example, Kylie thought they were

A high school student or 1st year bachelor student. (Kylie)

However, Rick disagreed. He thought they were

Intelligent, reminds me of lecturer that I have. (Rick)

Moreover, Tricia thought the Chinese speakers were Smart.

Though many of the participants thought the speakers were Intelligent people, two participants gave opinions to the contrary. In addition, these negative evaluations were based on the English language proficiency of the speakers rather than their perceived identity.
Not that much because they’re English language is not that perfect. (John)

Average intelligence because she didn’t express herself very well. (Emma)

6.4.1.10 Helpfulness

Two participants thought the she would be very Helpful.

They would be very helpful because they are very nice and kind and would make good friends. (Mel)

Would try to help when doing a project. (Helen)

However, the efficacy of this help may not have been applicable to all situations.

Her pronunciation cannot help me to improve my pronunciation. (David)

The positive evaluations for the Helpfulness trait seemed to be associated with the participants’ schematic knowledge about the speaker’s identity.
6.4.1.11 Honesty

Ten participants were asked to discuss their Honesty rating for the Chinese-English accent. All ten interviewees used avoidance strategies, such as ‘don’t know’ or ‘can’t tell’ when asked to talk about this particular item. These ‘neutral’ explanations were in spite of the fact that all ten participants had given overly negative or positive evaluations for this item. When probed further, the majority of the interviewees evaluated the Honesty of these speakers positively, such as Liz, who thought the speakers were probably Honest.

To conclude, the participant had mostly negative opinions about the Academic Competence of the Chinese speakers. However, there was a clear distinction between the attributes that received mostly positive ratings, and those that did not. For example, the attributes of Cooperation, Hard-working, Helpfulness, and Intelligence received quite negative evaluations when compared to the other attributes of Academic Competence.

6.4.2 French-English accent

6.4.2.1 Flexibility

None of the participants found the French speakers very Flexible, with simple statements, such as

Not flexible. (John)
Other negative statements where may be attributed to the individuals socio-economic Status.

**Less flexible in dealing with people because she is upper-class. (Emma)**

Finally, some of the participants thought that the French speakers could be Flexible given the right circumstances.

**Negotiable, fairly flexible if reasonable proposal. (Helen)**

From the interview data, it can be seen that the majority of the negative evaluations about the Flexibility of the French speakers were based on the participants’ schematic knowledge, or their beliefs about personality traits that may lead to Inflexibility.

### 6.4.2.2 Leadership

Nine of the 15 participants gave noteworthy ratings regarding the Leadership skills of the French speakers. In contrast to the evaluation of Flexibility, the majority of the opinions given about the Leadership skills of these speakers related to the participants systemic knowledge of English and languages in general. For example, Mark suggested that the French-English speakers were

**Not a good leader because the way she speaks may be unpleasant to some of the listener. (Mark)**
John had a similar view of the French speakers, stating:

I think to be a manager you need to be more flexible, more friendly, and more attached with the people, so not this person. (John)

Other participants thought that they would be a Leader

But not a very good one. (Jamie)

Some of the participants had positive things to say about the Leadership skills of the French speakers. However, unlike the negative evaluations, which were based more so on the phonological characteristics of the speaker, such as the type of vocabulary present in the speech excerpt.

Yep, she has the signal language [when she speaks] and she have some preparation before she speak. (David)

Other opinions seem to focus not so much on the Leadership qualities skills of the speakers, but more about their own inabilities. The latter part of the following sample also echoes Jamie’s concerns about the Leadership potential of the French speakers.

Yes, sometimes like to work with the girl because I don’t have to think too much and she say just do this and this and everything will be OK because she
will take care of everything. But sometimes I say I cannot do this but she say I must do it, this would be a very difficult problem. (Kylie)

6.4.2.3 Participation

The participants did not believe that the French speakers would work well with others. Instead, they

would rather work by themselves. (John)

They also suggested that any effort by the French speakers to Participate in a group activity would most likely have a detrimental impact on group dynamics.

I think they would participate but they wouldn’t be a good listener. They would wanna express what they think, what they wanna do, but not listen to others. (Jamie)

6.4.2.4 Autonomy

It seems that the Autonomy attribute of the French speakers may have had something to do with their perceived identity. Two of the participants thought the French speakers would possess a high level of Autonomy, saying:

She can do everything by herself. (Kylie)
I think they are very independent and rarely ask for help. If they didn’t understand they would just say ‘I don’t understand’ but I think they would try to figure it out. (Jamie)

Another one of the participants believed that the French speakers would not be able to work independently of others.

I don’t think they will work by themselves. (Mel)

6.4.2.5 Work Ethic

Eight participants had mixed ratings about the Work Ethic of the French speakers. Similar to the attribute of Autonomy, there were mixed evaluations about the work effort of the French speakers. For instance, Mel based her evaluations on her assumptions about the identity of the speakers.

I think they are always partying and always enjoy themselves. (Mel)

Moreover, Steve made a direct comparison between the speakers’ nationality, which he accurately identified as French, and the negative opinions he holds towards other members of this group.
Like my supervisor; not a hard worker. (Steve)

In contrast, other participants thought the French speakers sounded like a Hard-working people. For example, Kylie, Rick, and Liz were adamant in their opinion about the Work Ethic of the French speakers.

Really knows how to work. (Kylie)

Hard worker, focused on career (Rick)

Hard worker, from her voice she is ambitious’ confident. (Liz)

It should be noted that the word ‘focused’ was also used by Andrew to describe the Organizational skills of the French speakers, but due to a lack of data, the Organization attribute was not included in the interview results section.

6.4.2.6 Intelligence

Half of the participants thought the French speakers were not overly Intelligent, basing their opinions on the personality characteristics of the speakers.

I don’t think they are smart. I feel they are not the type of person who studies much. (Mel)
Not smart (Andrew)

In contrast, the other half of the participants thought the French speakers had above average Intelligence, citing their vernacular rather than their identity.

Intelligent, from content. (Shane)

Intelligent from topic. (Barry)

6.4.2.7 Creative

The evaluations given for the Creativity attribute continued the trend seen in the attributes of Work Ethic and Autonomy. That is, the participants sourced their schematic knowledge in order to create an identity for the speakers, and it was this representation that guided the participant’s opinions about the speakers’ Creativeness. The first sample shows that the participant was indecisive as to whether the speakers had Creative talents, swinging more towards a negative evaluation for the attribute of Creativity.

Maybe creative but more operations, she say do this do this, and not create something. (Kylie)

Two other participants thought that the French speakers might possess Creative talents. The first participant thought that the French speakers might be teacher, and thus,
discussed their potential for Creative thought in terms of the skills one needs to be an effective teacher.

Yes maybe, she is creative in her language to transfer her knowledge to her students. (David)

The second participant relied heavily on her assumptions about the speaker’s identity in order to discuss their Creative talents. The sample below illustrates the extent to which a participant’s schematic knowledge may create an image of a person, even specific aspects of their physical appearance.

From her voice she is artistic, good at painting, lives in a city but dresses naturally. (Liz)

6.4.2.8 Cooperation

Of the six responses given during the interviews, only three participants gave reasons for their negative evaluations of the Cooperation attribute. Similar to the comments made about their willingness to Participate during group activities, many thought the French speakers would not Cooperate well with others because they

May be impatient with those who don’t work enough (Rick)

or
May be hard to work with because of her accent and might not be good team member as she is confident and may not want to listen to others’ opinions. (Emma)

or

Wouldn’t be cooperative in a group, she just can’t speak English to discuss things. (Andrew)

From the samples given above, it appears that the participant relied heavily on their answers for the attributes of Work Ethic and Participation when giving their opinions about Cooperative nature of the French speakers.

6.4.2.9 Honesty

From the surveys, there was only one rating of interest. During Emma’s evaluation of the French speakers’ Honesty, she discussed the prosodic features of the speech excerpt.

Honest person because she can speak without pausing. (Emma)

In summary, apart from some positive comments about the French speakers, such as Autonomy and Creativity, the overwhelming majority thought the speakers were not
Flexible people, would not make a good Leader, and were unlikely to Participate in group activities or Cooperate with others.

6.4.3 Japanese-English accent

6.4.3.1 Flexibility

Only three participants gave more or less neutral ratings about the Flexibility of the Japanese speakers. From the interview data, it can be seen that two of the evaluations were based on the phonological characteristics of the speakers.

No, her voice and the tone that she speaks. (Mark)

Not flexible because she was in a hurry. (Liz)

However, it was unclear why the third participant did not think the Japanese speakers were very Flexible people.

No, I don’t think so, I just feel like that. (Mel)
6.4.3.2 Participation

It appears that the opinions about the Participation of the Japanese speakers depended on whether their Participation was active or passive. The first sample showed that the participant relied on her systemic knowledge of language universals when giving an opinion. More specifically, Jamie made reference to the speech rate of the speakers and how this would have a positive impact on the speakers’ passive approach to group Participation.

Again, because they speak at a really slow pace it shows that they don’t mind if someone intervenes or interrupts because if you don’t want to be interrupted you wouldn’t stop whereas if you speak really slow. (Jamie)

Similarly, Liz also mentioned Speech Quality when discussing her opinions about the speakers’ ability to Participate in a group activity.

Could be shy about working with others because of a strong accent as people with strong accents are less confident in a group. (Liz)

Quiet, not good conversationalist because of speaker’s proficiency. (Steve)

The last couples of samples shared the other participants’ view that the Japanese speakers sounded quite reserved, and this would reflect positively on their ability to Participate in a conversation.
Based on that accent I think they would participate better in a tutorial because the voice is shy. (Mel)

She will participate really well because she’s not really a leader but she prefer to become a team member. (Kylie)

These evaluations were in direct contrast to those given for the French speakers, who received quite negative evaluations for the Participation attribute because the interviewees believed they would Participate actively during group activities. The participants seemed to share a common opinion, which valued a passive approach to group interactions, with less being more.

6.4.3.3 Leadership

The Japanese speakers had the second highest number of noteworthy ratings. Twelve out of 15 participants had strong opinions about the speakers’ Leadership skills, and all of them unanimously agreed that the Japanese speakers would make a poor Leader. In order to justify their opinions, some participants sourced established attributes, such as Confidence, as well as the novel attributes, such as passiveness.

Their voice is not confidence so no. They need to be fluent in English.
Their English will make it easier for people to listen to. (Mel)
No, I think they sound very passive and I don’t think they could lead a whole group of people, don’t sound very confident. (Jamie)

In addition to the negative opinions about the speakers’ Fluency, Mark also doubted their Leadership abilities.

If the person speaks like that, the member will not follow her, they would rather follow then be a leader. (Mark)

Moreover, Steve questioned the Japanese speakers’ willingness to accept a Leadership role if one was offered.

Not a group leader, or at least she would not accept leader’s role. (Steve)

One participant, on the other hand, decided they would negatively evaluate their own Leadership skills rather than demean the Leadership skills of another person.

Not a good leader, she study hard, if I must chose me or them [as a leader of a group] I chose them because my communication skills are not good and my pronunciation is not clear so too difficult for people to understand. (David)

Shane, who was a 24-year-old male student from China studying a Master of Finance, correctly identified the speaker’s mother tongue. Using his schematic knowledge of the
Japanese culture, Shane discussed the role played by Japanese women in positions of authority.

**Hard to know if they’d be good or leaders in group work because of the hierarchical nature of Japanese society. (Shane)**

6.4.3.4 Work Ethic

Similar to the Participation attribute, there were quite a few positive remarks made about the Work Ethic of the Japanese speakers. All the comments centered round the speakers’ identity. More specifically, the majority of the participants thought the Japanese speakers were English language learners. Therefore, they based their opinions about the Work Ethic of Speakers Three and Seven on their experiences and stereotypes of Japanese. Some of the participants thought they were Hard-working people

**Because she study English. (David)**

**Based on the fact that studying English is hard work. (Shane)**

Other participants were not so convinced. In the critique of the Japanese speakers, they cited the speakers’ English language proficiency and used it to gauge their Work Ethic.
I guess it’s another cultural stereotype but not very. If she really studied hard her English would be better at this stage, she hasn’t studies very hard and she’s not trying. (Jamie)

It should be noted that Jamie was Japanese and had spent many years studying English in both Japan and Australia. Moreover, she correctly identified Speaker Three as being a Japanese national. Therefore, Jamie’s opinions about the Work Ethic of the Japanese speakers may have been based on her self-image as an English language learner. Overall, the participants evaluated the Japanese speakers’ Work Ethic positively when talking about their efforts as an English language learner. However, this was not the case for Jamie, who was more critical of the speakers’ Work Ethic in the English language classroom.

**6.4.3.5 Autonomy**

From the participant surveys, there were few noteworthy ratings about the Autonomy of the Japanese speakers. During the interview process, the participants were reluctant to discuss their opinions about this attribute. Instead, they used avoidance strategies when asked about the Autonomy of the Japanese speakers. For example, the participants tended to repeat the opinions they gave for other attributes.

I think they would rely on others for help because again going back to their confidence, they need someone to confirm that what they are doing is right. (Jamie)
May seek help from others because she is not that confident. (Emma)

A speaker’s level of Autonomy also seemed to vary depending on the context in which she was placed. For example, David thought the Japanese speakers would be able to work independently of other in a learning environment.

In the English study they can study by themselves and don’t have to ask the teacher [for help]. (David)

On the other hand, this level of Autonomy did not extend to other contexts, such as commerce.

She will work with people. I think she will work good. But I’m not sure if she’s ready to have a business for herself. (Kylie)

6.4.3.6 Cooperation

There were very few ratings about the attribute of Cooperation. The first sample demonstrated that at least one participant thought the speakers’ language proficiency was good enough for them to Cooperate well in a group.

Yep, in my opinion the speaker speaks fluently, soft and clear, so in a group they can give idea or express ideas easy. (David)
Moreover, the speakers’ Social Attractiveness and Personal Integrity also lead to positive evaluations for the Cooperation attribute.

Would work well in a group because she is friendly, may compromise, discuss. (Emma)

A mixture of systemic and schematic knowledge bases was used to evaluate the Cooperative nature of the Japanese speakers.

6.4.3.7 Organization

There were varying opinions given about the organizational skills of the Japanese speakers. For example, Tricia tied together her opinions towards the Social Attractiveness and Personal Integrity of the speakers with their Academic Competence.

Not well organized because she doesn’t speak confidently. (Tricia)

However, other interviewees sourced their systematic knowledge of English, such as the vocabulary used in the excerpts, to evaluate the organizational skills of the Japanese speakers. The first quote mentions the topic of conversation, and how this influences John’s opinion.
Yeah, I know that because they mentioned they talked about how you would find a job and mentioned a trip to China, so they have organization and cooperation with other students. (John)

Emma also relied on the vocabulary used by the speakers to assess their organizational skills. More specifically, she listened for discourse markers, or lack thereof, to indicate the organizational skills of the speakers.

Only average organization as her discourse isn’t overtly marked. (Emma)

Emma was not alone in evaluating the organizational skills of a speaker according to their speech qualities. For instance, David used phonological features to assess the organizational skills of the Chinese speakers, and Mark used prosodic features to assess the organizational skills of the German speakers.

6.4.3.8 Honesty

Similar to the interview responses to the attribute of Cooperation, all the comments about the Honesty of the Japanese speakers were very positive. The evaluations for Honesty were also based on the participants’ schematic knowledge of the speakers’ perceived identity

Of course it depends on the personality but most of them they tell the truth. (Mel)
Helen’s comment about the inability of the Japanese speakers to recognize a lie raises questions about the possibility of a novel attribute, such as naivety, for the category of Academic Competence.

To sum up, the participants had different opinions about the Academic Competence of the Japanese speakers. For example, the majority of the participants thought the Japanese speakers would Participate and Cooperate well in group activities, had a strong Work Ethic, and were well Organized. On the other hand, the Japanese speakers received negative evaluations about their Leadership skills, level of Autonomy, and flexibility.

6.4.4 German-English accent

6.4.4.1 Flexibility

There were few noteworthy ratings about the Flexibility of the German speakers. Moreover, there were mixed evaluations given during the interviews. Both positive and negative comments were made about the Flexibility of the German speakers, most of which mentioned Speech Quality. One participant thought the speakers were Flexible people because of speech rate.
Felt like [the speaker is] very quick in reacting because they speak fast.

(Mel)

However, the phonological features of the German-English accent led other participants to judge these speakers negatively.

Not very flexible as a person because she is aggressive when she speaks.

(Emma)

6.4.4.2 Cooperation

The majority of the ratings for the Cooperation attribute were negative. During the interview process, many of the participants shared their concerns about the speakers’ willingness to cooperate in group activities. Kylie thought the speakers would not be overly cooperative in a group

Because I think sometimes she want to listen but half the time she don’t want to listen and she only have her opinion and she is right and no-one can say the other side. (Kylie)

This sentiment was echoed by Helen, who thought the German speakers’ demeanor would inhibit their ability to cooperate with others.

Strong opinion so would be challenging in a group. (Helen)
There was one participant, however, who thought the German speakers would work well in a team environment. Moreover, it was unclear why Mel thought the speakers were a white-collar worker.

I think they have got teamwork skills because I feel like they are very professional. (Mel)

6.4.4.3 Autonomy

There were seven interesting ratings given about the Autonomy of the German speakers. While some participants did not elaborate on their response to the survey,

I think they will work independently. (John)

others based their evaluation on the perceived identity of the speakers.

Maybe they are not student but working, I think they would work well by themselves but reach for help when they need it. (Mel)

Finally, Jamie seemed a little confused as to which attribute she was discussing. In the interview transcript below, there was an overlap between the attributes of Helpfulness and Autonomy. The sample below also alludes to the novel attribute of Trustworthiness.
I think they would know what they had to do so they could work independently, but they would be willing to help others, but they don’t sound like they need help. And they would ask for help if in trouble from friends, colleagues, teachers, and go to the teacher first because they would probably trust someone in higher position. (Jamie)

6.4.4.4 Intelligence

The Intelligence attribute received one of the highest numbers of noteworthy ratings. Eleven out of a possible 15 participants thought the German-English accent speakers were highly Intelligent. David mentioned the phonological features of the speech excerpt when giving his opinions about the Intelligence of the German speakers.

They speak fluently so from the voice they are smart. (David)

On the other hand, John referenced the lexiogrammar evident in the speech sample.

Yes, because their speech, when you listen to you feel like this type of person has knowledge and an idea about what he’s talking about. (John)

A number of participants suggested that a speaker’s high IQ was due to the speaker’s and Status and Solidarity as a university student.

Very intelligent, she has done high level of education. (Tricia)
Barry went one step further and suggested that nationality may have something to do with their Intelligence.

**Reasonably intelligent because she’s a uni student from Sweden (Barry)**

Thus, the Intelligence of the speakers correlated strongly with one’s opinions about the speakers’ level of Education, and to some degree, their nationality.

### 6.4.4.5 Creative

There were few positive or negative ratings given for the attribute of Creativity. In fact, there were only three significant ratings for the Chinese, Japanese, and French speakers combined. In spite of this trend, six participants had noteworthy ratings for the Creativity of the German speakers. Barry believed the speakers had a logical-mathematical type of Intelligence.

**Not creative, more likely in logic and maths. (Barry)**

Mark also thought the German-English accent speakers sounded quite orderly. His comment may also have expressed opinions about other attributes of Academic Competence, such as the Flexibility.
Sounded really strict, formal, step by step, she must stay on the line and not be creative or try to do something else. (Mark)

Though ambiguous, David’s remarks seemed to echo Barry’s opinion about the speakers’ disposition towards an analytical and logical Intelligence type.

No I don’t think so because the voice is not attractive to me, so I think the speaker is not doing art. Maybe doing business or marketing but not computers because they don’t include technology and they are a woman. (David)

As mentioned earlier, David’s reference to gender was one of only three instances where a participant attributed their emotional attitudes about foreign accent to the speaker’s gender.

**6.4.4.6 Organization**

Similar to the other attributes of Academic Competence, only a few significant ratings were made about the organizational skills of the German speakers. Moreover, all of the ratings were on the positive side of the scale.

Very organized. How she speak is good enough so her time management is very good. (Kylie)
Yes, because the tone, she want her own way (Mark)

Organized and on time most of the time. (Emma)

6.4.4.7 Helpfulness

There were a relatively high number of noteworthy ratings for the Helpfulness attribute. It appears that the participants had a tendency to source their schematic knowledge about the speaker’s identity. More specifically, all the participants thought the German speakers would be

Helpful and not any problem. They will help you to find, or in meeting, to know other companies, for example, because of their experience. (John)

Very helpful if maybe I have a problem I will go to her to ask for advice or something. (Kylie)

Some participants relied on their responses to other attributes when giving an opinion about the Helpfulness of the speakers.

Would be helpful in a group because she is confident and thinks she is good at everything. (Emma)
Yes, they sound very friendly and helpful and patient. They may not know the answers but they would try to find a way to help (Barry).

These positive evaluations, however, quickly went the opposite direction if the participant placed the attribute in an Educational context.

**But not help with my English because their English is not native like.**

They don’t have to be a native speaker, just native-like. (Jamie)

The participants seemed to have definite opinions about the Helpfulness of a NNS when talking about English language Education, which mirrored the evaluation of other attributes. For instance, David also believed that the Chinese speakers would not be able to help him with his pronunciation of English.

### 6.4.4.8 Leadership

The final attribute for the German speakers was Leadership. Six participants rated this attribute positively on the equal-interval rating scale. While some of the participants related their positive evaluation on Leadership to the phonological features and intelligibility of the speakers,

**Of course, because their voice is easy to listen to and easy to understand.** (David)
others discussed their opinions about the qualities of a good Leader.

Would be more like a leader, would push you into doing your job. (Shane)

To conclude, the participants had mostly positive opinions about the Academic Competence of the German speakers. For example, the attributes of Flexibility, Creativity, and Cooperation received somewhat negative evaluations. However, the participants had rather positive opinions about the Autonomy, Intelligence, Helpfulness, Organizational skills, and Leadership skills of the German speakers.
Discussion

This study sought to answer four research questions. Firstly, does foreign-accented speech influence the intelligibility and accentedness L2 speech? Secondly, does the perception of foreign speech sounds have an impact on NNSs’ emotional attitudes towards a speaker in ELF? Thirdly, will sharing a first language or language typology with an interlocutor affect any of these three variables? Finally, is a relationship between intelligibility and accentedness and/or accentedness and emotional attitudes? The answers to these questions are discussed below.

7.1 Intelligibility

A number of factors, such as conversation structures, lexiogrammar, pronunciation, and perception, may lead to misunderstandings in ELF interactions. Regarding perception, it is likely that NNSs perceive L2 speech differently to NSs, yet the bulk of SLA research has investigated the perception of L2 speech from the perspective of NSs. Therefore, this paper investigated the intelligibility of L2 speech in ELF.

The literature review raised an awareness of the changing voice of English language users around the world. Moreover, fundamental assumptions about Modern Foreign Language theory were questioned, notably, the teaching and learning of
divergent Englishes in expanding circle countries, notions of ownership and judicature, and the interpretation of concepts, such as negotiated meaning and intelligibility. It was shown that L2 users employ numerous conversational strategies, while negotiating meaning in ELF interactions. In addition, the intelligibility of L2 speech was discussed in two parts. The first part looked at the speaker-dependent factors of short-term and long-term vocal qualities. The second discussion, which was grounded in a model of foreign speech adaptation, considered the influence of listener-related factors, such as a Shared First Language, typologically similar first languages, as well as the judgments of accentedness, perceived intelligibility, and phonological discord. From these discussions, a number of conclusions were drawn.

It has been claimed that the negotiation of meaning in ELF interactions may be described as cooperative and supportive (Cogo, 2010; Seedhouse, 2004). However, it is believed that the negotiation of meaning that takes place in ELF interactions may not be as amicable and balanced as some may suggest. If L2 accents are legitimate varieties of spoken English, and an intricate part of one’s sociolinguistic identity, then the territorial principle evident in conversations between L1 interlocutors may also be common in ELF interactions. Hence, there are still many unknowns about the influence of social factors on ELF interactions. For example, do power differentials between ELF users impact particular aspects of negotiated meaning, such as the accommodation of L2 phonology?

Two speaker-related factors have informed discussions about L2 pronunciation and its intelligibility. Firstly, it has been suggested that some short-term vocal qualities, such as speech rate, may affect L2 and L1 listeners differently. In addition, some researchers have claimed that long-term vocal qualities, such as the prosody, influence the intelligibility of L2 speech for L1 and L2 listeners alike. However, the segmental
features of foreign accented speech may have a greater impact on the intelligibility of L2 speech for L2 listeners than prosodic features. It is argued that the segmental features of L2 speech causes more intelligibility issues than prosody because they interrupt the phonological assimilation of speech sounds. This is, in part, the result of L2 listeners relying more heavily on different signals in speech to locate word boundaries in a stream of continuous speech (see Carroll, 2004; Cutler, 2001). Therefore, the difficulty in identifying word boundaries may lead L2 listeners to experience intelligibility issues related more to the segmental features of L2 speech rather than the prosodic features.

The other speaker-related factor to affect the intelligibility of L2 speech is speech style. Relatively unexplored is the impact of different styles of speech, such as synthesized speech, Lombard speech and clear speech, on the intelligibility of L2 speech from a NNS’s perspective. A study by Smiljanić and Bradlow (2011) investigated the impact of clear speech and conversational speech on the intelligibility of GA and Croatian-English. The researchers drew the following conclusions. Firstly, the clear speech produced by Croatian speakers increased the intelligibility of Croatian-English significantly for both Croatian listeners and American listeners. Secondly, background noise had more of an impact on intelligibility for the Croatian listeners than the American listeners. Thirdly, the researchers argued that L2 users might be able to accommodate the speech characteristics of clear speech without the need for formal training, which has interesting implications for the teaching and learning of pronunciation skills in English Language classrooms. Finally, Smiljanić and Bradlow (2011) argued, “as non-native listeners gain expertise in L2 processing, they increasingly manage to attend to and utilize the helpful L2 clear speech enhancements
implemented by native talkers, including both global signal enhancements and language-specific modifications” (p. 15). However, this begs the question as to whether the clear speech enhancements of NSs will also benefit the intelligibility of L2 speech in ELF interactions. Perhaps, ELF users require a unique set of clear speech enhancements that are tailored to meet the perceptual needs and non-native listeners. For example, NNS may need to focus on clear speech enhancements that address the perpetual needs of L2 listeners. For instance, exposure and/or familiarity training with the characteristics of clear speech may like to focus more on the segmental features of pronunciation rather than global signal enhancements.

While the intelligibility issues mentioned above relate to the pronunciation of L2 speech, others are due to environmental factors. It is also quite common for people to converse in the presence of background noise, including the noise of other voices. It has been shown that the impact of background noise consisting of speech is more detrimental to cognitive performance compared to noise lacking background speech (Schlittmeier, Hellbrück, Thaden, & Vorländer, 2008). More recently, a study by Holmes (2015) compared the impact of background noise compared with background talkers on the intelligibility of speech. She found that “intelligibility is best in the presence of a single-talker background and worst in the presence of a two-talker background” because of an increased instance of informational masking, which results from similarities between the background speech and the target speech (Holmes, 2015, p. 167). The impact of background noise, such as voices, raises the question as to whether or not other pronunciation styles, such as Lombard speech, will enhance intelligibility in ELF. In sum, there are still many unknowns regarding the role of different speech styles in ELF.
There is also a growing body of literature considering the impact of listener-related factors on the intelligibility of L2 speech. It has been claimed that L2 listeners rely more heavily on content word stress and segmental features than L1 users because they have a “higher dependency on phonological form … [and are] less able to integrate inferences from some kind of higher contextual knowledge or from a shared background with their interlocutors” (Pickering, 2006, p. 223). However, there were many instances in the Narratives where the participants sourced their schematic knowledge to form emotional attitudes towards the four accent types. For example, the students sourced their schematic knowledge when discussing the Naturalness, Wealth, Friendliness, Patience, Flexibility, Leadership, Helpfulness, Creativity, Cooperation, and Honesty of the speakers. It is believed that L2 speakers depend more on their schematic knowledge than their systemic knowledge of English when dealing with misunderstandings. Moreover, L2 users source their schematic knowledge more readily when trying to counteract misunderstandings caused by segmental features. This position is supported by Field (2004), who argued that:

L2 listeners tend to construct a schema relating to the topic of a listening and to use this to guide their processing of incomplete [systemic] information. The most striking finding, however, was that some [L2 listeners] seem to place more confidence in their preformed schema than in incoming data from the speech-stream. (p. 369)

Therefore, it is plausible that L2 listeners draw heavily on their schematic knowledge of English, and language in general, to resolve intelligibility issues in ELF interactions.

It has also been suggested that a Shared First Language background between interlocutors may have a positive influence on the intelligibility of L2 speech. Therefore,
this study investigated the possible impact of a Shared First Language and a Shared Typology on the intelligibility of L2 speech in an academic ELF setting.

### 7.1.1 Shared First Language

One factor thought to influence the intelligibility of L2 speech in ELF is a Shared First Language background between interlocutors. Before the results are discussed, it should be noted that the reliability test, or intraclass correlation coefficient, showed a strong to very strong correlation between the members of each listener group. For example, there was strong agreement among the Chinese listeners about the intelligibility of each accent type. Consequently, the conclusions drawn about the intelligibility scores of each listener group are likely to be consistent and dependable.

At a glance, the findings supported the notion of a Shared First Language advantage because the Chinese listeners found the Chinese-English accent to be the most intelligible. Moreover, the Japanese listeners found the Japanese-English accent to be the most intelligible of the four accent varieties. However, upon closer inspection, it became clear that a Shared First Language does not aid the intelligibility of L2 speech. There are two possible reasons for this. Firstly, the French listeners did not find the French-English to be the most intelligible. Instead, the French listeners found another European variety, German-English, to be the most intelligible. Secondly, the results for a Shared First Language were quite similar to those of all listeners. For example, the data in Figures 7 and 9 mirror the intelligibility scores for all listeners seen in Figure 6. Therefore, the Chinese and Japanese listeners may not have found the Chinese-English and Japanese-English accent types to be the most intelligible because of a Shared First Language.
Rather, the majority of the listeners, including the Japanese and Chinese listeners, found these two accent types to be the most intelligible. Thus, it was concluded that there is no positive impact of a Shared First Language on the intelligibility of L2 speech. In fact, the exact opposite may be true. For example, the French listeners found the French-English to be the most unintelligible. This begs the question as to why a Shared First Language may have a negative effect on the intelligibility of L2 speech.

It is widely accepted that the phonological characteristics of a person’s first language will influence their pronunciation of L2. It seems that the phonological features of one’s first language may also hinder their perception of L2 speech sounds. The results indicated that the participants with the same mother tongue experience more intelligibility issues than those who did not. It is believed that a lack of exposure to one’s own variety of English may play a part in this negative effect. According to NS ideology, this argument is fundamentally flawed. For example, asking an Australian about their exposure to StAust English is a very strange question indeed. However, the participants in this present study were not NSs. If one contemplates how much time Chinese speakers spend talking to each other in English, and thus exposed to their own accent, a very different picture emerges. Some L2 users may had had limited exposure to their own accent type for a number of reasons. Firstly, most EFL curricula in Asia, for example, do not formally assess speaking skills. As a result, the test-driven pedagogical practices focus predominately on the macro skills of listening, reading, and writing. Traditionally, there has been little attention given to speaking skills apart from pronunciation drilling. Moreover, the vast majority of the listening resources used in EFL classroom including the English language teachers, have divergent varieties of English accents. As a result,
there are relatively few opportunities for many EFL learners to adapt to the speech sounds of their own accent type.

While many EFL students in Asia may not have an opportunity to hear their own accent type in conversation, there are exceptions. The idea of a Shared First Language advantage may have been the rationale behind the use of the Katakana writing system in Japan. The Katakana writing system uses the phonetics of the Japanese language to write loan words. For example, the Japanese language does not have the [v] sound, so instead of ‘video’, the word is written and spoken using the Japanese [bi] phoneme, so ‘video’ is pronounced ‘bideo’. Perhaps, the ethnocentrism of the Japanese education system explains the results seen in studies by Smith and Bisazza (1982) and Munro, Derwing, and Morton (2006), where Japanese listeners found Japanese speakers to be highly intelligible. However, for the majority of L2 users, an adaptation to different varieties of spoken English will more often than not displace the repertoire of English sounds influenced by their first language. Therefore, sharing a first language with one’s interlocutor may have a negative impact on intelligibility in ELF interactions. It could be argued that increasing the amount of exposure to one’s own variety of convergent English may help reduce the prevalence of intelligibility issues.

Another reason for the negative impact of a Shared First Language background is the phonological characteristics of one’s Interlanguage. Similar to the claim that NNSs have ample exposure to the speech patterns of their L2 variety of English, people may also assume that L2 users have had extensive exposure to their own accent via their Interlanguage. This argument is based on the assumption that the phonological characteristics of one’s Interlanguage are identical to the phonology of their speech. However, it highly unlikely that a person’s first language phonology influences the
abstract representation of English, or Interlanguage, as much as its articulation. Moreover, the extent to which an Interlanguage is made up of the first language phonology seems to be dependent on proficiency. The Interlanguage of a NNS with lower listening proficiency may be dominated by mother tongue phonology; therefore, interlocutors with a Shared First Language will probably be more intelligible than a person who has integrated the speech sounds of other English varieties. A study by Hayes-Harb, Smith, Bent, and Bradlow (2008) also found that an Interlanguage speech intelligibility benefit might have more of an effect on listeners with low phonological proficiency in English. Perhaps, the contrast between the phonology of a listener’s first language and that of English aids intelligibility at the lower proficiency levels. However, as a person adapts to more English speech sounds, the contrast between the phonology of one’s first language and that of their Interlanguage increases. Consequently, a NNS’s own variety of English may become less intelligible as their proficiency improves. This argument is in line with the notion of transfer in the field of contrastive phonology. To sum up, the phonology of Interlanguage may or may not resemble a person’s speech, but it is influenced more heavily by the phonology of one’s mother tongue at the initial stages of SLA.

Some studies have found that L2 listeners find relatively unknown accent types quite intelligible (Munro, Derwing, & Morton, 2006). In the present study, the Indonesian listeners found the French-English to be the most intelligible. This was despite the fact that the Indonesian listeners could only identify 17% of the French speaker samples and were unlikely to have had extensive exposure to the French-English accent in either Indonesia or Australia. Moreover, it was expected that the Vietnamese listeners would find the French-English accent more intelligible than the Indonesian listeners would
because of the strong influence of the French language on Vietnamese society (Farrell, 1991; Haarmann, 1986). However, the results showed that a listener group with limited exposure to an accent not only found it highly intelligible, but they found it more intelligible than other listener groups with presumably more exposure. Hence, there were instances in the current study where the L2 listeners found a novel L2 accent to be quite intelligible.

Some people argue that exposure can significantly improve the intelligibility of L2 speech for NSs, but have only mild advantages for NNSs. This reasoning may be explained by differences in linguistic experience between monolinguals and multilinguals. The demands placed on ELF users to adapt to a wide range of linguistic variation are significant. Therefore, it is suggested that multilinguals are more flexible in their adaptation to foreign speech sounds, and are able to assimilate foreign speech sounds more readily than monolinguals. Perhaps, the L2 listeners’ intelligibility scores in the study mentioned above did not benefit greatly from an increased exposure to L2 speech because their speech perception faculty had already been exposed to a variety of Englishes. As a result, the NNSs demonstrated only moderate increases in intelligibility scores when given greater amounts of exposure to a foreign accent. These conclusions are supported by Moussu and Llurda (2008), who argued, “NNSs of English are more communicatively efficient speakers of English in international contexts than a great deal of NSs, especially those who speak fairly local or substandard varieties of the language…” (p. 318). Thus, it seems that the listeners who will benefit the most from exposure to L2 speech are monolingual L1 users.

There is another aspect of foreign speech perception that may impact the intelligibility of L2 speech. Questions have been asked about a Shared Typology between
L2 users and its influence on intelligibility. It was hypothesized that a Shared Typology between interlocutors in ELF may increase intelligibility. Therefore, the following section discusses the findings for a Shared Typology and its impact on the intelligibility of ELF.

7.1.2 Shared Typology

The results indicated that, overall, a Shared Typology between ELF users had neither a positive nor a negative impact on the intelligibility of L2 speech. For instance, there was no Shared Typology advantage for the Syllable and Stress languages. The Spanish listeners did not find the French speakers more intelligible than the other accent types. Moreover, the Arabic listeners did not find the German-English accent more intelligible than the other accent varieties. In contrast, the results are not so clear-cut for the Tone languages. At first glance, it seemed than the Thai listeners found the Chinese-English accent to be one of the most intelligible accent varieties, the other being the Japanese-English accent. This also seemed to be the case for the Vietnamese listeners, who found the Chinese-English accent to be quite intelligible. However, the results for the Chinese listeners in Figures 10 and Vietnamese listeners in Figure 11 are almost identical in median intelligibility scores as all the listeners shown in Figure 6. Moreover, the Indonesian listeners did not find the Chinese-English accent to be the most intelligible of the four accent types. Therefore, it may be concluded that a Shared Typology between interlocutors does not enhance the intelligibility of L2 speech.

A number of questions arose from the results for a Shared Typology. For instance, there was a strong correlation between the intelligibility scores for the Chinese-English
and Japanese-English accents, which was irrespective of listener typology. Moreover, there seems to be a consistent differentiation between the intelligibility scores for the Asian accent varieties and those for the European varieties. Apart from the Indonesian and Spanish listeners, all the listener groups found the Asian accent varieties to be the most intelligible. There are three possible explanations for these results. Firstly, it appears that exposure rather than sharing language typology may be the deciding factor when it comes to the intelligibility of L2 speech. This argument makes sense if one considers the context in which the study was conducted. The survey participants would more likely have had exposure to Asian varieties of L2 than European ones in Australia tertiary institutions. As a result, one might expect that the students would find Asian varieties of L2 speech more intelligible than European varieties, such as the French and German-English accents. This definitely seemed to be the case when comparing the intelligibility scores between the European and Asian accent varieties investigated in this study. However, if one compares the different accent types within a region, the argument that exposure significantly influences the intelligibility of L2 speech becomes less clear.

A significant proportion of the international students in Melbourne, Australia are Chinese, and thus, the participants may have had considerable exposure to the Chinese-English accent. Whereas, there are relatively few Japanese students study at universities in Melbourne. In fact, of the total number of students randomly selected to partake in the survey, only 3% were Japanese nationals. On the other hand, Chinese nationals made up approximately 40% of the survey participants. Therefore, it is unusual that the participants found the intelligibility of the Japanese-English accent to be strongly correlated with the intelligibility of the Chinese-English accent. The results somewhat support the findings of a study by Bradlow and Bent (2008). Their study suggested that
familiarity with one accent might positively affect the intelligibility of a novel accent that is typologically similar. For example, the Spanish listeners found the German-English accent, which is typologically similar to English, to be the most intelligible. Moreover, it is highly likely that the Spanish listeners from Latin America considered the German-English accent to be a novel accent. Thus, the Spanish listeners’ adaptation to the speech sounds of the divergent Englishes may have been generalized to a typologically similar convergent English, such as the German-English accent.

On the other hand, the transfer of intelligibility from one accent variety to another may not be based entirely on typology. There may be phonological features common to languages of a particular demographic that influence intelligibility; features not related to typology. For example, there may be similarities between different varieties of Asian English, such as segmental features, that influence intelligibility more so than exposure to speakers with typologically similar first language backgrounds. Perhaps, speakers of a particular region also share intercultural pragmatic structures. This inference may help explain why the present study found such a strong correlation between the intelligibility scores of the Chinese-English and Japanese-English accent types. The possibility of phonological similarities between L2 speakers of a particular region, and its impact on the intelligibility, is discussed hereafter.

Discussions about the nature of ELF have shifted over the years. Firstly, scholars differentiated between ELF and other uses of English, such as ESL and EFL, and argued that more attention should be paid to the ELF model of English language use (Jenkins, 1998). Next, scholars described ELF interactions as an adaptive medium that evolves to meet the communicative needs of its users more so than other models of English. Moreover, it has been suggested that ELF allow more freedom to negotiate linguistic
norms and meaning than other contexts, such as ESL and EFL, where NSs are the gatekeepers of the language (Cogo, 2008). It has also been claimed that the intercultural pragmatics of ELF may be sui generis (Firth, 2009), and “once a form of English is identified as having an existence it cries out to be described…” (Strevens, 1980, p. 64). As a result, there are a number of ELF corpora collecting data in different domains and regions around the world, which can be seen in Table 2. The majority of research to date has focused on the intercultural pragmatics of ELF. However, recent studies have suggested that the pragmatic conventions employed in ELF are no different to other examples of intercultural interaction (Baker, 2015; Bjorkman, 2013). Therefore, scholars may come to realize that ELF is unique more in its phonology than its conversational structures. Moreover, it is not a singular entity with one standardized form, but constitutes a number of varieties. This argument is in line with WE theory, where the word ‘English’ has been pluralized. Moreover, these varieties of ELF may be specific to particular regions of the world. Three scholars that have claimed the pluricentricity of ELF are Seidlhofer, Breiteneder, and Pitzl (2006). They put forward the emergence of a European ELF. In addition, a study conducted in South East Asia by Deterding and Kirkpatrick (2006) found that misunderstandings were more prevalent when a person’s first language, such as Vietnamese, shared fewer pronunciation features common to all the languages in the region. The present study concluded that a Shared First Language or Shared Typology between L2 users might not improve the intelligibility of L2 speech. However, the findings did indicate that listeners from 11 different language backgrounds found a presumably known Asian English, Chinese for example, to be just as intelligible as a relatively unknown variety of Asian English, such as Japanese. Moreover, the French and Spanish listeners found the European accents varieties to be more intelligible than the
Asian varieties. Perhaps, the listeners had had exposure to the phonology of L2 speech that is common to Asian varieties of spoken English rather than the phonology of European Englishes. More specifically, exposure to the segmental features common to a particular region in the world may lead to fewer instances of misunderstanding that are caused by intelligibility issues. The idea that the segmental features of L2 speech are an important factor in the intelligibility of L2 speech for NNSs is nothing new. It has been argued that the segmental features rather than the prosodic features of L2 speech may cause more intelligibility issues for NNSs (Lochland, 2011). This position is contradictory to research findings that have investigated intelligibility from a NS’s perspective. These researches have shown that prosodic features of L2 speech have more of an impact on intelligibility as opposed to the segmental features. If this be the case, there may be need to revise the teaching of pronunciation in EFL and some ESL contexts where there is a strong emphasis on the teaching of prosody. Textbooks that focus on the teaching of prosody may have been informed by research shrouded in NS ideology. To sum up, languages in a particular region of the world may share phonological features, and exposure to these commonalities may enhance the intelligibility of known L2 varieties as well as novel L2 accents from the same region. If one believes in the emergence of regional ELF varieties, then one day it may be possible to describe the demographic and linguistic characteristics of each variety.

From an evolutionary perspective, it makes sense that a lingua franca would possess the first language features of its interlocutors. Moreover, these shared characteristics would be specific to a particular region in the world rather than language typology. Therefore, further descriptions of ELF varieties, especially in phonology, may identify specific linguistic features that are specific to a particular region. Furthermore, an
increased awareness of these regional ELF qualities may help reduce misunderstandings at the intelligibility level of understanding. On the other hand, technological advancements in communication and travel have vastly accelerated the rates of contact between people from all over the world. As a result, ELF users may not be aware of phonological features specific to regional ELF varieties. In such interactions, negotiating other aspects of language besides speech sounds may take centre stage when misunderstandings arise.

The results for 7.1.1 Shared First Language and 7.1.2 Shared Typology suggest that these factors do not have a positive impact on the intelligibility of L2 speech. In fact, it may be the exact opposite if an L2 user shares a first language background with an interlocutor. The only consistent finding that could be seen across the two factors was the intelligibility of the Chinese and Japanese speakers. This begs the question as to why the majority of the L2 listeners found the Chinese and Japanese speakers to be the most intelligible of the four accent varieties. Hitherto, it has been suggested that the Chinese-English accent was the most intelligible because the listeners had had more exposure to Chinese-English than the other accent types. Moreover, it has also been suggested that phonological similarities between the Chinese and Japanese speakers, which may be based on demographics rather than language typology, was the reason why the listeners found the Japanese speakers to be highly intelligible despite having little exposure to the Japanese-English accent variety.

There may be another reason why the Japanese speakers as well as the Chinese speakers were consistently two of the most intelligible accent varieties. Upon further analysis of the speech samples, it became apparent that the speech rate of the Chinese and Japanese speakers did not fall within the optimal range of 210-290 spm. The Japanese
speakers had an average speech rate of 176 spm, and the Chinese speakers had an average speech rate of 184 spm. These speech rates were much lower than the French and German speakers, who averaged 250 spm and 244, respectively. These results suggested that slower speech rates might have a positive influence on the intelligibility of foreign accents. These conclusions contradict the findings of a study by Matsuura, Chiba, Mahoney, and Rilling (2014). Their study found that the comprehension of weakly accented convergent Englishes did not benefit from slower speech rates. It should be noted that there were theoretical and methodological differences between the above study and the present one. For example, the study by Matsuura et al. (2014) investigated the second level of understanding, which is comprehensibility, while the present study investigated the first level of understanding, or intelligibility. Secondly, Matsuura et al. (2014) subjectively measured the perceived comprehensibility of an utterance using a Likert scale. On the other hand, the current study adopted a more objective approach to the measurement of actual understanding rather than perceived understanding.

An analysis of the speech samples also suggested that speakers with the fastest speech rates, such as the French and German speakers, were the least intelligible for the L2 listeners. This finding supports the conclusions drawn by Kashiwagi and Snyder (2010), who found that variations in L2 speech rates were responsible for the intelligibility problems experienced by L2 listeners. However, these results do not support the findings of other studies. For example, the results presented here suggest that speech rates between 170-180 spm may enhance the intelligibility of L2 speech, but Derwing and Munro (2001) found that NNSs prefer both native speech and non-native speech at 270 spm. Hence, it is still unclear as to whether or not there is an optimal range of speech rate for ELF interactions.
Even though the present study investigated the intelligibility of L2 speech, there were many instances in the interview data where the participants mentioned judgments of perceived intelligibility. Moreover, the listeners’ comments were not just limited to opinions about Speech Quality. In fact, there were only two comments about perceived intelligibility in the Speech Quality category. To exemplify, Emma referred to perceived intelligibility when discussing her opinions about the Fluency of the French-English speakers as well as her evaluation of the Niceness of the Japanese-English speakers. The majority of the references to perceived intelligibility concerned the participants’ emotional attitudes towards the Speaker. For instance, the Chinese student named Helen mentioned perceived intelligibility when discussing the German speakers, and whether they were Interesting or not. Furthermore, David, who was Vietnamese, also mentioned perceived intelligibility when giving his opinions about the Leadership skills of the German speakers. These results reflect the findings of Bresnahan et al. (2002). Their study showed that NSs’ judgments about the perceived intelligibility of convergent English accents correlated strongly with negative ratings of Competence. Thus, judgments about the perceived intelligibility of L2 speech tend to influence NNSs’ emotional attitudes towards not only Speech Quality but also the Speaker.

In sum, it appears that the intelligibility of L2 speech from a NNS’s perspective may be influenced by a number of factors, such as regional ELF features, exposure to typologically related speakers, and speech rates rather than Sharing First Language background or Shared Typology between listener and speaker.
7.2 Accentedness

It has been suggested that judgments of accentedness may influence the misunderstandings of L2 speech. Therefore, numerous studies have investigated the accentedness of foreign speech sounds. The majority of studies to date have investigated judgments about the accentedness of L2 speech from a NS’s perspective. However, an increasing number of researchers have started to investigate such judgments from a NNS’s perspective (Kashiwagi & Snyder, 2010; Munro et al., 2006). It has been suggested that NSs and NNSs may not perceive L2 speech in the same way. That is, judgments of accentedness may differ between NNSs and NS when they are listening to foreign speech sound, such as L2 speech.

The intraclass correlations given in Table 4 show the unreliability of the in-group accentedness ratings, with the majority of the listener groups having weak correlations between their members. These findings contradict the conclusions drawn by Derwing and Munro (2009), who suggested, “Listeners usually agree with each other quite strongly on who has a heavy accent and who doesn’t (p. 478). The strong intraclass correlations found in the above study may be explained by the identity of its participants. Unlike the present study, all the participants were NSs. It is argued that the judgments L2 users make about foreign accented speech will be quite different to those of L1 users. This disparity may be due to a number of factors, such as exposure to different varieties of English, particularly convergent ones. However, the difference between NSs and NNSs in their judgments of accentedness is more likely the result of one’s expectation of speech sounds. Perhaps, the judgments of accentedness are different between NSs and NNSs because a NS living in a monolingual community may judge the strength of an accent
based on their own variety of English. This argument supports the idea that “it is not easy for the NSs to come to terms with the variations that occur in NNS use of what the NS feels to be ‘one's own language’” (Strevens, as cited Kachru, 1992b, p. 28). Therefore, judgments of a NS may contrast considerably to that of a multilingual NNS.

Inferences can also be made between the different expectations of NNS and NS, and the effect this has on the systemic and schematic knowledge bases. It has been argued that a monolingual L1 user, who is inexperienced with convergent varieties of English, will have a homogeneous expectation of English speech sounds. To put it another way, L1 users expect to hear their own accent in divergent English speech communities. On the other hand, these expectations are quite different to those of a multilingual L2 user, who only knows heterogeneous forms of English. More specifically, the contrast between a L1 listener’s expectations of English phonology and those an L2 user may lead L1 users to make stronger accentedness judgments of foreign speech than L2 users, who may intuitively expect to hear English varieties other than their own. As a result, accentedness judgments are likely to be more salient for L1 users than L2 users. If one is of the opinion that systemic knowledge focuses on the salient features of speech, then judgments of accentedness may lead L1 listeners to rely more so on their systemic knowledge when understanding L2 speech. Conversely, if accents are not a salient feature of L2 speech for NNSs, then they may rely more on their schematic knowledge of English. It is probable that L2 users depend less on their systemic knowledge because of the phonological discord caused by particular aspects of the incoming speech signal, such as the segmental features. Therefore, it would seem that foreign speech sounds have a lesser impact on judgments of accentedness for L2 listeners than they do for L1 listeners. If this is so, it challenges popular opinion that accentedness is the most salient feature of foreign speech.
for ‘all’ listeners.

While the majority of the listener groups had weak correlations between their members, there were some strong and very strong in-group correlations between participants of two listener groups. The results in Table 4 show that the French listeners had a strong correlation between their accentedness ratings, and the Chinese listeners had a very strong correlation between their accentedness ratings. Perhaps, the contrast between these two listener groups and the remaining six listener groups can also be explained by looking at the relationship between accentedness and emotional attitudes towards L2 speech. The Chinese students may have shared more common beliefs about convergent Englishes than the other nationalities. As a result, they tended to be more consistent in their ratings of accent strength. In fact, Munro, Derwing, and Morton (2006) found that Chinese students tend to rate the accentedness of convergent Englishes harsher than other nationalities. This conclusion is similar to the findings of other studies where NSs of a single speech community showed strong in-group agreement. Therefore, the characteristics of a speech community may have a strong influence on its members’ attitudes towards L2 speech, and consequently, judgments of accentedness.

It has been suggested that two factors may influence a NNS’s perception of L2 speech. More specifically, a Shared First Language background or Shared Typology between NNSs may judge their foreign accent to be weaker than other varieties of L2. Therefore, the current study investigated the possibility of a Shared First Language advantage and Shared Typology advantage in ELF interactions.
7.2.1 Shared First Language

There were mixed results for the Shared First Language analysis. Firstly, the findings do not support the notion that interlocutors with a Shared First Language background will lead to weaker accentedness ratings. For example, the French and Japanese listeners found their counterparts to be one of the most accented of the four L2 varieties. Moreover, the French and Japanese listeners, and to a lesser degree the Chinese listeners, clearly judged the German-English accent as being the weakest of the four types.

The investigation of a possible relationship between a Shared First Language and judgments of accentedness raised questions as to why the listeners, especially the French and Japanese listeners, found their own accent variety to be one of the strongest of the four types. A possible explanation for these results may relate to the aforementioned discussion of intelligibility and Interlanguage. It has been argued that the differences between the phonology of one’s Interlanguage and the pronunciation features of a speaker will impede the phonological assimilation and integration of foreign speech sounds. Similarly, if there is a mismatch between the phonology of one’s Interlanguage and that of their interlocutor, accentedness judgments are likely to be higher. In the case of the Japanese and French listeners, their repertoire of speech sounds may have contained more sounds of other Englishes, such as StAust and Chinese-English, than their own. This quickly became apparent during the data collection process because the French and Japanese participants had no difficulty understanding the interviewer’s StAust accent. Therefore, proficiency or familiarity with one’s own accent variety will likely have a positive impact on the accentedness of interlocutors who shared a first language.
The German-English accent was consistently rated the weakest by all listeners. One explanation may have something to do with the students’ expectation of particular speech sounds. It is possible that the participants expected to hear examples of divergent Englishes when listening to speech samples, especially when they were paying tens of thousands of dollars to study in an inner circle country. Evidence of this expectation can be seen in the survey data, where a significant number of the survey participants thought the Chinese, French, Japanese, and German speakers were NSs. In fact, 17% of them thought the German speakers were NS, which was almost double the percentage of the French and Japanese speakers. Further evidence that the participants expected to hear a divergent English accent can be seen in the perceived identity of the first speech sample. Twenty percent of the interview participants thought the first (Chinese) speaker was a NS. On the contrary, only three percent of the students thought the second Chinese speaker was a NS. Therefore, the listeners may have found the German-English accent to be the weakest of the four accent varieties due to their belief that the German speakers were NSs.

7.2.2 Shared Typology

A number of conclusions may be drawn about the impact of a Shared Typology on accentedness judgments in ELF. Firstly, a Shared Typology between listener and speaker did not reduce judgments of accentedness for most of the Tone listeners. To exemplify, the Thai listeners rated the Chinese-English accent as one of the strongest. Only the Vietnamese listeners weakly rated the Chinese speakers. Moreover, the Stress listeners, which included the Arabic students, did not rate the Stressed-timed German
speakers as having the weakest accent. On the contrary, the Arabic listeners thought the German speakers had the strongest accent. This was also the case for the Syllable listeners, such as the Indonesian and Spanish students, who rated the French speakers as having one of the heaviest accents. Therefore, a Shared Typology between ELF users seemed to bring about stronger ratings of accentedness.

Limited exposure to a particular accent variety probably explains the strong accentedness ratings despite a Shared Typology between the listeners and speakers. For instance, it is unlikely that the Arabic students had had extensive exposure to the German-English accent, so they gave this accent variety a high rating for accentedness. In addition, the Latin American students would have had little exposure to the French-English accent, thus, finding it a rather heavy accent. Furthermore, Chinese students make up the vast majority of international students from NESB at many universities in Australia. In fact, there are at least seven times more Chinese students at Deakin University, Melbourne, than any other nationality of students from NESB (Deakin University, 2011). Given the abundance of Chinese students studying in Australian universities, the Vietnamese listeners would certainly have had considerable exposure to the Chinese-English accent. Therefore, the Vietnamese students judged the Chinese-English accent the weakest of the four accent varieties as one might expect. Similar to the intelligibility of L2 speech, exposure also had an impact on the accentedness of foreign speech. The relationship between intelligibility and accentedness is discussed further in the next section.

There is a second inference about the impact of a Shared Typology on accentedness judgments in ELF. It appears that the relationship between a Shared Typology and accentedness is speaker-dependent rather than listener-dependent. In the
present study, the German-English accent may have consistently been identified as a divergent variety of English because of its genealogy. English and German share a common ancestry. Hence, there are phonological features common to both languages, such as their rhythmic properties. These commonalities may have led some participants to believe that the German-English speech samples were actually produced by NSs. For example, the German-English accent was identified as being GA 27 times, StAust 20 times and RP 16 times. These results, as well as discussions in Sections 7.1.2, suggest that a Shared Typology between listener and speaker does not positively affect intelligibility or accentedness. However, it may enhance intelligibility and lower ratings of accentedness when there is a Shared Typology between speakers. Furthermore, the findings indicated that people might be able to generalize their adaptation to one accent type to a typologically related, novel accent. For example, the students gave the novel German-English accent low ratings of accentedness because it is typologically similar to a known variety of English, which in the present study would most likely have been StAust. Therefore, it appears that familiarity with a divergent variety of a language may lower the accentedness of a typologically similar convergent one. In summary, the impact of a Shared Typology on accentedness judgments in ELF is speaker-dependent rather than listener-dependent.

Thirdly, it has been hypothesized regional varieties of ELF may exist (Deterding & Kirkpatrick, 2006; Seidlhofer, 2007). More specifically, there are phonological patterns common to the convergent Englishes of a particular demographic, such as Thai-English and Vietnamese-English, due to their genealogy. In the previous section, it was suggested that exposure to one variety of an Asian English, such as Chinese-English, may have a positive influence on the intelligibility of a novel variety from the same region,
such as Japanese-English. However, this trend did not continue for the accentedness data set. The results in Table 14 show a weak correlation between the Chinese-English and Japanese-English accentedness ratings according to 100 listeners. Therefore, exposure to a L2 accent does not seem to have a positive impact on the accentedness of another convergent variety from the same region.

7.3 Relationship between Intelligibility and Accentedness

The majority of the research to date has investigated the relationship between intelligibility and accentedness from a NS’s perspective. For instance, the extensive works by Munro and Derwing (1997) have demonstrated “the need to disassociate accent ratings and intelligibility” (p. 11). However, little is known about the relationship between intelligibility and accentedness from a NNS’s perspective. Therefore, the current study investigated the relationship between judgments of accentedness and intelligibility from an ELF user’s perspective.

It has been claimed that there is quasi-independence between intelligibility and judgments of accentedness. There were instances in the current study where one of the accent types was quite unintelligible yet received a low accentedness rating. For example, the Thai listeners, who recognized only half of the words spoken by the French speakers, gave the French-English speakers a low accentedness rating. However, the overall comparisons between the intelligibility and accentedness data sets showed a strong correlation between intelligibility and accentedness. For example, the French-English accent was the least intelligible accent type, and it was rated as being one of the most accented. Moreover, the German-English accent was quite intelligible overall and rated
quite low for accentedness. These findings do not support the argument that “… although some features of accent may be highly salient, they do not necessarily interfere with intelligibility (Munro & Derwing, 1997, p. 11).

There are a couple of reasons why accents may impede intelligibility in ELF. Firstly, research by Munro, Derwing, and Morton (2006) illustrated that NS tend to rate foreign speech more strongly than NNS. As previously mentioned, this is probably because accents are the most salient feature of L2 speech for NSs. Because of its salience, NS may have a tendency to rate foreign accents strongly for accentedness. From a methodological standpoint, these high ratings would correlate less with the intelligibility scores. On the other hand, NNS may not find foreign accents to be as salient as NSs. Therefore, NNS are likely to rate a foreign accent more moderately. This would result in stronger correlations between accentedness ratings and intelligibility scores. Moreover, Anderson-Hsieh, Johnson, and Koehler (1992) found that accent variation is the result of differences in the segmental features used by speakers. Coupled with the argument that the segmental features of L2 speech will have a significant influence on intelligibility for NNSs, this may explain the relationship between accentedness and intelligibility from a NNSs’ perspective. In summary, the unique perception of L2 users as well as methodological considerations shed light on the relationship between intelligibility and accentedness in ELF.

7.4 Emotional Attitudes

This study investigated the influence of intelligibility and accentedness on misunderstanding in ELF. A third possible cause of misunderstandings in ELF is the
emotional attitudes of NNSs towards convergent varieties of English. This study surveyed the emotional attitudes of 100 NNSs towards Chinese-English, French-English, Japanese-English, and German-English users.

For ease of exposition, the following discussion is organized according to the four categories of emotional attitude, which are Speech Quality, Status and Solidarity, Social Attractiveness and Personal Integrity, and Academic Competence. Moreover, the discussion of each category begins with a summation of the survey data, followed by inferences about the interview data. Since the flexible reporting framework and constant comparative method allowed new themes and attributes to emerge, such as age and gender, these are also discussed. An analysis of the interview data also highlighted relationships between intelligibility, accentedness, and emotional attitudes. For example, Barry mentioned accentedness when discussing his attitudes towards the Confidence of the Chinese speakers. Therefore, this paper discusses the probable relationship between the categories of emotional attitude and the variables of intelligibility and accentedness. Finally, there is a discussion of the false positive phenomenon, or instances of incongruence between the survey and interview data sets. For example, the French speakers were rated highly for the Participation attribute on the survey. However, this rating was a false positive because it signified the French speakers’ dominance during group activities, which the participants said was an undesirable quality.

### 7.4.1 Speech Quality

ELF users seem to have distinct attitudes towards the Speech Quality of the Chinese-English, French-English, Japanese-English, and German-English accents. Figure
36 clearly shows a bimodal trend. The Chinese-English and German-English accents received the highest ratings the Speech Quality, while the French-English and Japanese-English accents were rated rather poorly. Upon further analysis, it became evident that the German speakers received slightly higher ratings for the attributes of Fluency and Nativeness. There was no significant difference in the median ratings between the French and Japanese-English accent types. Thus, the survey data revealed a number of interesting results regarding the participants’ emotional attitudes towards the four varieties of convergent English. However, a number of questions remained unanswered. For example, why did the Chinese-English and German-English accents receive Speech Quality ratings twice as high as the French and Japanese-English accent types? Secondly, why were the Chinese speakers rated poorly for the attributes of Nativeness compared to the German speakers? Lastly, why were the Chinese speakers rated lower than the German speakers were for all the attributes of Speech Quality apart from Niceness? The following section compares and contrasts the students’ emotional attitudes towards each variety of English and presents a number of inferences based on these findings.

It has been claimed that “social identities go largely unnoticed [by ELF users] (Seidlhofer, 2001, p. 141). However, it is believed that many of the positive ratings for Speech Quality were due to the perceived identity of the speakers. An analysis of the survey data clearly showed a link between a speakers being identified as a NS and positive evaluations for Speech Quality. For example, the Chinese-English and German-English accents were identified as NSs more frequently than the French-English or Japanese-English accents. Perhaps, this is why the German and Chinese speakers received ratings twice those of the French and Japanese speakers. When discussing the identity of the speakers during the interviews, the students often sourced their systemic
knowledge of the English language. Some participants based their assumptions about the identity of a speaker on specific phonological features. For example, David referred to the articulation of the segmental /r/ by the Chinese-English speakers. It should be noted that the majority of the participants were able to identify correctly a speaker’s region of origin. For instance, the students could not identify the Chinese-English accent, but they knew the speaker was Asian, so they labeled the speakers as being Vietnamese or Malaysian. Therefore, the participants used their systemic knowledge to identify regional varieties of English, such as Asian Englishes. In summary, there is a considerable amount of data linking the participants’ evaluations of Speech Quality to the perceived identity of the speakers.

Regarding the attribute of Nativeness, the participants were quite candid when discussing their opinions about the Nativeness of the Chinese-English, French-English, Japanese-English, and German-English accents. Most of the comments referred to a NS benchmark. For example, Steve used the phrase, “not close to a native speaker” when giving his opinions about the Nativeness of the French-English accent. Despite their surety about the Nativeness of the accent, many participants struggled to elaborate on their response when prompted by the researcher. Most of the interviewees cited a perceived difference between divergent and convergent accent varieties when qualifying their attitude. To exemplify, John said, “Close to the native, like Australian” but could not explain why the German-English accent was ‘close’ to an Australian accent. Jamie said, “You could tell they are no native speaker, because [their accent] doesn’t fit the American accent, British accent or Australian accent.” The use of the words ‘close’ and ‘fit’ has two implications. Firstly, the act of fitting foreign speech sounds to one’s repertoire of English phonology resembles the cognitive process of phonology
assimilation. It has been stated that judgments of phonological discord are based on a comparison between an incoming speech signal and a person’s repertoire of English phonology. Perhaps, Jamie’s repertoire of English phonology consisted predominately of divergent English speech sounds. Therefore, she had trouble assimilating the foreign speech sounds produced in the samples, and her judgment of phonological discord led to a negative attitude towards Nativeness. The other reason for the students’ attitudes towards the Nativeness of an accent may be connected to the attribute of Fluency. The following section discusses the students’ emotional attitudes towards the attribute of Fluency. It also discusses the relationship between the suprasegmental features of L2 speech, such as speech rate and pausing, and the perceived identity of a speaker.

Overall, the participants had quite positive attitudes towards the Speech Quality of Chinese-English and German-English when compared to the other varieties. However, there was still a significant difference between the two for the Nativeness attribute. This difference may be explained by looking at speech rates. The Chinese speakers had the slowest speech rate with an average 197 spm, while the German speakers had the second fastest speech at 244 spm. Upon further analysis, the German speakers also received a higher rating for Fluency. Many of the interviewees mentioned speech rate when discussing the Fluency of the speakers, such as Tricia. She stated that speakers who speaks slowly… must need to think before she speaks. Moreover, Helen suggested that the German speakers were fluent, especially compared to the [Chinese] accent, speaks quickly. Jamie also thought the faster you speak you would sound more fluent. Tricia, Helen, and Jamie all made the connection between speech rate and Fluency despite citing a range of speaker backgrounds, such as Pakistan, China, and Japan, respectively. It appears that they had a shared systemic knowledge of what constitutes Fluency in
English. Therefore, suprasegmental features may have a significant impact on interlocutors’ emotional attitudes towards Fluency and perceived identity in ELF contexts.

At first, it appeared that the participants’ association between speech rate and Fluency might be indicative of a language universal. However, this systemic knowledge may not be universal to all languages. The connection between speech rate and Fluency may be specific to a particular language (or even a variety of a language) rather than universal to all languages. It is suggested that attitudes towards Fluency in English are strongly associated with the suprasegmental features of speech rate and pausing. Evidence of this can be found in places where English-speaking skills are assessed. For example, IELTS, which is administered by the British Council, IELTS Australia Pty Ltd, and Cambridge English Language Assessment, is the most popular English language proficiency test in the world. In fact, 2.5 million tests were taken in more than 140 countries in 2014 (IELTS Partners, 2016). According to the IELTS speaking band descriptors, a test candidate is marked down if they “cannot respond without noticeable pauses and may speak slowly” (IELTS Partners, 2016). Moreover, it is also suggested that candidates record themselves:

When you listen back, you might hear how unnaturally slow your speech is. Next, record yourself and try not to worry about making any grammar mistakes, just try to speak at the same speed you do in your native language. (British Council, 2016)

However, some languages are naturally faster or slower than English. For example, Mandarin has a speech rate of 5.18 syllables per second, while English is spoken at an average rate of 6.19 syllables per second, followed by Spanish at 7.82 syllable-per-second, with Japanese having the fastest speech rate of the four languages at 7.84
(Pellegrino, Coupé, & Marsico, 2011). Not only do speech rates vary between languages, but attitudes towards other suprasegmental features, such as pausing, also differ. For example, it is common for Japanese people to pause at the start of a sentence to signal tentativeness, which is a speech act of politeness (White, 1997). Moreover, Mark thought a Chinese speaker was highly educated because she thinks before she speaks. Interestingly, Mark associated the suprasegmental feature of pausing with a person’s level of thoughtfulness, which represented a higher level of Education rather than Fluency. Thus, people’s attitudes towards L2 Fluency are likely to be influenced by the sociolinguistic conventions that guide the use of suprasegmentals in English as well as the extent to which these differ from a user’s first language.

The ELF users surveyed and interviewed in this study had consistent opinions about the Speech Quality of the Chinese-English, French-English, Japanese-English, and German-English accents. More specifically, the participants’ systemic knowledge of English, especially the suprasegmental features of speech rate and pausing, influenced their belief about the perceived identity of the speaker. Subsequently, this belief shaped the participants’ emotional attitudes towards the Speech Quality of the speaker. It will also be shown that the students’ attitudes towards Speech Quality had a flow on effect on their opinions about the Status and Solidarity, Social Attractiveness and Personal Integrity, and Academic Competence of convergent English users.

### 7.4.2 Status and Solidarity

An analysis of the survey data generally revealed positive attitudes across the accent types for the attributes of Career Success, Wealth, and Education. However, the
rating for the Japanese speakers was significantly lower than the other speech samples. Moreover, the Chinese speakers had a slightly lower rating for Career Success and Wealth when compared to the French and German speakers. In addition, the Chinese and French speakers both received a score of five for Education, but the participants thought the German speakers were slightly more educated. Despite these noteworthy conclusions, a number of questions remained. For instance, why did the participants rate the German and French speakers equally for all the attributes of Status and Solidarity except for Education? Moreover, why did the participants have negative attitudes towards the Status and Solidarity of the Japanese speakers? By comparing the survey data with the interview transcripts, the following discussion hoped to shed further light on the students’ evaluation each accent type.

There were a couple of interview excerpts that contradicted the survey results. Firstly, Jamie negatively evaluated the Status & Solidarity of the German speakers. She thought the German speakers were not so rich, I feel like they have done a lot of self study, that’s my impression, because their accents are not influenced by [NSs], it’s like their own accent so they probably didn’t have instructors or anyone to help them with their pronunciation. Secondly, the survey participants gave negative ratings for the Status and Solidarity as well as the Social Attractiveness and Personal Integrity of the Japanese speakers, yet the comments made during the interviews were overwhelmingly positive. Thus, there was a discrepancy between the survey and interview data sets.

The discrepancy between the survey and interview data sets may have been caused by the interview process. More specifically, it is believed that the students altered their responses during the interviews because the researcher was a NS. The tendency for
NSs to perpetuate NS ideology in ELF interactions was discussed in 2.1.1 ELF Corpora, Domains, Modes, and Regions. Jamie’s comment about the German speakers’ Wealth seemed to reinforce simultaneously the legitimacy of inner circle varieties of English and the illegitimacy of expanding circle varieties of English, such as the German-English. In doing so, she made a clear distinction between NS and NNS varieties of English, showing a clear preference for the former variety. Moreover, the participant equated a NNS’s Wealth with their proficiency in English. It appears that some L2 users still have a strong preference for divergent varieties of English. Thus, opinions towards the Status and Solidarity in ELF are based on an L2 user’s knowledgeable attitudes towards convergent varieties of English.

Another reason for the inconsistency between the survey and interview data sets was a difference in the perceived identity of the speakers from one data set to the next. While the survey participants probably used their systemic knowledge of the English language to form opinions about the Status and Solidarity of the speakers, the interview participants may have relied more heavily on their schematic knowledge of the speakers’ identity to form opinions about their Status and Solidarity. The vast majority of the evaluations in the interviews were positive. There were also instances during the interviews where the participants seemed reluctant to give a negative evaluation of the speakers. For example, Mark said, “not much career success, so, but not unsuccessful, about average.” Some students may have been hesitant to give negative evaluations for Status and Solidarity in front of the researcher. Perhaps, the interviewees thought the speakers were former ESL students similar to themselves. This inference was based on instances where the participants thought the speakers were L2 learners. For example, Shane said the Japanese speakers were Hard-working based on the fact that studying
English is hard work. Moreover, Jamie guess[ed] it’s another cultural stereotype but not very. If she really studied hard her English would be better at this stage. She hasn’t studied very hard and she’s not trying. In addition, all the interviewees assumed the speakers had a tertiary education, and the majority of them thought the speakers were in the process of or had completed post-graduate studies. However, if a participant did not believe a speaker was an L2 learner, then the evaluations tendered to be negative. Moreover, these negative opinions persisted despite the fact that student thought the speakers were NNSs. For instance, David said that a French speaker, who he identified as a NNS, was not rich because she’s a teacher. Thus, the emotional attitudes towards Status and Solidarity in academic ELF settings are influenced more by social identities and notions of professional prestige than linguistic identity.

The belief that some of the speakers were students led the participants to make assumptions about their motivations for studying in Australia. Previous research has suggested that different motivations for learning are associated more with the different categories of emotional attitudes. For instance, Garrett (1992) argued that:

Learners with a predominantly instrumental orientation are likely to be more concerned with reactions on more status-related scales such as [career success], education, [wealth], etc., while those with a stronger integrative orientation are likely to be more affected by reactions on more [Social Attractiveness]-related scales, such as likeability, friendliness. (p. 311)

An integrative orientation towards language learning has been defined as “a desire to learn the target language, attitudes toward learning the target language, attitudes toward the learning situation, desire to interact with the target language community, and attitudes toward the target language community (Dornyei, 1990, p. 46). An instrumental
orientation towards SLA is “where the learner’s interest in learning the foreign language is associated with the pragmatic, utilitarian benefits of language proficiency, such as a better job or a higher salary” (ibid, p. 46).

If the students thought the speakers had a particular motivation for studying in Australia, this tended to influence their emotional attitudes towards the Status and Solidarity of that speaker. It is argued that instrumentally motivated students are likely to be rated highly for Status and Solidarity in Australian ELFA contexts. The results support this claim because the French speakers received one of the highest ratings for Status and Solidarity, yet one of the lowest ratings for the Social Attractiveness and Personal Integrity attribute of Friendliness. Excerpts from the interview data also support the argument that a speaker lacking integrative motivation will be poorly evaluated for Social Attractiveness and Personal Integrity. For example, John said the French speakers would rather work by themselves. Moreover, Jamie said, “I think they would participate but they wouldn’t be a good listener. They would wanna express what they think, what they wanna do, but not listen to others. The Chinese speakers also received positive rating for Status and Solidarity but poor ratings for Social Attractiveness and Personal Integrity. It was noted that the Chinese speakers had an instrumental motivation for studying in Australia. For instance, Steve noted that the Chinese students group among themselves, don’t interact [with other students]. Thus, the students used their schematic knowledge about the motivations of L2 learners to form emotional attitudes towards ELF users in an Australian academic setting.

To sum up, knowledgeable attitudes about the legitimacy of convergent and divergent Englishes influenced the students’ opinions towards the Status and Solidarity of ELF users. Secondly, a shift in the perceived identity of the speakers from survey to
interview most likely explains the inconsistent findings. A lack of candidness on the part of the interviewee, especially when giving their attitudes about the Status and Solidarity of the Japanese speakers, also caused a disparity between the data sets. Finally, speakers identified as L2 learners with an instrumental motivation for studying in Australia were rated highly for the attributes of Status and Solidarity but poorly for some attributes of Social Attractiveness and Personal Integrity. Thus, the students’ schematic knowledge about social identities and learner motivations had a significant impact on their emotional attitudes towards the Status and Solidarity of L2 users.

7.4.3 Social Attractiveness and Personal Integrity

An analysis of the Social Attractiveness and Personal Integrity data revealed a number of interesting comparisons. For example, both the French and Japanese speakers scored five out of nine for the attribute of Interest. However, this is where the similarities ended. While the Japanese speakers were rated quite favorably for the attribute of Patience and Kindness, the French speakers were not, especially concerning the Patience attribute. Secondly, the Japanese speakers received a rating of six for Friendliness, but the French speakers only managed a rating half that. Thirdly, the French speakers were rated quite positively for Confidence. On the other hand, the students did not think the Japanese speakers were Confident at all. Finally, the German speakers scored highly for Interest and Confidence when compared to the Chinese speakers, yet there was no difference between the two for the attributes of Kindness, Patience, and Friendliness. Overall, there were some interesting findings regarding the participants’ emotional attitudes towards the Social Attractiveness and Personal Integrity of the four L2 speakers.
Despite the quantitative data showing a number of noteworthy comparisons, there were still unanswered questions about the students’ attitudes towards the four varieties of convergent English. For example, why were the French speakers rated equally or better than the Japanese speakers for all the category of emotional attitudes except Social Attractiveness and Personal Integrity? Moreover, why were the Japanese speakers rated more positively than the French speakers for the attributes of Kindness, Patience, and Friendliness, but not Confidence? Finally, why did the participants have such a positive opinions about the Interest and Confidence of the German speakers compared to the Chinese speakers, yet find no difference between the two for Kindness, Patience, and Friendliness? The following discussion used both the survey data and the interview transcripts to make inferences about the ELF users’ attitudes towards linguistic variation.

The Asian speakers tended to receive more positive evaluations for the category of Social Attractiveness and Personal Integrity than the European speakers did. For instance, Tricia said a Japanese speaker was Kind because she’s a woman. In addition, Kylie thought the Chinese speakers sound friendly and you can talk about your problems and they will listen. However, Emma stated that the German speaker wouldn’t want to be friends with me if we met at a party because she wants to link up with upper-class people. Moreover, John suggested that a French speaker was neither Friendly nor Flexible because from her speaking I feel she just give orders, very direct and she is talking like a manager, not flexible. The French speakers were also likely to receive positive evaluations in formal settings, such as an educational institution, but negative ones in informal settings. At first, it appeared that the students might have stereotyped the speakers according to demographics because they correctly identified the speaker’s region of origin. However, further analysis showed that this was
not so. The interview participants were not able to identify consistently the speakers’ nationality or region of origin. Therefore, some other factor led to their opinions about nationality.

The contrast in attitudes towards the Asian and European speakers may have been caused by the speech samples rather than the identity of the speakers. The speech samples of the Japanese-English and Chinese-English speakers were sourced from conversations using ELF. On the other hand, the French-English and German-English samples were sourced from one-way seminar presentations. Perhaps, the participants based their opinions about a speaker’s Social Attractiveness and Personal Integrity on differences between formal and informal speech patterns. An analysis of the speech samples revealed slight differences between the seminar excerpts and the samples sourced from classroom interactions. For instance, the seminar samples sounded more monotonic than the samples taken from discussions. Secondly, the presentations had a greater speech rate, which coincides with the previous discussions about the speech rates of the French-English and German-English samples. Lastly, the seminar samples followed the formality conventions one would expect of this type of spoken discourse, including text structure, signal language, and a range of complex lexiogrammar. These differences may have led some students to identify the Asian speakers as peers, and thus, rating them highly for the attributes of Social Attractiveness and Personal Integrity.

On the other hand, the participants may have thought the European speakers were lecturers or managers due to the formality of their speech patterns. These results suggested that ELF users in an Australian university rely on their systemic knowledge of the English language to form emotional attitudes towards the Social Attractiveness and Personal Integrity of other L2 users. Moreover, these opinions are centered on peer
relationships rather than a speaker’s nationality or region of origin. Thus, similar to the category of Status and Solidarity, social identities had a considerable impact on the students’ opinions about Social Attractiveness and Personal Integrity in ELF.

The constant comparative method of analysis revealed a number of associations between the category of Speech Quality and the attributes of Confidence and Leadership. The attribute of Fluency was frequently cited by the participants when discussing their emotional attitudes towards the Confidence and Leadership of the Asian speakers. For instance, Mel said one of the Chinese speakers would not have many chances for her to be a good leader. Her voice does not support the characteristic of a good leader, which is confidence because she does not speak fluently much. David also said that the Chinese speaker would be a good leader if she can speak fluently and a little fast. If she speak slowly, she cannot transfer her idea or opinion to the group because in the meeting there is not enough time to discuss. Regarding the Japanese speakers’ leadership potential, Mel suggested that their voice is not confidence so no. They need to be fluent in English. Their English will make it easier for people to listen to. In addition, Jamie said, “No, I think they sound very passive and I don’t think they could lead a whole group of people, don’t sound very confident.” Interestingly, Liz thought that that the Japanese speakers’ confidence may improve when speaking with international students because accent doesn’t show as much, they also have accent. Hence, there was a strong correlation between Speech Quality and ratings of Confidence and Leadership.

Liz’s comment about the Confidence of Japanese speakers in ELF contexts led to two inferences. Firstly, L2 users may be more Confident when conversing in ELF because there is less pressure to confirm to NS norms, or standards of divergent
Englishes. On the contrary, ELF users can adapt and negotiate linguistic forms in the absence of ‘gate-keeping’ NSs. Secondly, the willingness of the Japanese-English speakers to converse with other NNSs highlights the importance of self-identity and the attitudes towards one’s own language use. The relationship between L2 language use and identity was discussed by Rindal (2010), who argued that identity is constructed and negotiated through language. Her study concluded that a person’s language use not only shaped their identity, but NNSs “may exploit linguistic resources from English, and reshape and adapt the social meaning of the variables to a local construction of identity” (Rindal, 2010, p. 240). The reconstruction of identity to suit the sociolinguistic particulars of one’s surrounds details the transformation of a person’s identity from language learner to language user. Moreover, identity transformations may occur when a person migrates between EFL and ELF speech communities, for example. In sum, the emotional attitudes towards the Confidence attribute focused on both the speaker’s speech patterns as well as the students’ attitudes towards their own language use.

Identity shifts also occur when language users move between ELF and ESL contexts. The reliability tests provide evidence of this. The results of the intraclass correlations for emotional attitudes reported a weak correlation between the attitudes held by members of the same listener group. The lack of agreement between members may have been the result of differences in their linguistic identity. Some members of a listener group may have identified themselves as language learners, while others considered themselves language users. The identity of a language user can be further subdivided according to the type of English they want to use. For example, students that have a strong affiliation with the wider community in Australia will prefer ESL and hold particular attitudes accordingly. On the other hand, students strongly affiliated with an
academic speech community may prefer ELF and have a greater tolerance of linguistic variation. It is believed that the participants had negative attitudes towards some categories of emotional attitude because they identified themselves as language learners and/or ESL users. This was the conclusion of a study by Meyerhoff et al. (2010). They showed that Polish immigrants had the same negative attitudes towards the Status and Solidarity of Polish-English accent as their NS peers when they identified more with the NS speech community than the Polish immigrant community. Moreover, Gluszek and Dovidio (2010) argued that “speaking with a non-native accent… was significantly associated with feeling less belonging” (p. 244). Hence, identity transformations are likely to coincide with a shift in emotional attitudes.

Identity transformations have a number of implications for the teaching of English, especially in English as Foreign Language (EFL) contexts. Jenkins (2006b) queried the germaneness of theory that focuses on the teaching of inner circle norms and sociocultural conventions to EFL learners, who are likely to have minimal contact with NSs but considerable contact with other NNSs. Such queries have led to a paradigm shift away from NS models of language instruction; instead, academics have begun to focus their efforts in describing the type of the English used between NNSs-ELF. This shift in perspective has led some scholars to revisit Cook’s theory of multicompetence, which refers to the “possession of more than one set of linguistic and socio-cultural knowledge in one and the same individual, on language use rather than the development and acquisition, and the socio-pragmatic functions of language choice” (House, 2003, p. 558). Thus, a great deal can be learnt about the relationship between language use, identity transformations, and the impact these changes have on language attitudes and SLA.
7.4.4. Academic Competence

There were some noteworthy results regarding the Academic Competence of the Chinese-English, French-English, Japanese-English, and German-English speakers. For instance, there was no significant difference between the French and German speakers; however, the students thought the European speakers were more competent than the Asian speakers were. Furthermore, there was a significant difference between the Asian speakers. More specifically, the participants thought the Japanese speakers had more Academic Competence than the Chinese speakers. In fact, the Chinese speakers received the poorest rating for Academic Competence, which was half as positive as the Japanese speakers. Thus, there did not seem to be an association between regional varieties of English and the students’ opinions towards the Academic Competence of the speaker.

A number of conclusions were drawn from the survey data. However, it was still unclear why the students’ held such emotional attitudes towards the Academic Competence of ELF users in an Australian tertiary setting. Some of the answered questions included: Why were the Chinese speakers rated favorably for the categories of Status and Solidarity and Social Attractiveness and Personal Integrity but rated poorly for Speech Quality and Academic Competence? Furthermore, why did the participants have such negative opinions about the Speech Quality, Status and Solidarity, and Social Attractiveness and Personal Integrity of the Japanese speakers but rate them the highest for Academic Competence? By comparing the survey data with the interview transcripts, inferences were made about the students’ emotional attitudes towards the Academic Competence of the Chinese, French, Japanese, and German speakers.
It has been suggested that the segmental features of L2 speech may affect foreign speech adaptation because they inhibit the process of phonological assimilation. It is also likely that speech rate will compound this issue because higher speech rates make it harder for a listener to differentiate word boundaries, which leads to intelligibility issues. Some may argue that higher speech rates will also have a negative impact on emotional attitudes towards L2 speech. However, the results of this study indicated the exact opposite.

Many participants mentioned slow speech rates when discussing their emotional attitudes towards the four varieties of convergent English. For example, Jamie had a negative opinion about the Speech Quality of the Japanese speakers due to their slow speech rates. Likewise, Barry thought the Chinese speakers lacked Social Attractiveness and Personal Integrity because they spoke slowly. Similarly, David, Kylie, and Jamie negatively evaluated the Academic Competence of the Asian speakers for the attributes of Leadership, Work Ethic, and Participation, respectively. Generally, there seemed to be a positive correlation between speech rate and the students’ emotional attitudes towards Academic Competence. Thus, slower speech rates led to negative attitudes.

At first, it was assumed that a slow speech rate would result in negative attitudes towards the speaker. However, slow speech rates were not always viewed as a negative quality of speech. For example, Emma positively evaluated the Helpfulness of the Japanese speakers because people who speak slowly have more time to help others. Equally, Jamie had a positive opinion about the Participation of the Japanese speakers because of their slow speech rates. Visa versa, Tricia had a poor opinion about the Patience of the French speakers because they spoke too fast. In sum, the opinions about the speech rates of the speakers concentrated more on the categories of Social
Attractiveness and Personal Integrity and Academic Competence rather than Speech Quality. None of the comments about speech rate related to the Status and Solidarity of the speakers.

An analysis of the interview data revealed a number of similarities between the Chinese and Japanese speakers for the attributes of Leadership, Work Ethic, Cooperation, and Organization. Despite these similarities, there were also a few differences between the two accent types. For example, the participants thought the Japanese speakers would Participate more readily in group activities than the Chinese speakers. Moreover, they did not think the Japanese speakers would be as Flexible as the Chinese speakers. The most significant differences between the two speakers, which may help explain the difference seen in the quantitative results, existed between the attributes of Autonomy and Honesty. Some of the students said the Japanese speakers were Autonomos, but all the students made negative comments about the Autonomy of the Chinese speakers. Lastly, the students were very open when giving their opinions about the Honesty of the Japanese speakers. However, quite the opposite occurred when they were asked to discuss the Honesty of the Chinese speakers. During the interviews, it quickly became apparent that the participants were reluctant to stand by their negative evaluations of the Chinese speakers. An analysis of Table 31 showed that 20% of the Chinese speakers were correctly identified by nationality, with only 14% of the Japanese speakers being identified as Japanese nationals. It was still unclear to what extent the perceived identity of the speakers influenced the participants’ opinions about Autonomy and Honesty, but Steve did mention that the Chinese speakers would ask for help from [other Chinese people] in their group but not from the teacher, I think culture influence here. Mel, who thought the Japanese speakers were Chinese, said, “Of course it depends on the
personality but most of them they tell the truth.” These inferences may help explain why Academic Competence was the only category of emotional attitude where an Asian speaker scored higher than one of the European speakers. Thus, perceived identity may have played a significant role in determining the Academic Competence of the Chinese and Japanese speakers.

One of the purposes of using a semi-structured interview and flexible reporting framework was to allow for the emergence of new themes and attributes. The interviews provided an excellent opportunity for the participants to introduce attributes they thought belonged to the Speaker category of Academic Competence. Two interesting comments were made about the Work Ethic and the Organizational skills of the French-English speakers. Both Rick and Andrew used the word ‘focused’ to describe the Academic Competence of the French speakers when discussing their Work Ethic and Organizational skills. These comments brought to light the possibility of a Motivation subcategory for Academic Competence, and the attributes that may be strongly associated with it, such as ‘focused’, ‘driven’, ‘directed’, and of course, ‘motivated’. It also possible that some of the attributes for Academic Competence could be further subdivided into the categories of Skills and Performance. Furthermore, the loading of attributes for the Academic Competence and Performance of students will differ to those for teachers. To sum up, the classification of attributes associated with Academic Competence needs further consideration.

A number of inferences were made about the Participation attribute. The negative opinions about the Participation of the ‘dominant’ French speakers were opposite to the positive evaluations of the ‘shy’ Japanese speakers. These opinions were based on the participants’ views about effective Participation in a conversation. More specifically, the
ability of a speaker to demonstrate reservation during a conversation was deemed an admirable quality. On the other hand, the tendency to dominate group conversations was considered an undesirable personality characteristic of a speaker. This phenomenon was termed a false positive because the speakers received high ratings even though the students had negative opinion of the person. The false positive scenario witnessed in the present study highlights the efficacy of a mixed-methods approach, and the need to substantiate quantitative results with interpretative data. Hence, sociocultural expectations about appropriate levels of Participation informed the students’ attitudes towards the Academic Competence of the speaker.

Jamie’s comment about the willingness of the French-English speakers to Participate in group activities may have been influenced by her schematic knowledge about the identity of the speakers, and her stereotypes of different cultures. Jamie’s response was one of only four instances where a participant correctly identified the French-English accent. Consequently, her opinion about the Participation of the speakers was based on the national cultural dimension of individualism versus collectivism and her beliefs about the French people’s disposition towards the individualistic end of the spectrum (Hofstede, as cited in Bowe, Martin, & Manns, 2014, p. 4). In addition, Jamie used her first hand experience of the Japanese education system when giving her opinions about the Wealth of the Japanese-English speakers. She believed that a Japanese person’s level of English language proficiency is directly related to the amount of money one spends on English language education. Thus, attitudes towards the Academic Competence of a speaker are influenced by notions of identity and the stereotypes that accompany them.
Recently, sociolinguists have moved their investigations away from the linguistic homogeneity of ESL and EFL contexts. Instead, scholars have shifted their attention towards the language attitudes present in multilingual settings, such as ELF. For example, Jenkins (2007) drew attention to the importance of considering contextual particulars, such as the linguistic diversity of the speech community, when making inferences about the attitudes people have towards language variation. Researchers have also suggested that “people can express definite and consistent attitudes towards speakers who use particular styles of speaking” (Gile & Powesland, as cited in Jenkins, 2007, p. 66). This was evident in the present study, where participants from a wide range of sociocultural and linguistic backgrounds had similar emotional attitudes towards a speaker because they shared a systemic understanding of the English language. Moreover, it was also shown that the ELF users relied heavily on their schematic knowledge about the perceived identity of a speaker to form their emotional attitudes towards linguistic variation. This dependence on schematic knowledge coincides with the work of Field (2004), who found that NNSs source their schematic knowledge, or top down mental processes, to make sense of L2 text. Thus, sociolinguists are shifting their attention away from traditional contexts of English language use, drawing attention to the nature of heterogeneous speech communities, such as ELF, and emphasizing the importance of situational particulars when trying to understand attitudes towards language use.

In conclusion, the emotional attitudes people have towards L2 speech are brought about by a complex interplay between four key areas. The first is the listener’s schematic knowledge about fluency in English. Secondly, a listener’s sociocultural background influences their interpretation of attributes. Thirdly, an ELF user’s self-identity and attitudes towards their own English variety affects their attitudes towards linguistic
variation. Finally, the perceived identity of the speaker plays a significant role in
determining the person’s opinions about L2 speech. Therefore, the emotional attitudes
ELF users have towards L2 speech are a complicated phenomenon, which involves a
listener’s attitudes towards convergent and divergent varieties of English, the domain-
specific qualities of the ELF speech community, the perceived identity of the speaker,
and the listener’s identity.

7.5 Relationship between Accentedness and Attitudes

The data analysis indicated a strong relationship between judgments of
accentedness and attitudes towards linguistic variation. To understand this relationship, it
may be helpful to review the dimensions of language attitudes. More specifically, how
the different dimensions interplay with other perceptual processes, such as judgments and
beliefs. The perception of language from a cognitive perspective probably involves at
least three systems, which are beliefs, judgments, and attitudes. In addition, it is more
than likely that the judgment and belief systems precede one’s attitudes towards language
and identity. Furthermore, the attitude dimensions of knowledge, emotion, and behavior
could also be sequential. To exemplify, people perceive foreign speech sounds and make
a judgment about its accentedness. Afterwards, their belief system qualifies the nature of
the speech and the identity of the speaker. Based on these assumptions, people use their
knowledgeable attitudes about language variety to form emotional attitudes towards
Speech Quality and the Speaker. Finally, people will develop a behavioral attitude that
may or may not guide future actions towards the speaker. This process was evident in the
interpretative data set. There were instances during the interviews where a student gave a
strong judgment of accentedness, which lead to the belief that they were listening to a convergent variety of English. This assumption had a flow on effect on the listener’s emotional attitudes towards the accent type and the speaker. If the student believed they were listening to a NNS, they used their knowledgeable attitudes about convergent Englishes, such as their illegitimacy, to form negative emotional attitude towards some attributes of the speaker. In most cases, the poor evaluations related to the Speech Quality, Status and Solidarity, and Academic Competence of the speaker. Lastly, the students formed behavioral attitudes towards the speaker, such as whether or not they wanted a NNS as their group Leader or would seek the speaker’s assistance.

The constant comparative method of analysis revealed a number of associations between accentedness and the Confidence of the Asian speakers. For instance, Rick suggested that the Chinese speakers were not assertive because self-conscious about their accent; lacks confidence. Barry also thought the Chinese speakers were not particularly confident, not like the other faster accent. Her accent is strong so not confident. When you know your accent is strong, you are not so confident. There were similar attitudes towards the Japanese speakers. Liz said they would be personally more confident when speaking with international students because accent doesn’t show as much, they also have accent. Thus, judgments of accentedness had a negative impact on the Confidence of the Chinese and Japanese speakers.

Numerous studies have shown a link between judgments of accentedness and emotional attitudes in academic settings. However, the findings are mixed. For instance, a study by Rubin and Smith (1990) found that NNS teaching assistants, who were identified as such, were rated highly for accentedness and poorly as a teacher. However, a study by Liang (2002) found quite the opposite. The results showed dissociation between
the accentedness of either NS or NNS teachers and students’ negative attitudes towards their professionalism. Moreover, Brennan and Brennan (1981) suggested that the judgments of accentedness are highly correlated with a listener’s emotional attitudes towards the Status and Solidarity of a speaker. More specifically, their research showed that high school students in the Midwest tend to rate the Career Success of Mexican-American speakers poorly when they thought the speaker had a strong accent. However, the correlation between judgments of accentedness and attitudes towards the Career Success of a speaker may be more dependent on the linguistic background of the listener than that of the speaker. In Australia, Eisenchlas and Tsurutani (2011) found that NNSs received positive ratings for Status despite their foreign accents (p. 232). It was argued that such positive evaluations stemmed from:

> The life experience of these participants who, as full-time university students of foreign languages, were regularly exposed to non-native English-speaking language teachers. Moreover, as adult language learners, all participants were aware of the difficulties associated with foreign language acquisition after puberty and may, therefore, have particularly appreciated the speakers’ ability to perform competently in a language other than their native language. (Eisenchlas & Tsurutani, 2011, p. 232)

There is certainly a significant difference between the experiences of Midwestern high school students and those of Australian Languages Other than English (LOTE) students. The contrast in findings between the American and Australian studies is due to monolingual as opposed to multilingual background of the students, respectively. Therefore, the linguistic makeup of a speech community will have a strong influence on the relationship between accentedness and emotional attitudes towards L2 speech.
In summary, there is a special relationship between judgments of accentedness and people’s emotional attitudes towards foreign speech. In the present study, many of the students based their opinions about a speaker on the strength of their accent. More specifically, those speakers perceived to have a strong accent were evaluated negatively for the categories of Status and Solidarity and Academic Competence. It was concluded that three factors influence the relationship between judgments of accentedness and emotional attitudes: speech community membership(s), a person’s linguistic background, and the socio-political particulars that encompass the interaction between speaker and the listener.
Conclusions

8.1 Summary of the Study

This study investigated three factors that influence the misunderstanding of L2 speech in ELF, which included intelligibility, accentedness, and emotional attitudes. Chapter One introduced the research problem, aim, scope, and overview of the research. Chapter Two was the literature review, and started by discussing the spread of English and the nature of ELF. It then touched on two causes of misunderstanding in ELF interactions, which were conversational structures and lexiogrammar. Next, Chapter Two reviewed the concepts of negotiated meaning and intelligibility, and suggested how they may be situated in ELF. This chapter ended by examining the cognitive processes involved in Foreign Speech Adaptation from an ELF user’s perspective. More specifically, it discussed judgments of accentedness as well as three dimensions of language attitude, such as emotional attitudes towards language variation. Following on from Chapter Two, Chapter Three presented the quantitative methods for measuring intelligibility, judgments of accentedness, and language attitudes. On the other hand, Chapter Four considered the interpretative methods for investigating emotional attitudes towards language variation. Both chapters finished by discussing the limitations of each approach. Chapter Five showed the quantitative result for the intelligibility, accentedness, and emotional attitudes data sets, while Chapter Six gave a narrative of the interpretative data for emotional attitudes. Chapter Seven discussed the quantitative findings for the
 intelligibility, accentedness, and emotional attitude data sets. The interpretive results were used to enlighten the latter findings. The Discussion chapter also considered the relationship between the intelligibility and accentedness results as well as the accentedness and attitudes data sets.

The literature review highlighted a number of issues, especially those pertaining to the changing voice of English language users. Firstly, scholars have begun to acknowledge the ever-increasing role that NNSs are playing in the evolution of the English language. This role has led some academics to challenge the validity of contemporary models of English diaspora and take the legitimacy debate to the expanding circle varieties of English. The changing voice of English language users has also encouraged scholars to revisit the concepts of negotiated meaning and intelligibility. In doing so, some theorists have questioned the relevance of NS norms in the negotiation of meaning in ELF and argue that ELF is endonormative in nature. Thirdly, the prevalence of ELF in locales traditionally described as a NS domain emphasizes the efficacy of English language models based on the characteristics of speech communities rather than national borders. There have also been arguments about the nature of ELF. While some theorists refuse to believe that ELF is a unique variety of English, other academics argued that ELF is sui generis and should, therefore, be recognized as legitimate variety of English. Finally, comparisons have been made between ELF and the other paradigms, such as EIL and WE. Some of the differences between EIL and ELF, for example, relate to the concentric circle as opposed to speech community models of English, while others concern the EIL perspective of the Interlanguage continuum. In addition, some people have suggested that ELF and WE paradigms share both similarities and differences. For example, both ELF and WE theorists argue that English is
pluricentric. On the other hand, the theories differ in their views about the levels of understanding: intelligibility, comprehensibility, and interpretability. Thus, the literature review highlighted issues surrounding contemporary theories about SLA, paradigms shifts, and NS ideologies in academia.

The literature review then turned its attention to the spread of English and the theoretical perspectives of ELF. It was argued that the endonormative approaches to the description of spoken ELF are in opposition to traditional approaches, which have described English language forms at the lexicogrammar level. Furthermore, there was a discussion about the dichotomy of ELF as a register for communication or as a language for expressing cultural identity.

The next stage of the literature review examined the causes of misunderstandings in ELF. Some have claimed that the misunderstandings result from pragmatic factors. However, others have suggested that pragmatics do not lead to a loss of intelligibility. In addition, it has been argued that different conversational strategies employed by ELF users may bring about changes in lexicogrammatical forms, and it is these variations of Standard English that cause communication breakdown. The final section of the literature review discusses the etymology and different interpretations of mutual intelligibility, intelligibility, and negotiated meaning. It was posited that the negotiation of meaning in ELF might not be as harmonious as some may argue.

While both short-term and long-term vocal qualities may influence the intelligibility of L2 speech, this study also considered the intelligibility of L2 speech from a listener’s perspective. A model of foreign speech adaptation was proposed to frame discussions about the perception of L2 speech, such as the roles of the systemic and schematic knowledge bases, the cognitive functions of phonemic assimilation and
phonemic integration, and judgments involved in the perception of foreign speech, such as accentedness, phonological discord, and perceived intelligibility.

The literature review then took a closer look at the judgments people make about foreign speech. The first judgment was accentedness. It was suggested that NS ideologies, such as the Interlanguage continuum, are reflected in the methods used to research accentedness. In addition, a NSs judgment about the accentedness of L2 speech may not be the same as a NNS’s judgment. For example, a foreign accent is probably the most salient feature of L2 speech for NSs, but perhaps not so for NNSs. It has also been shown that NSs can find a strong foreign accent quite intelligible. However, it is likely that this finding cannot be generalized to NNSs. The second judgment was phonological discord. This judgment is quite different to accentedness because phonological discord is a judgment about the cognitive effort needed to assimilate foreign sounds, while accentedness is the degree of similarity between one’s expectation of and experience with foreign speech sounds. The final judgment involved in the perception of L2 speech is perceived intelligibility. This discussion emphasized the subjective nature of speech perception and the active role listeners play in the intelligibility of L2 speech.

A number of factors are thought to influence a person’s adaptation to foreign speech and, thus, misunderstandings in ELF. The first two are familiarity and exposure. The third factor is a Shared First Language between ELF users. While some theorists believe that intelligibility will be enhanced and accentedness lowered when ELF interlocutors share a first language, others posit that a Shared Typology will have more of an impact. The final factor believed to impact one’s perception of foreign speech is the emotional attitudes of NNSs towards L2 speech. It has been found that NSs hold mostly negative attitudes towards convergent varieties of English, but relatively little is known
about the emotional attitudes of NNSs towards the Speech Quality, Status and Solidarity, Social Attractiveness and Personal Integrity, and Academic Competence of convergent English users.

A quantitative research approach was employed to study intelligibility, accentedness, and emotional attitudes in ELF. In order to investigate intelligibility, it was decided that an orthographic transcription of intonation units is the most suitable measure of intelligibility, or a listener’s ability to recognize and record individual, spoken word. A nine-point semantic differential rating scale was used to measure the judgments of accentedness and emotional attitudes.

The current study addressed issues related to the reliability of the intelligibility, accentedness, and emotional attitude data sets. Intraclass correlations were calculated for in-group agreement between members of each listener group. The results showed a high agreement across all listener groups for intelligibility and emotional attitude; however, only the Chinese listener group showed a strong agreement amongst its members for their accentedness ratings.

Steps were taken to address the validity of the intelligibility, accentedness, and emotional attitude data sets. Regarding the intelligibility data, only female speakers were used when sourcing speech samples. In addition, a speech rate of 210-290 spm was deemed the optimal range for the speech samples. Moreover, care was taken to ensure the intonation units did not contain complex lexical items or register specific vocabulary. Finally, the intonation units sourced from each speaker were played out of sequence to prevent the participants from using top-down cognitive processes and contextual clues to predict the words contained within each utterance.
Three validity issues concerned the accentedness data set: gender, data collection procedures, and idiosyncratic speech styles. An equal-interval 9-point rating scale was considered a valid way to measure the subjective judgments of accentedness.

Finally, the validity of the attitude data set was tested. Empirical analysis of language attitudes has shown that participants consider some attributes as belonging to one category more so than another. Therefore, the loading of an attribute to a specific category may be dependent on the type and number of categories being investigated as well as the meaning attached to each attribute by the participants. Therefore, Principle Component Analysis (PCA) was used to assess the associations of each attribute to the categories of Speech Quality, Status and Solidarity, Social Attractiveness and Personal Integrity, and Academic Competence. In addition, the participants seemed to pay little attention to the gender or age of the speakers, so it is unlikely these variables influenced the construct validity of the emotional attitudes data set. Thirdly, the issue of idiosyncratic voice qualities was addressed by mixing the intonation units of one accent variety. Finally, a mixed methods approach was employed to address the content validity of the attitude data set. Despite these precautions and tests, the results were limited by some of the speech samples, data collection and analysis procedures, and the classification of attributes.

The present study used the VGT to create the speech samples. Two speakers of each accent type were selected according to three selection criteria: language typology, gender, and proficiency. The listeners were randomly sampled from the student cohort at La Trobe University, Melbourne, Australia. The on-line survey Qualtrics Web Application was used to collect the quantitative data. The quantitative data was analyzed using the software packages Excel and SPSS.
An interpretive research approach was also employed to compliment the quantitative data for emotional attitudes. To address reliability issues, the current study used a flexible reporting framework to guide the semi-structured interview process. Such interviews allowed for the emergence of new themes and novel attributes associated with emotional attitudes towards linguistic variation. Finally, a research protocol guided the data collection and analysis processes. Despite these precautions, there were a number of limitations, such as data triangulation, interview skills, research transparency, and ethnocentrism.

Fifteen participants were recruited for the interview component of the study. Each participant was selected according to three selection criteria; gender, first language background, and the ratings given for each attribute of the survey. A constant comparative method was used to analyze the interview data.

8.2 Conclusions and Implications

An analysis of the results led to a number of inferences being made about the impact of a Shared First Language and Shared Typology on the intelligibility of L2 speech in ELF contexts. The results indicated that a Share a First Language between ELF users might have a negative impact on the intelligibility of their speech. Two types of exposure may contribute to this less than favorable impact. The first type of exposure relates to people’s experience with their own variety of English. The second type of exposure concerns the phonological characteristics of Interlanguage. Finally, L2 learners with low listening proficiency are likely to benefit the most from a Shared First Language between interlocutors. It was concluded that an increased amount of exposure or even
familiarity training with one’s own L2 variety of English may help reduce the prevalence of miscommunication, especially those at the intelligibility level of understanding.

There were some interesting findings regarding the impact of a Shared Typology on the intelligibility of ELF. It was concluded that a Shared Typology between interlocutors does not enhance the intelligibility of L2 speech. However, the Spanish listeners’ adaptation to the speech sounds of English may have been transferred to a typologically similar accent, such as German-English. Therefore, the effect of a Shared Typology seems to be speaker-speaker dependent rather than speaker-listener dependent. In addition, languages of a particular demographic tend to share phonological features, and exposure to these commonalities may enhance the intelligibility of known L2 varieties as well as novel L2 accents from the same region. Furthermore, speech rate has a pronounced impact on the intelligibility of L2 speech in ELF. However, it is unclear if there is an optimal range of speech rate for ELF users. Finally, judgments about the perceived intelligibility of L2 speech generally influence ELF users’ emotional attitudes towards foreign speech sounds.

A second factor that influences misunderstandings in ELF is accentedness. The findings did not support the argument that a Shared First Language background between ELF users will lead to weaker judgments of accentedness. It is suggested that a mismatch between the phonology of one’s Interlanguage and that of an interlocutor will likely cause stronger judgments of accentedness. Proficiency and familiarity with one’s own accent variety will also have an impact on the accentedness of interlocutors with a Shared First Language. Furthermore, NNSs may think that a convergent variety of English, such as German-English, is weakly accented due to its genealogical ties with divergent varieties of English.
It was concluded that a Shared Typology between ELF users does not lead to lower ratings of accentedness. Moreover, exposure to a convergent variety of English accent does not have a positive influence on the accentedness of another variety from the same region. On the other hand, speakers with typologically related accents may receive similar accentedness judgments. This finding mirrored the intelligibility results, where the impact of a Shared Typology seems to be more speaker-speaker dependent instead of listener-speaker dependent. It was also suggested that NNSs are be more flexible in their adaptation to foreign accents than NSs due to their expectation of foreign speech sounds as well as notions of identity and language ownership. Therefore, foreign speech sounds will have a lesser impact on the accentedness judgments of NNSs than they do for NSs.

The present study investigated the relationship between accentedness and intelligibility. This relationship is likely to be more complex in ELF contexts than NS-NNS interactions due to the multilingual nature of ELF and its users’ expectations of foreign speech sounds. Researches into the perceptions of NSs have suggested quasi-independence between the intelligibility of L2 speech and judgments of accentedness. From a NNSs’ perspective, however, this study found a strong correlation between intelligibility and accentedness. It is argued that a foreign accent is more salient for NSs than NNSs because of differences in the way they perceive foreign speech.

A third factor that influences misunderstandings in ELF is emotional attitudes. This study investigated ELF users’ emotional attitudes towards the Speech Quality, Status and Solidarity, Social Attractiveness and Personal Integrity, and Academic Competence of NNSs. The findings indicated that the participants use their systemic knowledge of English to identify regional varieties, such as Asian Englishes. Moreover, a strong relationship was found between the suprasegmental features of L2 speech, such as
speech rate and pausing, and the perceived identity of a speaker. The students’ attitudes towards the Fluency of an L2 user were heavily influenced by suprasegmental features specific to the English language rather than language universals. Overall, the ELF users had similar opinions about the Speech Quality of four varieties of convergent English.

Status and Solidarity was the second category of emotional attitudes to be discussed. The Constant Comparison method revealed some inconsistencies between the survey and interview results, which could have been caused by either a lack of participant candidness during the interviews and/or differences in the perceived identity of a speaker from one data set to the next. Nonetheless, the emotional attitudes of ELF users towards the Status and Solidarity of NNSs in an Australian academic setting were influenced more by social identities and notions of professional prestige than language identity. In addition, NNSs are more likely to be rated highly for Status and Solidarity but poorly for Social Attractiveness and Personal Integrity if they are identified as an instrumentally motivated learner. Thirdly, a NNS’s knowledgeable attitude about the legitimacy of convergent Englishes will probably affect their opinion towards Status and Solidarity in ELF. Finally, the multilingual composition of a speech community will cause very different attitudes towards the Status and Solidarity of L2 speakers.

The present study also investigated ELF users’ emotional attitudes towards the Social Attractiveness and Personal Integrity of L2 users. Asian varieties of English tend to receive more positive evaluations for the category of Social Attractiveness and Personal Integrity than European varieties in Australian ELFA settings. It is believed that the participants used their systemic knowledge to pinpoint differences between the speech samples, such as formality and academic discourse markers. As a result, the Asian speakers were identified as peers, while the European speakers were labelled as lecturers.
and managers. Furthermore, a strong correlation between Speech Quality and the attributes of Confidence and Leadership can be attributed to speech patterns as well as attitudes towards one’s own language use. Furthermore, it appears that judgments of accentedness have a negative impact on students’ emotional attitudes towards the Confidence of Asian speakers. Finally, L2 users may reconstruct their identity to suit the sociolinguistic particulars of a speech community. For example, NNSs might transform their identity from language learner to language user when moving from an EFL to ELF context. Thus, identity transformations are likely to coincide with a shift in emotional attitudes.

The final category of emotional attitudes was the Academic Competence of the Chinese-English, Japanese-English, French-English, and German-English speakers. The results showed a negative correlation between a NNS’s speech rate and their Academic Competence. Moreover, the interview data indicated that speech rate has its greatest influence on the attributes of Social Attractiveness and Personal Integrity, followed by Academic Competence and then Speech Quality. Speech rate does not seem to have a significant impact on students’ attitudes towards the Status and Solidarity of other NNSs in an Australian ELFA setting. In addition, the perceived identity of a speaker has a notable effect on ratings of Academic Competence. For instance, if a speaker is identified as a Chinese student, who has an instrumental motivation for studying in Australia and unwillingness to identify with different speech communities, this will have detrimental impact on how other NNSs rate their Academic Competence. To sum up, the students’ schematic knowledge about the perceived identity of the speakers guided their opinions about the Academic Competence of the NNSs.
In order to understand better the emotional attitudes of ELF users towards linguistic variation, sociolinguists are shifting their attention away from traditional models of English language. Instead of scoping their lines of inquiry according to SLA theory and contexts, such as ESL and EFL, academics have started to frame their work at the speech community level. From a methodological perspective, situational particulars are very important when trying to appropriate and classify the myriad of attributes that describe language use. For example, the ‘false positive’ phenomenon seen in the emotional attitude data set raised questions about the face validity of some attributes, or issues caused by the intercultural differences between researcher and participant.

8.3 Suggestions for Future Research

There are still many unknowns about intelligibility, accentedness, and emotional attitudes in ELF. Future research could take a number of directions. Firstly, the results showed that certain qualities of L2 speech influence intelligibility for NNSs. For example, the suprasegmental feature of speech rate has an impact on intelligibility in ELF. This finding supports the conclusions drawn by previous research, where the suprasegmental features of L2 speech caused intelligibility issues for NSs (Anderson-Hsieh & Koehler, 1988; Tajima, Port, & Dalby, 1997). However, it is believed that the segmental features of foreign accented speech may result in more intelligibility issues for NNSs than NSs. Future research could investigate why segmental features may impede foreign speech adaptation for NNS more so than NSs. If one were to speculate, it is likely that the segmental features of foreign speech are impairing NNSs’ ability to recognize word boundaries in connected speech. Furthermore, experimental research into the affects
of segmental features would also inform debates concerning the emergence of regional varieties of ELF and features common to all ELF interactions. Moreover, further research is needed into the relationships between proficiency level, foreign speech adaptation, and the intelligibility of L2 speech. In addition, there is still a considerable gap in our understanding of how NNSs judge the accentedness of foreign speech. For example, it is still unclear whether NNSs and NSs differ in their judgments of accentedness, especially judgments about convergent varieties of English. Moreover, it is likely that a person’s judgment of accentedness will be influenced by their attitudes towards L2 speech. Therefore, more research is needed into the relationship between ELF speech communities, L2 users’ attitudes towards their own language use, and the accentedness of convergent Englishes.

Future research may also like to consider the emergence of regionally specific ELF varieties. It has been suggested that neighboring varieties of convergent Englishes, such as those in Europe or South East Asian, share common speech sounds. Therefore, some believe that regional varieties of ELF are emerging. If such varieties are emerging, then a number of conditions may apply to their users. For example, people from the same region may find their speech more intelligible than convergent varieties from other regions of the world. Moreover, the segmental similarities between these regional varieties would likely reduce accent salience, and thus lower ratings of accentedness. Finally, members of each region may have positive attitudes towards speakers from the same region, especially in the emotional attitude categories of Speech Quality, Solidarity, and certain attributes of Academic Competence, such as Work Ethic, Organization, and Cooperation. It is hoped that future research endeavors will shed light on some of these issues.
To date, there is a limited body of knowledge regarding ELF users’ emotional attitudes towards convergent varieties of English when compared to their emotional attitudes towards divergent varieties. Therefore, there is much to be learnt about L2 users’ attitudes towards different varieties of English, especially their own variety. The focus of SLA discourse and research has gradually been shifting in an outwards motion away from the inner circle countries. It is hoped that this trend will continue to validate the linguistic forms that exist in not only the outer circle countries but also the varieties of spoken English that exist in the expanding circle countries. If academic discourse continues to recognize the legitimacy of English spoken by L2 users, it may lead to a greater acceptance. As a result, it is hoped that L2 users will have positive attitudes towards their own language use and other convergent varieties of English.

As the characteristics of one speech community is different to another, and with it the attitudes of its members, more research is needed into the attitude shifts that occur when L2 users move between speech communities. For example, much can be learnt about ELF users’ attitudes towards convergent varieties of English when moving between EFL, ESL, and ESL contexts. In addition, the identity shift from L2 learner to L2 user, especially when NESB students move between EFL, ESL, and ELF speech communities, has received little attention in academic discourse. Moreover, the motivations and attitudes that underpin these transformations are relatively unknown. It is envisioned that certain facets of language attitudes, such as attitudes towards one’s own language use, will play a significant role in this transition between identities.

A number of novel attributes were identified during the interview process. Firstly, speech rate could be a novel attribute for the category of Speech Quality. The interview data also suggested that there is causality between speech rate and Fluency. Therefore, it
is proposed that the dimension of Speech Quality be subdivided into the categories of Fluency and Aesthetics. The attribute of speech rate could then be allocated to the Fluency category, while the attributes of Naturalness, Niceness, and Nativeness assigned to the Aesthetics category. Moreover, it is recommended that the attribute of Nativeness also become a category of Speech Quality in its own right; however, it is unclear at this point which attributes would load the heaviest to such a category.

The second and third novel attributes were mentioned when the participants were discussing their emotional attitudes towards the French speakers. The participants relied heavily on their schematic knowledge when discussing their emotional attitudes towards the Social Attractiveness and Personal Integrity of the French speakers. Moreover, the semi-structured interviews afforded the participants with an opportunity to discuss openly the personality characteristics of the French speakers. As a result, the French speakers were described as Ambitious and Opinionated. It is imagined that that the Ambitious attribute would load the heaviest into the Category of Academic Competence in an Australian tertiary setting, while the Opinionated attribute might load more so towards Social Attractiveness and Personal Integrity.

The fourth novel attribute was discovered whilst analyzing the students’ emotional attitudes towards the Academic Competence of the French speakers. An analysis of the quantitative data set showed that the majority of the participants gave low ratings for the Participation of the French speakers. During the interviews, it quickly became clear that all the participants had negative opinions about the role of the French speakers in a group activity. The results alluded to the novel attribute of Group Orientation, which may load heavily to the category of Academic Competence.
The fifth novel attributes to be identified during the interview process was mentioned in relation to the Academic Competence of the Chinese and Japanese speakers. It was suggested that the Chinese speakers may lack Flexibility in an academic setting due to their Passiveness. She also thought the Japanese speakers may not participate well during group activities because of they sounded rather Passive.

Naivety is the sixth novel attribute. One of the participants made an interesting reference to the Naivety of the Japanese speakers when discussing her opinions about the speaker’s Honesty. Future research in Australian academic domains will inform academics about the classification of Honesty and Naivety, which are likely to be strongly connected to the final attribute.

The final attribute to be discovered was Trustworthiness. A student’s somewhat confusing comment about the Autonomy of the German-English speakers alluded to the novel attribute of Trustworthiness. In sum, seven novel attributes were identified during the analysis of the interview data. In most academic domains, some attributes would be loaded to the same category, such as Speech Rate; however, the loading of other attributes would not be so clear-cut, such as Opinionated.

If one considers that the attribute of Helpfulness, which has had a strong association with the category of Social Attractiveness and Personal Integrity over many years, was found to load strongly to the category of Academic Competence, this begs the question as to which other attributes might also shift from one category to another in different ELF domains. These findings highlight the importance of taking a pragmatic approach to the defining of attributes. Therefore, more intercultural studies comparing the attitudes of different speech communities will further our understanding of ELF user’s emotional attitudes towards linguistic variation.
The relationship between accentedness and emotional attitudes highlighted the importance of addressing sociocultural factors in ELF interactions. How does this apply in the classroom? Further research is needed to understand the connection between the cultural beliefs of different speech communities, and how these may influence a person’s emotional attitudes and judgments of accentedness. Additional research into intercultural communication may also shed light on the complex relationship between emotional attitudes and judgments of accentedness in ELF.

Finally, a great deal more research is needed into the relationships between cognitive processes, such as phonological assimilation and phonemic integration, and judgments of accentedness, phonological discord, and perceived intelligibility. Moreover, how these interactions influence the intelligibility of L2 speech. Furthermore, there is still much we can learn about the impact of motivation on the perception of foreign speech and misunderstanding in ELF.

The prevalence of NESB students in Australian academic domains highlights the spread of ELF into inner circle contexts, which has pedagogical implications for the teaching and learning of English in university preparatory classes. ESL practices currently being taught in Australian universities may not adequately prepare students for the types of communicative interactions they are likely to encounter at university. Moreover, current descriptions of English should not adhere so rigidly to traditional models of the English language but, rather, consider closely the diversity of speech communities and linguistic backgrounds of the individuals that reside within them.
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Appendices

Appendix A: Research protocols

1. Meet with La Trobe University’s International Student Services Coordinator Joanna Shaw in order to discuss the particulars of the research, such as recruiting participants and the logistics of conducting the interviews.
2. Conduct a pilot study to identify any ambiguous test items.
3. Rephrase or rewrite any interview questions identified as being ambiguous in the pilot study.
4. Develop a final version of the interview questions, which is categorized according to a thematic based research framework. The thematic framework is based on the two components of emotional attitudes: Foreign speech and Speaker attributes. The thematic framework acts as a template guiding data collection and analysis, as well as a reference framework for the discussion of issues that arise from the interviews.
5. Analyze the data from the survey and identify subgroup of participants to participant in an interview.
6. Send them an email inviting them to attend an interview and attach the plain language statement and consent form.
7. Discuss the plain language statement and consent form with the prospective participant. Ask the participant to sign the consent form if they wish to participate in the study.
8. Conduct the interviews in line with the research issues framework.
9. Be sensitive to any possible discomfort that the interview may cause the participant.
10. During the write-up of the methodology and results sections of the thesis, provide an in-depth description of the researcher’s personal and theoretical perspectives about research methodology and the case being investigated (cyclic process).
11. Sufficient citations are made to all interview transcripts (cyclic process).

12. The transcription database is made available to supervisors in accordance with the human research ethics approval 2012.011.

13. Explanations are given for decisions made throughout the process of inquiry (cyclic process). For example, a list of descriptors is used to guide the classification of attributes for the categories of Foreign Speech, Status and Solidarity, Social Attractiveness and Personal Integrity, and Academic Competence.

14. The report indicates the circumstances under which the evidence was collected.

15. The participants’ verbatim is carefully referenced (cyclic process)

16. Use the flexible thematic framework to investigate issues and themes found in the literature. These issues and themes act as a categorizing and retrieval system to guide the categorizing of attributes, analysis of data, and inference process (cyclic process).

17. Inferences are clarified and developed by constantly comparing data in each category of the thematic framework- known as the constant comparative method (cyclic process)

18. Findings are compared to theoretical propositions found in literature (cyclic process)

19. Inferences are compared with the narratives for accuracy (cyclic process)

20. Submit findings, with original data and narratives, so that the academic audience has the opportunity to access the research in relation to the theoretical perspectives of methodology, inferences, and relevance to current debates in applied linguistic, sociolinguistics and the use of ELF in academic domains.
Appendix B: Speech material transcripts

**Accent 1: Chinese: Ivy**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Sample</th>
<th>Intonation Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>Listening 1A</td>
<td>That will take probably another one more year</td>
</tr>
<tr>
<td>5</td>
<td>Listening 1B</td>
<td>Yes sometimes it’s hard to</td>
</tr>
<tr>
<td>6</td>
<td>Listening 1C</td>
<td>Especially you got a good job</td>
</tr>
<tr>
<td>5</td>
<td>Listening 1D</td>
<td>Doing some homework as well</td>
</tr>
<tr>
<td>6</td>
<td>Listening 1E</td>
<td>Some are trying to looking for</td>
</tr>
</tbody>
</table>

Total = 30

**Accent 2: French: Amielle**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Sample</th>
<th>Intonation Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Listening 2A</td>
<td>So they have the time to establish</td>
</tr>
<tr>
<td>5</td>
<td>Listening 2B</td>
<td>Strategies to compensate their impairment</td>
</tr>
<tr>
<td>6</td>
<td>Listening 2C</td>
<td>Treat them as a normal people</td>
</tr>
<tr>
<td>6</td>
<td>Listening 2D</td>
<td>Fully available in front of them</td>
</tr>
<tr>
<td>6</td>
<td>Listening 2E</td>
<td>To communicate with them at work</td>
</tr>
</tbody>
</table>

Total = 30

**Accent 3: Japanese: Yoshiko**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Sample</th>
<th>Intonation Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Listening 3A</td>
<td>Very high in all over the world</td>
</tr>
<tr>
<td>5</td>
<td>Listening 3B</td>
<td>There might be hospitality management</td>
</tr>
<tr>
<td>8</td>
<td>Listening 3C</td>
<td>Because I want to be a flight attendant</td>
</tr>
<tr>
<td>5</td>
<td>Listening 3D</td>
<td>High English language skills so</td>
</tr>
</tbody>
</table>
5 Listening 3E A very short time so
Total = 30

Accent 4: German: Carolin

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Sample</th>
<th>Intonation Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Listening 4A</td>
<td>Basically learn Japanese and</td>
</tr>
<tr>
<td>5</td>
<td>Listening 4B</td>
<td>I have some courses in</td>
</tr>
<tr>
<td>6</td>
<td>Listening 4C</td>
<td>And my major is Asian studies</td>
</tr>
<tr>
<td>7</td>
<td>Listening 4D</td>
<td>I think it’s a very interesting field</td>
</tr>
<tr>
<td>8</td>
<td>Listening 4E</td>
<td>I’ve always been interested in the country so</td>
</tr>
</tbody>
</table>
Total = 30

Accent 5: Chinese: Sharon

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Sample</th>
<th>Intonation Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Listening 5A</td>
<td>And the salary is not good so</td>
</tr>
<tr>
<td>6</td>
<td>Listening 5B</td>
<td>You can have your own style</td>
</tr>
<tr>
<td>7</td>
<td>Listening 5C</td>
<td>I just take the working holiday visa</td>
</tr>
<tr>
<td>5</td>
<td>Listening 5D</td>
<td>I can talk with people</td>
</tr>
<tr>
<td>5</td>
<td>Listening 5E</td>
<td>And everyone is very friendly</td>
</tr>
</tbody>
</table>
Total = 30

Accent 6: French: Olivia

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Sample</th>
<th>Intonation Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Listening 6A</td>
<td>They use it for its format</td>
</tr>
<tr>
<td>8</td>
<td>Listening 6B</td>
<td>Some objects are placed in a very specific</td>
</tr>
<tr>
<td>5</td>
<td>Listening 6C</td>
<td>Which make them highly relevant</td>
</tr>
</tbody>
</table>
6 Listening 6D In the second part they use
5 Listening 6E The case for newspaper and

Total = 30

**Accent 7: Japanese: Kimi**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Sample</th>
<th>Intonation Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Listening 7A</td>
<td>It’s a linguistic area</td>
</tr>
<tr>
<td>7</td>
<td>Listening 7B</td>
<td>I prefer to go to other countries</td>
</tr>
<tr>
<td>7</td>
<td>Listening 7C</td>
<td>I decided to go to China because</td>
</tr>
<tr>
<td>4</td>
<td>Listening 7D</td>
<td>It’s not actually really</td>
</tr>
<tr>
<td>8</td>
<td>Listening 7E</td>
<td>It’s really easy to find a good job</td>
</tr>
</tbody>
</table>

Total = 30

**Accent 8: German: Adal**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Sample</th>
<th>Intonation Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Listening 8A</td>
<td>Followed by the main actors</td>
</tr>
<tr>
<td>5</td>
<td>Listening 8B</td>
<td>He’s talking about personal trust</td>
</tr>
<tr>
<td>9</td>
<td>Listening 8C</td>
<td>I have never had the incentive to mistrust Putin</td>
</tr>
<tr>
<td>5</td>
<td>Listening 8D</td>
<td>Energy supplies from the seventy’s (70s)</td>
</tr>
<tr>
<td>6</td>
<td>Listening 8E</td>
<td>It links up with the question</td>
</tr>
</tbody>
</table>

Total = 30
Appendix C: Interview questions

Attitudes towards Foreign speech

1. How fluent do you think the accent sounds? Would you like to have this accent?
2. Does the accent sound close to a native English accent? Why do you say that?
3. Is this accent nice to listen to?
4. How natural does the accent sound?
5. How much did you understand? What percentage?

Attitudes towards the speakers

Status & Solidarity

6. How successful would you say the speaker is? Why do you say that?
7. How wealthy would you say the speaker is? Do you think the speaker belongs to the lower, middle or upper socio-economic class?
8. What level of education would you say the speaker has reached? High school? University?

Social Attractiveness and Personal Integrity

9. How confident do you think the speaker is?
10. Do you think you could like this person? Do you think you could be friends?
11. Suppose you met this person. How kind do you think they would be?
12. What if you met this person? How interesting would they be to talk to?
13. Suppose you met this person. Do you think they would be a patient?
14. Could you trust this person with money or an important task, for example?

**Academic Competence**

15. It has been said that this student doesn’t sound very intelligent. What do you think?
16. Some people say that this student isn’t a very flexible. Do you agree?
17. It has been said that this student sounds very helpful. What would you say to them?
18. Some people say this speaker sounds hard-working. What’s your opinion?
19. Some people say this student would participate in class activities. What do you think?
20. It has been said that this student cooperates well during group activities. What’s your opinion?
21. Some people say this student has good leadership skills. Do you agree?
22. It has been said that this student is very creative. What would you say to them?
23. It has been suggested that this student is also very organised. What’s your opinion?
24. Some people say this student is a proactive and independent learner. What would you say to them?
Appendix D: Qualtrics survey sample

Biodata

Please answer the following questions about your gender, age, and first language

Q01
Gender

☐ Male
☐ Female

Q02
Age

☐ 18-22 years old
☐ 23-27 years old
☐ 28-32 years old
☐ 33 years old or above

Q03
What is your first language/mother tongue?


Q4

Accent 1: Please listen and type all the words in the spaces provided

Listening sample 1A

Q5

Listening sample 1B

Q6

Listening sample 1C

Q7

Listening sample 1D

Q8

Listening sample 1E
Q9

Please rate the strength of the accent:

<table>
<thead>
<tr>
<th>No accent</th>
<th>Very strong accent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>---------------------</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>9</td>
</tr>
</tbody>
</table>

Q10

Which country is the speaker from? If unsure, please type "don’t know"

[ ]

Q11

Please rate Accent 1 for friendliness:

<table>
<thead>
<tr>
<th>Unfriendly</th>
<th>Friendly</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>---------</td>
</tr>
<tr>
<td>0</td>
<td>9</td>
</tr>
</tbody>
</table>
Appendix E: Sample Interview transcript

Interview 2 Kylie (Indonesian listener, female, 22 yrs old, 1st year student, Bachelor of Commerce)

Chinese-English accent

Interviewer: Where do you think the speaker is from?
Participant: Australian, making like slang.

Interviewer: How natural does the accent sound?
Participant: Because they are native speak, so their English is very natural.

Interviewer: How much did you understand? What percentage?
Participant: They not using very high vocab, so I think accent is the reason.

Interviewer: Suppose you met this person. How kind do you think they would be?
Participant: Sound friendly and you can talk about your problems and they will listen.

Interviewer: It has been said that this student doesn’t sound very intelligent. What do you think?
Participant: I think a high school student or 1st year bachelor student.

Interviewer: has been said that this student cooperates well during group activities? What’s your opinion?
Participant: She will want to listen to other people, so really kind and friendly, so she will cooperate with us on an assignment or something.
Interviewer: Some people say this speaker sounds hard-working? What’s your opinion?
Participant: They speak really slowly and not for speed.

Interviewer: Some people say this student is a proactive and independent learner? What would you say to them?
Participant: They will need help from other student.

**French-English accent** (Counter 4:20)

Interviewer: Where do you think the speaker is from?
Participant: India, because I can catch Indian accent.

Interviewer: How fluent do you think the accent sounds? Would you like to have this accent?
Participant: No, their accent is really strong… and because not their mother tongue they think “what is the word next after this word?”

Interviewer: How wealthy would you say the speaker is? Do you think the speaker belongs to the lower, middle, or upper socio-economic class?
Participant: She sound intelligent girl, maybe a master or something and from the people who are educated more, parents educated.

Interviewer: What level of education would you say the speaker has reached? High school? University?
Participant: Maybe, a master or something and from the people who are educated more, parents educated.

Interviewer: Some people say this speaker sounds hard-working? What’s your opinion?
Participant: Really know how to work.

Interviewer: Suppose you met this person. Do you think they would be a patient?
Participant: No, I think that the girl not patient with people because hard-working.

Interviewer: It has been said that this student doesn’t sound very intelligent? What do you think?
Participant: She sound intelligent girl.

Interviewer: Some people say this student has good leadership skills?
Participant: Yes, sometimes like to work with the girl because I don’t have to think too much and she say just do this and this and everything will be OK because she will take care of everything. But sometimes I say I cannot do this but she say I must so it would be a very difficult problem.

Interviewer: How confident do you think the speaker is?
Participant: Very confident, I think it’s from a presentation or something, they speak very confident.

Interviewer: Some people say this student is a proactive and independent learner? What would you say to them?
Participant: She can do everything by herself.
Interviewer: It has been said that this student is very creative?
Participant: Maybe creative but more operations, she say do this do this, and not create something.

**Japanese-English accent** (Counter 7:55)

Interviewer: Where do you think the speaker is from?
Participant: Japanese.

Interviewer: How much did you understand? What percentage?
Participant: 30%.

Interviewer: How fluent do you think the accent sounds? Would you like to have this accent?
Participant: A little bit difficult to understand because of a strong accent.

Interviewer: Does the accent sound close to a native English accent? Why do you say that?
Participant: A little.

Interviewer: What level of education would you say the speaker has reached? High school? University?
Participant: High school.

Interviewer: Do you think you could like this person? Do you think you could be friends?
Participant: Friendly to people she just meet.

Interviewer: Some people say this student would participate in class activities? What do you think?
Participant: She will cooperate really well because uts not really leadership but she prefer to become a team member.

Interviewer: Some people say this speaker sounds hard-working? What’s your opinion?
Participant: She would work hard, but someone that can do anything.

Interviewer: Some people say this student would make a good leader? What do you think?
Participant: Not really.

Interviewer: Some people say this student is a proactive and independent learner? What would you say to them?
Participant: She will work with people, but I think she will work good. But I’m not sure if she’s ready to have a business for herself.

**German-English accent** (Counter 12:45)

Interviewer: Where do you think the speaker is from?
Participant: Australia because she talk like Australian person.

Interviewer: How much did you understand? What percentage?
Participant: 80%.
Interviewer: How wealthy would you say the speaker is? Do you think the speaker belongs to the lower, middle or upper socio-economic class?

Participant: Maybe from middle class.

Interviewer: What level of education would you say the speaker has reached? High school? University?

Participant: Really educated, they want to have a high education.

Interviewer: Suppose you met this person. Do you think they would be a patient?

Participant: More patient than accent two (French).

Interviewer: How confident do you think the speaker is?

Participant: I think she can speak with a lot of people and very easily, and make people listen to what she say.

Interviewer: Suppose you met this person. How intelligent do you think they are?

Participant: Very intelligent.

Interviewer: It has been said that this student sounds very helpful? What would you say to them?

Participant: Very helpful if maybe I have a problem I will go to her to ask for advice or something.

Interviewer: It has been said that this student cooperates well during group activities? What’s your opinion?
Participant: yes, because I think sometimes she want to listen but half the time she don’t want to listen and she only have her option and she is right and no-one can say the other side.

Interviewer: has been said that this student is very creative?
Participant: She can think about strategies but she does have an art talent or something.

Interviewer: It has been suggested that this student is also very organized?
Participant: Very organized, how she speak is good enough so her time management is very good.
Appendix F: Plain language statement and consent form

PLAIN LANGUAGE STATEMENT AND CONSENT FORM

TO: Participant

Date: 01/04/2012
Full Project Title: Intelligibility, Accentedness and Attitudes in English as a lingua Franca
Associate Researcher: Paul Lochland, Student Researcher, Deakin University, Melbourne

Dear participant,

My name is Paul Lochland and I am doing this study as part of my Ph.D. at Deakin University. The aim of this study is to look at problems non-native English speakers may have when speaking to each other. The study is trying to find the answer to four questions:

1. Do non-native English speakers have a problem understanding different accents?
2. How strong do non-native English speakers find different accents?
3. How much exposure have non-native English speakers had to different accents?
4. What attitudes do non-native English speakers have towards foreign accents?

The study is divided into 2 parts: Online survey and interview. The survey and interview will be carried out separately. If you complete the survey, and choose to give your email address at the end, you may be sent another email inviting you to attend an interview. If you give us your email address, it will be kept confidential and not given to any other person or organization outside the research team.

The online survey takes approximately 20 minutes. In the survey, participants are asked to listen to 4 different accents and write down the words that they hear. Next, participants are asked to score each accent from 0 (no accent) to 9 (very strong accent) and record how much exposure they have had to different accents. Lastly, participants are asked to rate each accent for different characteristics, such as ‘easy to understand’.

After looking at the survey answers, I will send an email inviting 20 students to attend an interview. The interview will take about thirty minutes and can be done at La Trobe University whenever you have free time. The interview will be recorded. In the interview, participants hear the same accents from the online survey and are asked questions. The questions are similar to the online survey questions.
Participation in this research is completely voluntary. Only student who complete the survey will be invited to attend an interview. If you consent to an interview, you can change your mind at any time, either before or during the interview. The interview will stop immediately, you do not have to give a reason, and any information collected will not be used in my research. Furthermore, this project will be carried out according to the National Statement on Ethical Conduct in Human Research (2007). The Human Research Ethics Committee of Deakin University has approved the ethical aspects of this research project. Ethics ID number for this project is 2012-011.

Researcher’s contact details:

If you have any questions about this study, please contact the principal researcher, Dr Tricia Henry, or myself:

Dr Tricia Henry  
Principal Researcher  
Lecturer  
School of Education  
Faculty of Arts & Education  
Deakin University  
221 Burwood Highway  
Burwood, VIC 3125  
Tel: 03- 924 43922  
Email: tricia.henry@deakin.edu.au

Paul Lochland  
Student Researcher  
Deakin University  
School of Education  
Faculty of Arts & Education  
Deakin University  
221 Burwood Highway  
Burwood, VIC 3125  
Email: plochlan@deakin.edu.au

Complaints

If you have any complaints about any part of the project, the way it is being conducted or any questions about your rights as a research participant, then you may contact:

The Manager, Office of Research Integrity, Deakin University, 221 Burwood Highway, Burwood Victoria 3125, Telephone: 9251 7129, Facsimile: 9244 6581; research-ethics@deakin.edu.au

Please quote project number 2012-011
DEAKIN
UNIVERSITY AUSTRALIA

PLAIN LANGUAGE STATEMENT AND CONSENT FORM

TO: Participant

Consent Form

Date: 01/04/2012

Full Project Title: Intelligibility, Accentedness and Attitudes in English as a lingua Franca

Reference Number: 2012-011

I have read and I understand the attached Plain Language Statement.

I freely agree to participate in this project and agree to the conditions in the Plain Language Statement.

I have been given a copy of the Plain Language Statement and Consent Form to keep.

The researcher has promised to keep my personal details confidential at all times and not reveal my identity if the research is published or presented in any public form.

By providing my email address at the end of the online survey, I understand that I may be contacted and invited to take part in the interview as explained in the Plain Language Statement.

If I attend an interview, I consent to having my answers recorded so that my answers can be examined afterwards. I understand no identifying information will be recorded during the interview and only the researcher and supervisors will have access to the audio recordings.

By clicking on the link below, I give my consent to participate in the online part of this project.

http://deakinhmnsb.qualtrics.com/SE/?SID=SV_9Ttwc2f7kBdUyOkQ

By giving my signature below, I give my consent to participate in the interview part of this project.

Participant’s Name (printed) …………………………………………………………………………

Signature ………………………………………………………………………………………………… Date ……………………………

Plain Language Statement & Consent Form to Participant
Project ID: 2012-011 Version 2: [01/04/2012]
Appendix G: VOICE & ELFA Data Licence Agreements

Agreement

between Paul Lochland and Barbara Seidlhofer

for usage of the audio recordings EDcon496, EDcon521, EDsed251, POmtg447 and POWgd14 for PhD research

I agree to use the audio recording of the speech events EDcon496, EDcon521, EDsed251, POmtg447 and POWgd14 exclusively for my PhD research, only non-commercial purposes and not for any commercial advantage.

The recordings will be made available to me via Online Download or, failing that, via DVD.

I agree to handle the audio recordings highly confidentially, in accordance with generally accepted ethical and scientific principles and to protect informants’ personal identities. This means that I will not try to discover speakers’ identities and will keep them strictly confidential in case I do. It also means that for material which has not been anonymized (POmtg447), I will ensure that the parts shown or played to third parties do not contain any information about the speakers’ identities (e.g. name, occupation, country of origin etc.)

I agree that in accordance with standard academic and general practices, I will give credit to the Creators of VOICE in all publications, scientific papers and reports based on VOICE data.

Date, Place, Signature
Paul Lochland

Date, Place, Signature
Prof. Barbara Seidlhofer

Signature Redacted by Library
Signature Redacted by Library
ELFA Corpus Data Licence Agreement

This licence agreement is made and entered into between the Authorised agent and the Licensee as of the date specified later. With this agreement, the Authorised agent gives the Licensee the right to use the Target of agreement under the Terms and conditions of use specified below. Two identical copies of the agreement have been made, one for the Licensee, one for the Authorised agent.

LICENSEE

Name          Paul Ochland
Academic status  Student
Place of work or study Deakin University, Melbourne, Australia
E-mail       plohland@deakin.edu.au
Phone         +61-3-94791704
Address       4/1 Waterdale and Crispine Roads
Postal code and city 3086
Country       Australia
Scientific advisor (if student) Dr. Patricia Henry

AUTHORISED AGENT

Name          Anna Mauranen
Organisation  Department of Modern Languages, University of Helsinki
E-mail       anna.mauranen@helsinki.fi

TARGET OF AGREEMENT (later referred to as data)

The Corpus of English as a lingua franca in academic settings (ELFA Corpus):
A selection of text files and sound files (specified in a separate sheet)

PURPOSE OF USE OF THE DATA AND INITIAL RESEARCH PLAN (continue overleaf if necessary)

The accented samples will be used to investigate the intelligibility of L2 speech by non-native speakers in an academic ELF domain. The participant will listen to extracts of the sound files and transcribe the utterances.
TERMS AND CONDITIONS OF USE

1. The data are for personal use only, and the Licensee is not allowed to give any parts of the data to a third party.
2. The Licensee agrees to use the data only for the purpose defined under "Purpose of use of the data and initial research plan".
3. This agreement does not change the copyrights of the texts or other incorporeal rights. They still belong to the assignees of the texts.
4. The Licensee agrees to store the data so that no third party can get hold of them. The Licensee is allowed to make temporary copies of the data and parts of the data if required by her/his research work, provided that s/he takes care of proper data security. S/he agrees to destroy the temporary copies, at the latest, right after the contract has expired.
5. The Licensee may quote short extracts of the data in her/his research provided that nothing in the extracts reveals the informants' identity.
6. When presenting research findings based on the data, the source of the data is to be mentioned in the presentation/publication/thesis/etc. as follows:


7. The Licensee agrees to send the Authorised agent electronic copies of the manuscripts (if possible) as well as references to the publications where s/he uses the data. The Licensee gives the Authorised agent permission to post this information online and to use it for the advertisement of the data.
8. This contract will dissolve immediately if the Licensee breaks the rules of the contract.
9. The contracting party is not liable to compensate detriments to the other party if the agreement cannot be met because of an insurmountable obstacle (force majeure clause).
10. The Authorised agent cannot be held responsible if the data does not suit the purpose of use stated under "Purpose of use of the data and initial research plan".
11. This agreement comes into effect when the Authorised agent has signed it and the Licensee has paid the required licence fee.
12. The licence agreement is valid for six months from the date the Authorised agent has last signed the agreement. The agreement period can be extended by a separate agreement with the Authorised agent.

SIGNATURES

Licensee  
Place and time 16/11/2011
Signature

Authorised agent
Place and time 21/11/2011
Signature

Signature Redacted by Library  
Signature Redacted by Library
Appendix H: Principal component analysis for the attributes of emotional attitudes

Pattern Matrix A

<table>
<thead>
<tr>
<th></th>
<th>Component 1</th>
<th>Component 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please rate the accent 4 for: Level of education</td>
<td>.946</td>
<td>.042</td>
</tr>
<tr>
<td>Please rate the accent 4 for: Wealth</td>
<td>.874</td>
<td>.029</td>
</tr>
<tr>
<td>Please rate the accent 4 for: Careers success</td>
<td>.857</td>
<td>.034</td>
</tr>
<tr>
<td>Please rate the accent 4 for: Nativeness</td>
<td>.094</td>
<td>.915</td>
</tr>
<tr>
<td>Please rate the accent 4 for: Naturalness</td>
<td>.029</td>
<td>.896</td>
</tr>
<tr>
<td>Please rate the accent 4 for: Fluency</td>
<td>.059</td>
<td>.822</td>
</tr>
<tr>
<td>Please rate the accent 4 for: Niceness</td>
<td>.364</td>
<td>.526</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.\(^a\)

a. Rotation converged in 6 iterations.
Pattern Matrix B

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<tr>
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<th>Component 1</th>
<th>Component 2</th>
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</thead>
<tbody>
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<td>Please rate the accent 4 for: Leadership</td>
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</tr>
<tr>
<td>Please rate the accent 4 for: Organisation</td>
<td>.909</td>
<td>.042</td>
</tr>
<tr>
<td>Please rate the accent 4 for: Confidence</td>
<td>.895</td>
<td>.020</td>
</tr>
<tr>
<td>Please rate the accent 4 for: Work ethic</td>
<td>.867</td>
<td>.001</td>
</tr>
<tr>
<td>Please rate the accent 4 for: Participation</td>
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<td>.014</td>
</tr>
<tr>
<td>Please rate the accent 4 for: Intelligence</td>
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<td>.076</td>
</tr>
<tr>
<td>Please rate the accent 4 for: Creative</td>
<td>.805</td>
<td>.057</td>
</tr>
<tr>
<td>Please rate the accent 4 for: Autonomy</td>
<td>.796</td>
<td>.081</td>
</tr>
<tr>
<td>Please rate the accent 4 for: Honesty</td>
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<td>.189</td>
</tr>
<tr>
<td>Please rate the accent 4 for: Interest</td>
<td>.531</td>
<td>.271</td>
</tr>
<tr>
<td>Please rate the accent 4 for: Cooperation</td>
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<tr>
<td>Please rate the accent 4 for: Patience</td>
<td>.103</td>
<td>.964</td>
</tr>
<tr>
<td>Please rate the accent 4 for: Friendliness</td>
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<td>.832</td>
</tr>
<tr>
<td>Please rate the accent 4 for: Kindness</td>
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<td>.713</td>
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<tr>
<td>Please rate the accent 4 for: Helpfulness</td>
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<td>.443</td>
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</table>

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.a

a. Rotation converged in 6 iterations.
Appendix I: Assessing Construct Validity of the Accentedness Data

*Spearman’s rho values for all listeners with respect to each accent type*

<table>
<thead>
<tr>
<th>Language 1(^a)</th>
<th>Language 2</th>
<th>Rho(^b)</th>
<th>p Value</th>
<th>Significance(^c)</th>
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</tr>
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<td>Japanese</td>
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<td>.801</td>
<td>.001</td>
<td>Significant</td>
</tr>
<tr>
<td>German</td>
<td>German</td>
<td>.851</td>
<td>.020</td>
<td>Significant</td>
</tr>
</tbody>
</table>

\(a\) N = 100 in all instances.

\(b\) df (degrees of freedom) is 98 in all instances.

\(c\) \(\alpha = 0.05\) in all instances.