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The Potential Use of Slow-down Technology to Improve Pronunciation of English for International Communication

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**The Potential Use of Slow-down Technology to
Improve Pronunciation of English for
International Communication**

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PhD Thesis

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Abstract

The focus of this research is on oral communication between L1 (first language) and L2 (second language) English users - to determine whether an algorithm which slows down speech can increase the intelligibility of speech between interlocutors for EIC (English for International Communication). The slow-down facility is a CALL tool which slows down speech without tonal distortion. It allows English language learners more processing time to hear individual phonemes as produced in the stream of connected speech, to help them hear and produce phonemes more accurately and thus more intelligibly.

The study involved five tests, all concerned with the intelligibility of English speech. The first test looked at L2:L2 English communication and levels of receptive intelligibility, while Tests 2 and 3 focused on testing the slow-down for receptive communication – to help L2 users to process speech by slowing it down and thus making the speech signal more accessible. Tests 4 and 5 changed focus, testing the slow-down speech tool as a means of enhancing the intelligibility of L2 speech production, namely individual phoneme production, as little research has been carried out in this area and phoneme discrimination can greatly increase the intelligibility of an L2 speaker's pronunciation. Test 5, the main test, used a qualitative analysis of a pre- and post test and a number of questionnaires to assess subjects' progress in developing intelligible English phoneme production across three groups: the Test Group, who used the slow-down speech tool, the Control Group, who undertook similar pronunciation training but without the application of the slow-down tool and the Non-Interference Group, who received no formal pronunciation training

whatsoever. The study also ascertained and evaluated the effects of other variables on the learning process, such as length of time learning English, daily use of English, attitudes to accents, and so forth.

Declaration

I certify that this thesis which I now submit for examination for award of PhD is entirely my own work and has not been taken from the work of others, save and to the extent that such work has been cited and acknowledged within the text of my work.

This thesis was prepared according to regulations for postgraduate study by research of the Dublin Institute of Technology and has not been submitted in whole or in part for an award in any other Institute or University.

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Signature _____ **Date** _____

Candidate

Abbreviations

AOLA: Adaptive Overlap-Add

BES: Bilingual English Speaker

CAE: Cambridge Advanced English exam

CG: Control Group

Comprehen.: Comprehension

CPE: Cambridge Proficiency English exam

CZ: Czech

DIT: Dublin Institute of Technology

EAP: English for Academic Purposes

ECA: Early Childhood Acquisition

EFL: English as a Foreign Language

EIC: English for International Communication

ELF: English as a Lingua Franca

ELT: English Language Teaching

ENL: English as a Native (L1) Language

ESL: English as a Second Language

F: Female (subject)

FCE: First Certificate in English (Cambridge exam)

FR: French

G: German

GA: General American

Grp: Group

IBL: International Business and Languages

ICS: Irish Cultural Studies

Iter: Iteration

IELTS: International English Language Testing System

ILT: Interlanguage Talk

LFC: Lingua Franca Core

L1: First language

L1 User: Speaker using their L1

L2: Second language

L2 User: Speaker using a language other than their L1, i.e., using a second or other language
in their language repertoire – no indication of their language level in the L2

L1ET: English language teacher who speaks English as a first language

L2ET: English language teacher who speaks English as a second language

M: Male (subject)

MD: Mini Disc

NBES: Non-Bilingual English Speaker

NE: Nuclear English

NIG: Non-Intervention Group

No: Number

NOL: No Other Language

RIP: Rudimentary International Pronunciation

RP: Received Pronunciation

SLA: Second Language Acquisition

SP: Spanish

SR: Speech Rate

STM: Short Term Memory

Sub. No: Subject number

TG: Test Group

TOEFL: Test Of English as a Foreign Language

TOEIC: Test Of English for International Communication

TL: Target Language

Trans./Transcrip.: Transcription

TSM: Time-Scale Modification

VOICE: Vienna and Oxford International Corpus of English

VR: Verbatim Recall

WE: World English

Yrs: Years old

Yrs. Eng: Years learning English

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CHAPTER 1: INTRODUCTION

1.1 Overview

The impetus for this research was an Enterprise Ireland-funded project to develop and test a novel speech tool¹ for the purposes of English Language Teaching (ELT). This thesis is concerned with the issue of English for International Communication (EIC) and specifically with pedagogical implications for ELT in the area of pronunciation. In this study, the term EIC - English for International Communication² is used to refer to the use of English around the world³ by all speakers. The term EIL – English as an International Language – is not applied as it incorrectly implies that there is a single, distinct ‘unitary variety called ‘International English’ ’ (Seidlhofer, 2003: 8).

The focus of this study is two-fold:

1. to test the effectiveness of a speech slow-down facility for improving L2 English users’ speech reception and production by increasing speech intelligibility
2. to test the effectiveness of a slow-down software-based pronunciation training programme to increase L2 users’ speech production

The study aims to answer the following research questions:

¹ See the two-pointer focus of study at the end of this page.

² Taken from the title of a book by Brumfit, 1982.

³ International (between speakers from two different countries, L1s and cultures) as well as intranational communication, for example, between two Indian English speakers of different L1s such as Hindi and Konkani (the language from the state of Goa).

1. Is the speech slow-down facility effective in improving listeners' speech reception?
2. Is the speech slow-down facility effective in increasing the intelligibility of speakers' pronunciation?
3. Can a pronunciation training programme focused on individual subjects' problematic English phonemes increase their spoken intelligibility?
4. Are there fewer problems for English for International Communication (EIC) users in understanding speakers with the same L1 background?
5. Can experience with L2 accents affect how intelligible L1 and L2 users find such speech?

This study incorporates work on both productive and receptive speaking skills and testing of a novel speech tool which slows down speech without tonal distortion, to determine whether it can facilitate linguistic processing and increase student users' spoken intelligibility (pronunciation) with particular reference to phoneme production. The slow-down facility has been further investigated by (2007) for receptive purposes using authentic speech and its ability to highlight language chunks by means of tonal contours.

The research in this thesis focuses specifically on the need for a comprehensive pedagogical approach to pronunciation in English Language Teaching (ELT) which reflects the current status of English as a world language used for international communication amongst L1 and L2 users and whether the slow-down facility can be applied for this purpose. The thesis addresses issues dealing with English pronunciation, such as the ever-increasing numbers of L2 English speakers around the

world, the question of identity, linguistic standards, ELT pronunciation models, internationally-recognised English language proficiency tests, teacher-training and pedagogy. Existing difficulties in the area of pronunciation pedagogy are presented with some solutions offered including the application of the slow-down speech tool for pronunciation training. The present thesis suggests that few existing pronunciation teaching materials adequately address or reflect the international status of the English language. However, it is suggested that pronunciation pedagogy can be modified depending on the learning context and needs of the learners and this can be supported with Computer Assisted Language Learning (CALL) or other speech technologies such as the slow-down speech tool. The application of this speech tool is justified and illustrated as a CALL feature to complement and facilitate pronunciation teaching for EIC. This is done by highlighting features of pronunciation so that L2 users can imitate a chosen pronunciation model (speech production) and in the process increase their accommodative skills (speech reception) through exposure to authentic L1 or L2 speech, depending on which varieties of English they wish to be exposed to and/or to emulate. The efficacy of the speech slow-down tool is also examined with L1 and L2 English users for receptive purposes, to determine if it increases users' speech reception before it is applied for the purposes of speech production, since production is dependent on speech reception for the purposes of speech processing and modelling.

The present thesis offers the following contribution to the body of knowledge in the field of Applied Linguistics:

- a) A lack of current English language pronunciation teaching materials incorporating non-standard ELT models is identified. A process, and

associated teaching materials, for use in conjunction with a slow-down speech tool, are provided and evaluated.

- b) A slow-down speech tool is investigated as a means of making non-standard speech varieties available to L2 users for speech reception and production.
- c) The slow-down speech tool is also investigated as a means of accessing authentic English speech as used by L1 and L2 users rather than inauthentic speech⁴ that is usually incorporated in ELT materials for receptive and productive purposes. The slow-down is seen as a viable means of equipping L2 users with the means of processing real speech as it is used in the world outside the ELT classroom.
- d) Aspects of speech which hinder intelligibility in terms of speech reception and production are identified, concentrating specifically on phonetic issues in later tests.
- e) The usefulness of the slow-down tool is identified for other pedagogical and research purposes in ELT and Applied Linguistics, specifically in areas of speech production and reception.

⁴ Inauthentic speech here refers specifically to specially recorded aural material for ELT materials which are scripted and use actors and therefore do not reflect 'real' speech as produced by L1 users.

1.2. English in the World Today

'English is used as an official or semi-official language in over 70 countries and states and occupies an important position in a further 20. It is well established or dominant in all six continents. It is the main language of books, newspapers, airports, air traffic control, international business, international shipping, science, technology, medicine, diplomacy, sport, pop music and advertising. Over 60% of the world's scientists are able to read English, 70% of the world's mail is written in English and 80% of all information in the world's electronic retrieval system is stored in English'

(McCallen, 1989: 1).

This section outlines the current status of English as the main international language of communication in the world, how it achieved this status historically and how it currently maintains this position, and outlines different approaches to its description for language teaching. The following concepts are discussed:

- 1) the status of English as the world's main international language/lingua franca
- 2) how English spread internationally and effects of this spread
- 3) speech intelligibility and its definition for the purposes of this study
- 4) an outline of the world's English speakers and how they have been categorised by different linguistic scholars
- 5) a description of the different ways English is used, taught or referred to as an L2/additional language worldwide
- 6) the debate about the ownership of English involving L1 and L2 users and its implications for ELT and English language pedagogy
- 7) an outline of aspects of pronunciation with particular reference to segmental features

The Status of English in the World Today

English is by far the most taught foreign language in schools of countries where it is not the L1, such as the former USSR and China. In China, approximately 250 million people are learning English, which is more than the total population of the United States (Alatis, 2005). The English language has achieved its current status as the world's main lingua franca due to two significant factors: British colonial power in the nineteenth century and the United States' economic power since the twentieth century (Crystal, 2003: 59). British colonial power, at its most powerful at the end of the nineteenth century, established English as an international language by spreading its use across its colonies and various countries around the world and giving it prestige. The rise of the United States as the principal economic power in the twentieth century, and still today, maintains English as by far the most important international language in the world. It is not surprising then that these two countries' language varieties and cultures have dominated ELT – in terms of models, standards and general language authority – and is what many L2 learners of the language continue to aspire to as production models. However, not only are other L1 varieties of the language included in ELT, such as Australian English and Hiberno-English⁵, there are also a number of L2 varieties which are becoming more recognised internationally, such as Indian English, Singlish (Singapore English) and East and West African Englishes (Modiano 2001, Warschauer 2000, Crystal, 1999). These changes, as well as the ever-increasing number of people worldwide learning English as a second or foreign language, are altering the long-held traditional views of English and widening the debate on what are standard and acceptable forms of the language

⁵ These L1 countries are now attracting huge numbers of EFL students.

and who has the right to claim ownership of it and therefore use and alter the language as they see fit (Widdowson, 1994 and 1997). With language spread comes language change and English is diversifying as quickly as it is spreading around the world.

The Global Spread of English

It has been strongly argued that English is geographically the most widely used language in the world, spoken by millions of people for various reasons. Some are L1 users, while other L2 English users employ it regularly – either for personal or professional reasons, intranationally⁶ and internationally. There are many more who use it less often, such as when they occasionally travel abroad or communicate with others of a different L1, as a lingua franca. Reliable statistics for L2 English users worldwide are difficult to obtain and categorise due to difficulty in deciding level of proficiency and accessing accurate figures for each country. Determining level of proficiency is the most problematic, as it is extremely difficult to define who can be considered a speaker of English. Fluent L2 English speakers⁷ are obviously included, but what about people who have been learning English for a period of time (up to and over ten years), yet have difficulty in speaking the language and/or rarely do so? This is the case for a large number of L2 users who learn English in school, at secondary level in particular, yet who rarely, if ever, use the language outside of the classroom. They have a level of knowledge of English, but should they be considered English speakers or not? Vivian Cook (2003: 275), amongst others, refers to second language English learners/speakers as L2 users. He states that L2 users differ in a number of

⁶ Intranational use refers to a language being used within a particular country or area between speakers of different local or ethnic languages as opposed to international use, which refers to a language being used between speakers from different countries/L1s.

⁷ See Chapter 2, Section 5.4.3 for more on fluency.

ways from monolinguals - they do not require a native-like ability in their L2 English, unless they are 'professional spies' and they have the ability to communicate not only through two languages but also two cultures (ibid). The terms 'native' and 'non-native'⁸, while still widely used in ELT literature, are not deemed by some to be politically, ethically or descriptively correct, as the classification

'does not take into account the continuum that stretches from the monolingual speaker of the one language, through different degrees of proficiency in the second language, past different degrees of bilingualism in both languages, to the monolingual speaker of the other language at the other end of the spectrum'

(Suárez, 2000: 1).

Jenkins (2000: 1) states that there are 337 million people worldwide who speak English as a first language and 1,350 million who speak it as a second or other language – a ratio of 4:1. Crystal (1997: 6) maintains, 'about a QUARTER of the world's population is already fluent or competent in English, and this figure is steadily growing – in the early 2000s that means around 1.5 billion people. No other language can match this growth'. Given the fact that these figures are somewhat dated, one may estimate that the number of L2 English users has increased somewhat since. Regardless of the true number of English speakers worldwide, the reality is that far more English communication occurs solely between L2 users than between L2 and L1 users, or even exclusively between L1 users.

The growing number of English speakers around the world has greatly increased in the last century or so, with the greatest increase being in the last few decades. Just two hundred years ago, the use of English was limited to Britain and its colonies. The spread has been rapid and dramatic. Graddol (2006: 14) predicts that the number of English speakers will, 'reach a peak of around 2 billion in the next 10-15 years'. This

⁸ See Chapter 1, section 1.6 for more on the debate between native/non-native speakers of English.

spread of English is viewed in two ways: one view is that the spread of the language has caused it to diversify into distinct varieties, termed ‘World Englishes’ (Jenkins, 2003, Kachru, 1997, Smith, 1987) or ‘New Englishes’ (Mufwene, 1994, Platt et al, 1984, Pride, 1982) while the other view is to unify English under the term ‘World English’ (Rajagopalan, 2004, Brutt-Griffler, 2002) or ‘Global English’ (Gnutzmann, 1999, Trudgill, 1998, Crystal, 1997, Pennycook, 1994, Quirk, 1987). This thesis does not seek to take sides in the debate over these two views of English. Instead, the focus will be on English for international communication, with the notion of intelligibility being the main factor in successful communication between two speakers of English – whether they are L1 or L2 users.

1.3. The World’s English Speakers

English is spoken and used in every corner of the world, for various purposes by a diverse range of people of all ages, nationalities, L1s, level of education, political, social, religious and other backgrounds. The world’s English speakers include L1 and L2 users but there are many variations within these categories, particularly amongst L2 English users. Geographical and political boundaries have been the main deciding factors in determining the types of English speakers around the world, but with the rapid spread of the language comes a blurring of these demarcations to include other more fuzzy categories which now have to be considered and investigated more closely, such as English speakers who use two or more languages on a regular basis (particularly from an early age), such as people growing up in ex-British colonies, who use a local language as well as English on a daily/frequent basis. A number of models have been proposed to represent the world’s English speakers. One of the

most well-known and enduring of these is perhaps that proposed by Kachru (1992) – The Three Circles Model.

Kachru's Three Concentric Circles

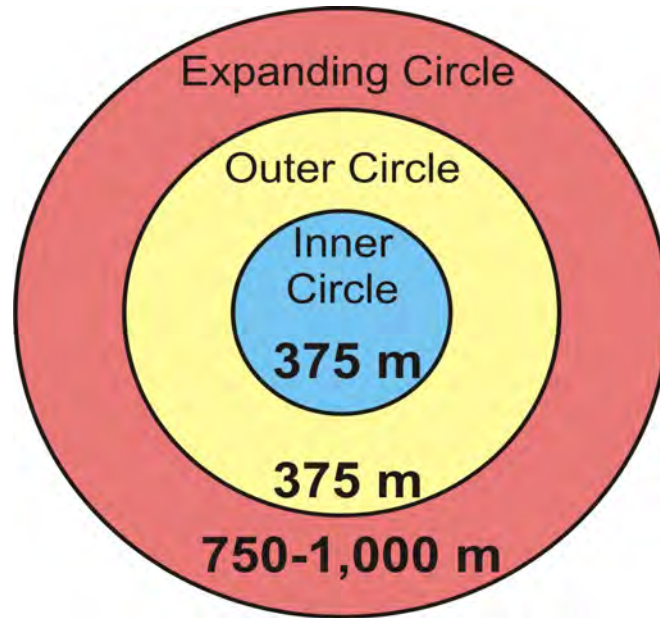


Figure 1: Kachru's 3 Concentric Model of English, Statistics from Graddol (2000)

Kachru (1992: 356) separates the world's English language speakers into three distinct circles which 'represent the types of spread, the patterns of acquisition, and the functional allocation of English in diverse cultural contexts', which he calls the Inner Circle, the Outer Circle and the Expanding Circle. The Inner Circle reflects 'the traditional cultural and linguistic bases of English', is 'norm providing'⁹ and encompasses countries where English spread from Britain in the first diaspora to countries where it is predominantly the native language (ENL), such as the US, Australia, Canada, New Zealand and Ireland. English speakers from the Inner Circle are estimated at around 375 million (Graddol, 2000: 10). The Outer Circle, where

⁹ 'Norm' here refers to issues of correctness in terms of grammar, syntax and so forth – this suggests that the Inner Circle countries dictate the 'norms' of the language which all other users of English must adhere to in order to use the language correctly.

English is spoken as a second language (ESL) and which is ‘norm developing’¹⁰, is comprised of countries where English spread when Britain held colonies around the world. This includes India, Pakistan, Bangladesh, Sri Lanka, Nigeria, Kenya, Ghana, Tanzania, Zambia, Philippines, Malaysia and Singapore. The estimated number of English speakers in this circle is also 375 million (ibid). The Expanding Circle, where English is a foreign language (EFL) and is little used within the countries themselves but learnt mainly for communication and trade with other countries, is ‘norm dependent’¹¹ and includes countries such as China, Japan, Egypt, Saudi Arabia, Indonesia and Russia (Jenkins, 2003: 16). Numbers of English speakers for the Expanding Circle are the most difficult to approximate but Graddol (ibid) estimates it to be around 750 million while Jenkins (2003: 15) believes the number with ‘reasonable competence’ could be approximately one billion, though she does point out this may be somewhat contentious.

Prestige varieties from the Inner Circle have been deemed worldwide as the most desired models, as they are L1 varieties, although it is clear that the British and General American (GA) varieties are by far the most dominant in terms of status and educational influence. Jenkins (2003: 61) points out that the main reason why the L1 varieties of British and GA English have been traditionally viewed as the best educational models, as opposed to those from the Outer Circle is that ‘many others (English language scholars) consider differences from British or American standards not to be local innovations but errors and, as such, evidence of the substandard nature of these varieties’. The Outer Circle, where English is a second and official language,

¹⁰ The Outer Circle countries have their own L2 varieties of English which are in the process of creating and establishing legitimate norms of their own.

¹¹ Expanding Circle countries differ in that generally, their speakers do not have an intimate knowledge of the language and use it more as a lingua franca, to communicate with speakers of different L1s. Therefore they are dependent on the Inner Circle countries for the language’s norms.

includes many BESs¹², some of whom view themselves (and may be termed) as L1 English users, as English is the language they use every day with family and/or friends, and indeed ‘in some ESL territories differences and distinctions between standard and non-standard varieties¹³ and native and non-native speakers¹⁴ of a language become blurred’ (Carter and Nunan, 2001: 4). The Outer Circle is also made up of English speakers who use the language mainly for official purposes while using a local/national language at home and for more intimate or social purposes.

While Kachru has developed a fairly comprehensive model to represent the varieties of English speakers in the world, he has in part fuelled the view of the supremacy of the native English speaker by placing ENL countries at the centre of his Three Concentric Model, while EFL countries lie on the periphery. Jenkins (2003: 61) offers an insight into the varieties of English from the Expanding Circle, which she claims is, ‘even more controversial’ than those of the Outer Circle. She (ibid) believes that the long-established view held by many scholars that L2 varieties of English exhibit errors and are therefore substandard, persists because many who seek to gain acceptance for Outer Circle varieties from the ELT community usually ignore or omit the varieties from the Expanding Circle¹⁵. Members of the Expanding Circle make up the largest number of English speakers in the world and most English communication internationally solely involves L2-L2 users (Jenkins, 2005: 145).

¹² BESs = Bilingual English Speakers. Jenkins (2000: 10) states ‘bilingual’ should indicate, ‘the speaker has attained a specified degree of proficiency in both languages’, although the exact degree of proficiency remains to be specified.

¹³ See Chapter 2, Section 2.3 for a discussion on Standard English

¹⁴ See Section 1.4, ‘Ownership of English’ in this chapter for a discussion on ‘native’ and ‘non-native speakers’ of English.

¹⁵ Expanding Circle varieties include ‘EuroEnglish’ (Seidlhofer, 2001c), ‘Japanese English’ or any other country where English is learned as a foreign language. Kachru (1982: 27) acknowledges that while these varieties of English ‘may be facts of performance linguistics’ he also believes they can and should be acceptable varieties of English and that ‘there is no reason for setting them up as facts of institutional linguistics or as models for the learners in the countries’ (ibid).

As the use of English spreads around the world¹⁶ resulting in many varieties, both L1 and L2, some are seeking an internationally acceptable standardisation of the language. Varieties within the Inner Circle are generally accepted by Inner Circle members, even though they may cause intelligibility problems between interlocutors, while those from the Outer and Expanding Circles tend to be viewed with varying degrees of suspicion and intolerance. Brutt-Griffler (1998) believes the L2 varieties should also be viewed as legitimate and, therefore, acceptable forms of English,

‘Most, if not all, Inner Circle English speakers appear willing to meet on a common linguistic place, accept the diversity of their Englishes, and do not require of one another to prove competence in English, despite the considerable differences in the varieties of English they speak and the cross-communication problems entailed thereby...this situation must be extended to all English-speaking communities’

(Brutt-Griffler 1998: 389).

From the point of view of the L2 language learner, it is arguably necessary to ascertain whether English is required as a second language or as a lingua franca and to take the needs and wishes of the individual into account. A learner may or may not want to acquire a specific variety of English due to political, social, psychological or other reasons. In turn, it is also necessary to consider the reasons for the language being learnt – whether for personal or professional reasons, such as for communication on an international basis with L1 and/or L2 English users, or just within the country or community of the learner, usually for communication with other L2 English users.

¹⁶ English use is not only between speakers face-to-face but also through the internet, such as VOIP (Voice Over Internet Protocol) = speech over the internet, as in the software programme WIMBA. Geography is no longer a determiner in the use of language, as L1 and L2 language users can now speak live to anywhere in the world and not just by phone. Skype allows people to see as well as talk to each other (important for lip-reading as well as enhancing comprehension and intelligibility by seeing the speaker’s facial expressions and even body language).

Kachru (1986) notes that,

‘In English the prescribed norm does not refer to the use by a majority. The motivations for such a preferred norm stem from pedagogical, attitudinal, and societal reasons, and are not due to any authoritative or organized move for codification, as is the case with some other European and non-European languages’

(Kachru, 1986: 84).

There are many drawbacks to Kachru’s three-circle categorization: notably, it does not adequately describe how members in each circle use English. For instance, countries within the Inner Circle differ in the varieties of English they use, so Australian English can be quite different from GA English, not only in terms of pronunciation but also grammar, vocabulary and syntax. Also, the variety of English can vary between different territories or areas of one country - for example, English pronunciation, some vocabulary and syntax in Northern Ireland differs from that in the West and other parts of the country. On the other hand, more and more members of the Expanding Circle use English for many reasons other than just trade and communication - such as for social purposes. Not only do they use English with L1 users in such contexts but also, and usually more often, with L2 English users of the same or different first language backgrounds, both at home and abroad (Jenkins, 2003: 17). Also, there are significantly more BESs in some Expanding Circle countries, such as Scandinavia and the Netherlands, than in countries of the Outer Circle, where English has official status (McKay, 2002: 6). Jenkins (2003: 17) believes about twenty countries are currently moving from an EFL to ESL category, including Denmark, Costa Rica and Argentina. She (ibid: 17-18) also points out that there is a grey area between Inner and Outer Circles, where English may be learnt as a first language and used within the home, rather than for official reasons only, and that

Kachru's model does not take acrolect (standard) and basilect (colloquial) use of English into account, as basilect is being used more in international communication, rather than just for informal intranational interaction. It is an immutable model but needs to be updated, to include in the Inner Circle category varieties from the Outer Circle which have now become established, such as Indian English and Singapore English, and which are spoken by members who consider themselves to be L1 users of English (ibid). Kachru (ibid: 15) divides the English-speaking world into two rudimentary positions: L1 English users and L2 English users, with L1 English users generally viewed as superior, without taking into account that some L2 English users actually use English of a higher quality than L1 English users.

As has been mentioned previously, Kachru (1992) implies the linguistic superiority of ENL speakers by giving them the central position in his model and denoting them 'norm providing'. Modiano (1999b: 24) believes this positioning of L1 users at the centre also implies that such speakers can easily communicate in international English, which of course is not necessarily the case. Kachru's model is also problematic due to the positioning of members from ESL countries in the 'Outer Circle', resulting in those members being perceived as either using a variety of English that is of a lower quality than ENL members or having a weaker grasp of the language. Also, by placing Expanding Circle members on the periphery, it assumes that all speakers in this category have a very limited knowledge of English and their use is more prone to errors or more unintelligible than the other two categories - which may generally be the case, but not always. Four notable Indian academics in the field¹⁷, in a co-written article, have rejected the idea that people like the subjects in

¹⁷ Singh, R., J. D'Souza, K.P. Mohanan and N.S. Prabhu (1998).

this study's tests and themselves, should be considered outside of Kachru's 'Inner Circle'. They believe the Inner Circle is a socio-political concept designed to maintain the privilege bestowed on L1 speakers, usually by native English speakers themselves, as gatekeepers of the language¹⁸ (Singh et al, 1998) and Phan Le Ha (2005) agrees with this view.

3.5. Other Proposed Models of the English-Speaking World

This section presents other proposed models of the English-speaking world classified in terms of the following aspects: political, regional, ethnic, functional and language description (Platt, Weber and Ho, 1984: 5-6). The following models largely reflect more than one of these aspects. This author recognises that the division of English speakers in the world is unstable (liable to change) and is a complicated task with blurred edges, mainly due to the fact that it can be difficult to accurately determine an L1 user as opposed to an L2 user. The inclusion of the following models are merely to present different scholars' views of the English-speaking world. The different views relating to the way English is seen or defined – either as a 'native' language belonging solely to L1 users, or as an international language belonging to all users - is relevant to this study. In this study, the international view of English is taken – English for International Communication (EIC). For a more comprehensive and balanced approach however, it is necessary to present and discuss all possible views on the status of English as a language and all varieties of it – L1 and L2.

¹⁸ See Widdowson's similar commentary in Chapter 2, Section 2.3.

Görlach's Geopolitical Model of Englishes

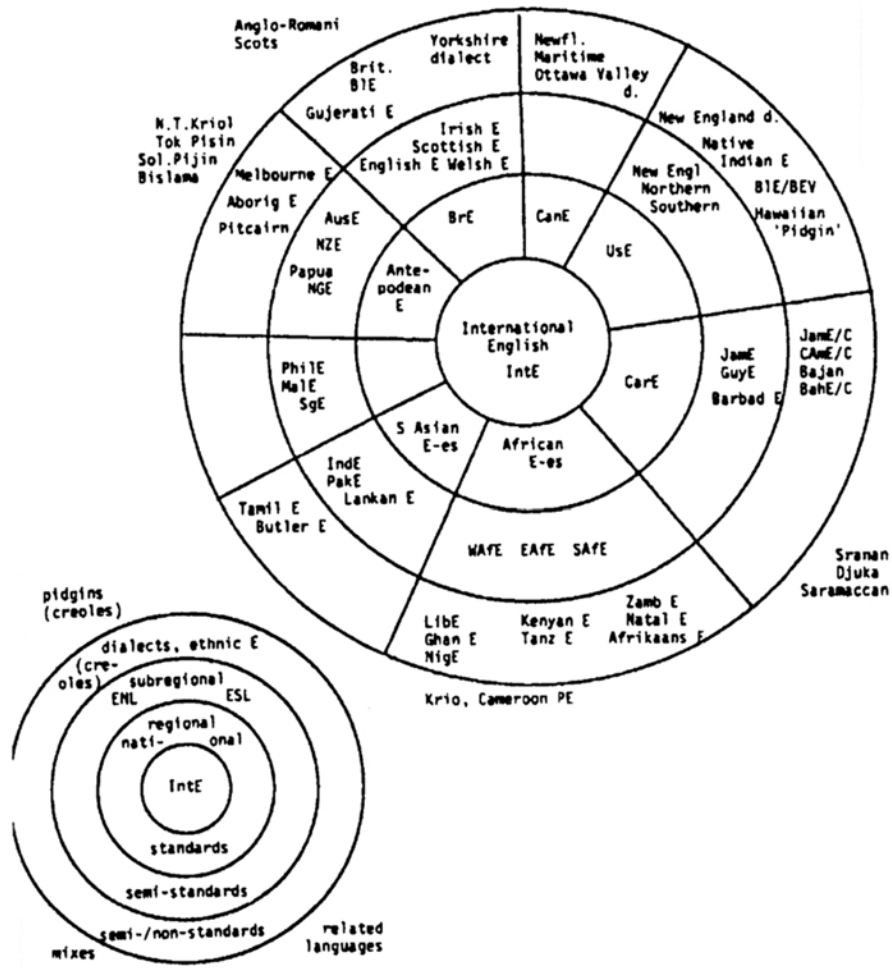


Figure 2: Görlach's Geopolitical Model of Englishes

Görlach's (1988) model presents a large number of Englishes, or varieties of English which are identified as segments of a circle. In the centre, International English (IE) refers to all varieties of English – L1 and L2. However, there is no further description or classification of IE. The next circle refers to classifications of regional international varieties – a broad classification of varieties of English as used in specific geographical areas around the world, such as British English, US English, Caribbean

English, African Englishes and South Asian Englishes. Görlach (ibid) refers to these as standard forms of the language and therefore providing prescriptive norms for pedagogy. The next circle delineates the sub-regional ENL and ESL varieties of the previous classifications, for example, for British English, the sub-regional varieties are Irish English, Scottish English, Welsh English and English English while South Asian Englishes refer to Indian English, Pakistani English and Lankan English respectively. These are termed semi-standard forms of English – they resemble the standards forms but are distinct varieties and it is inferred that they are not suitable for language instruction as they are not standard. The next and final circle categorizes ‘semi or non-standard’ language forms which refer to dialects and ethnic Englishes or English-based creoles¹⁹, such as Kenyan English, Tamil²⁰ English and Aboriginal English. Outside of these circles lie pidgins²¹, other language mixes and languages related to but different from English. This is a more in-depth categorisation of Englishes than Kachru’s as it is more detailed in terms of its description of English based on geographical, political and varietal classifications. However, while International English lies at the centre and includes all varieties of English, it does not indicate any specific qualities or descriptions of International English as a unified concept.

¹⁹ A creole is defined as, ‘a mother tongue formed from the contact of a European language with another language, especially an African language’ (Soanes, 2003: 253).

²⁰ Tamil is an Indian language

²¹ A pidgin is defined as, ‘a grammatically simplified form of a language with elements taken from local languages, used for communication between people not sharing a common language’ (Soanes, 2003: 854).

Quirk's Taxonomy of Varieties of English

A Taxonomy of Varieties of English

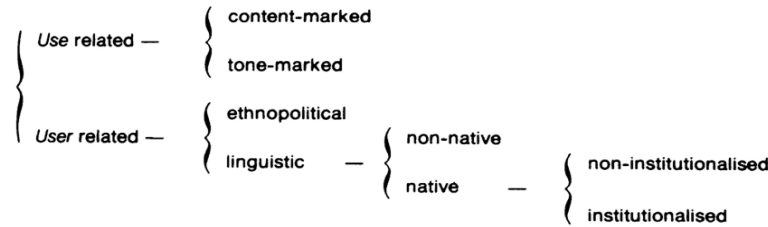


Figure 3: Quirk's Taxonomy of Varieties of English

Meanwhile Quirk (1990: 99) separates English into 'native' and 'non-native' which he terms '*use* related' or '*user* related'. These classifications are more descriptive in terms of use rather than geographical location or specific variety. 'Use related' refers to language use in terms of content (which determines a speaker's choice of words or phrases), or tone (which determines a speaker's implied meaning). 'User related' concerns ethnopolitical and linguistic features, which refer to a wider range of aspects such as language variety (L1 or L2) and geographical location, which can determine whether the English variety is from the Inner, Outer or Expanding Circle, whether users speak English for intranational or international communication or for personal or solely professional use. However, Quirk does not discuss these aspects in detail but merely points them out.

Holliday's BANA Model

Holliday (1994: 137) refers to ENL countries as BANA (Britain, Australasia and North America) which maintain a central position and states that English language teaching methodology is 'chauvinistic' as L2 learners are instructed with a view to conforming to BANA norms – he refers to cultural norms in particular. He (ibid)

believes teaching methodology is as much a political issue as an educational one and that L2 English learners' cultures should be reflected in ELT curricula and that pedagogy should be altered to include this. This is especially important for classes of mixed cultures, who should negotiate a new classroom culture rather than be made to adhere to BANA culture, which Holliday (ibid) believes strongly influences current ELT methodology and literature. He (ibid) is not so concerned with describing English in terms of a world view but rather ENL cultural norms enforced through ELT practices by BANA countries, mainly through private language schools and English classes in higher education institutes, which he believes could in fact cause conflict amongst L2 learners from differing cultures.

Modiano's Model of English

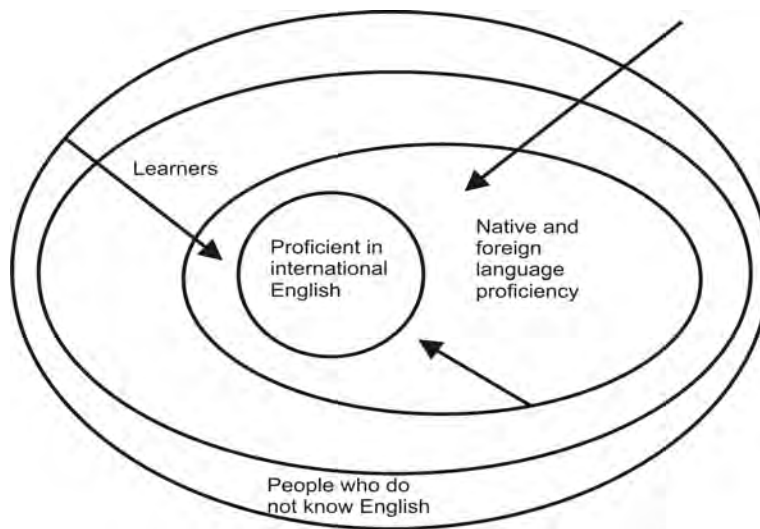


Figure 4: Modiano's Model of English

Modiano (1999b) also proposes a model for the world's English speakers which is composed of four circles as opposed to Kachru's three. The two inner circles do not distinguish between L1 and L2 English users, only between competent speakers of EIL - in the 'inner circle', and those who can use English only at local level - in the

‘outer circle’. The inner circle refers to speakers of English (both L1 and L2 varieties) who are able to function well in English for international communication. Modiano (ibid) supports the notion of global competence for English communication over that of local English varieties. His outer circle includes all speakers who are not proficient users of EIL and who do not have ‘native-speaker’ proficiency in SE in one of its two forms – RP or GA²². The second circle includes L1 and L2 users at various levels of proficiency but differs from EIL in that these speakers are unable to code-switch²³ for international communication. This category includes L1 users with strong regional dialects or strong accents which hinder their intelligibility for international communication and L2 users whose varieties of English are incomprehensible to EIL users. This second circle also includes Creole speakers whose language is ‘obscure’ to EIL speakers (ibid: 26). Some of the second circle members could be deemed ‘native speakers’ by other criteria, such as that of ECA – Early Childhood Acquisition. Modiano goes on to say that ‘only common sense and intuition will tell us who is or is not a proficient speaker’ (ibid: 25). The third circle is reserved for learners of English who have not yet attained proficiency in a regional dialect, accent or indigenized variety. The fourth and outermost circle is designated for ‘people who do not know English’ (1999b: 26). Modiano (ibid) does not make L1 or L2 distinctions or refer to geographical or political indicators, as Kachru, Görlach or Holliday do. Rather he presents English as ‘a common denominator uniting people’ (ibid: 26). Modiano (ibid) believes it is important to present the world’s English speakers in this manner

²² See Chapter 2, section 2.3.2 for details of the English varieties: Received Pronunciation and General American

²³ Changing from one language to another in the same sentence/conversation, either because the speaker does not know a word or grammatical feature in one language but does in another or to help their interlocutor by using a language form they deem known by the interlocutor. It can also be for psychological/social reasons by reflecting the identity of a speaker, such as Singlish (Singaporean English) or Indian English.

so that the idea of ‘native speaker’ and/or near-native proficiency is removed as he believes they are not necessary for effective EIC.

1.5. English as an L2/Additional Language: EFL, ESL, ELF, WE, EIL

This section presents some of the well-known acronyms commonly used to refer to English in English Language Teaching (ELT)/Applied Linguistics. These acronyms reflect either its pedagogical approach in ELT by describing the status of English in a particular learning context, such as EFL²⁴ (English learned in contexts/countries as a foreign language), ESL²⁵ (English learned as a second language, usually in an L1-English speaking country), and, ELF²⁶ (English used as a lingua franca to communicate with L2 users of English from a variety of L1 backgrounds, as a common language for international communication). WE²⁷ and EIL²⁸ are two acronyms used to describe English’s position as the main language in the world used for international communicative purposes. These are the five main acronyms that have been used to describe English language learning and use amongst L2 users. The terms have also been used to describe different language settings: for example, a specific community or country where most users learn English as a foreign language is known as an ‘EFL country’, such as Japan, while a location where L2 users learn the language in order to excel in an L1 English-speaking environment is referred to as an ‘ESL’ setting (Nayar 1997, Trudgill and Hanna 1994, McArthur 1996). McArthur

²⁴ EFL = English as a Foreign Language

²⁵ ESL = English as a Second Language

²⁶ ELF = English as a Lingua Franca

²⁷ WE = World English

²⁸ EIL = English as an International Language

(2003: 57) states that while the terms ENL²⁹, ESL and EFL were quite distinct before ('the first were born to English, the second had it thrust upon them in colonial times, and the third was everybody else who knew any English'), now they 'have very fuzzy edges'. With the residual effects of colonialism, namely bi- and multi-lingualism, huge worldwide travel and migration, parents of different L1s raising bilingual children and so forth, it is now quite difficult to define such distinct categories amongst the plethora of English speakers around the world. EFL and ESL are terms which have been in circulation since the 19th century (Graddol, 2006: 82-84). EIL is a newer concept and reflects the more recent worldwide adoption and adaptation of the language by L2 English users.

²⁹ ENL = English as a Native Language – L1 English users

Scope of Language Treatment	Officialdom /Public Function	Purpose of Learning	Student/ User Population	Language Model	Performance Target	Lang. Inter-actors
EFL General English, English for Specific Purposes	School subject	i) limited use: for employment ii) higher education iii)communication is a low priority	L2 users	Educated L1 user (standard English)	Performance level of educated L1 user	L2↔L1
ESL General English- more depth and range than EFL	Medium of instruction; lingua franca	Intranational & international communication	L2 users	Educated L1 or L2 user of local English variety	Performance level of educated L1 or L2 user of local English variety	L2↔L1 intra-national L2↔L2
ELF General English, EIC	Lingua franca	For EIC	L2 users	L2 user of local Eng. variety		L2↔L2
WE General English, EIC	Lingua franca	For EIC	L1 and L2 users	Educated L1 or L2 user of local standard English variety		L2↔L2 L2↔L1
EIL General English, EIC, English for Specific Purposes	International communication & business, sports, news, diplomacy, advertising, etc.	For EIC	L1 and L2 users	Any internationally intelligible L1 or L2 English variety	Mutual intelligibility and appropriate language for context of use/situation	L2↔L2 L2↔L1 L1↔L1

Table 1: English as an L2/Additional Language: EFL, ESL, ELF, WE, EIL³⁰

³⁰ Adapted from Smith (1983).

English as a Foreign Language (EFL)

EFL is learned by L2 users where English has no ‘internal function in their L1 country’ (Jenkins, 2000: 5). It is generally studied to enable L2 learners to communicate with L1 and L2 English users, for either personal or professional reasons, such as for business or other purposes. EFL involves emulating the language as produced and used by educated L1 users as well as learning the L1 culture (Graddol, 2006: 82). Due to the centrality of L1 norms in the teaching methodology, Graddol (ibid: 82-3) states that the L2 user is always a ‘foreigner’ or ‘outsider’ in EFL who is never granted the same linguistic rights as L1 users, who are deemed the superior authority. EFL generally starts to be taught to learners at secondary/junior high-school age of around twelve years old (ibid). Private courses in fee-paying English language schools range from short-term ‘holiday’ courses between a few days to a number of weeks, to more long-term courses, consisting of a number of months or up to and over a year. English language holiday courses are generally aimed at school-going students, usually teenagers, where learners study in an ENL (English as a Native Language) country with an emphasis on the culture of the host country. Such courses do not tend to be very intensive and are generally more about experiencing an ENL country and culture than actually progressing in the language. More long-term courses are generally taken by people who have finished secondary education and seek to improve their English language level, usually for educational and employment purposes in their home countries. These students may study part-time in their home countries, while working or studying, or study full-time in an ENL country on a student visa. The emphasis in these courses is on improving and expanding knowledge of and ability in language criteria such as grammar, syntax and vocabulary, and skills – reading, writing, speaking and listening. Students undertaking

such courses usually sit an internationally-recognised English language exam, such as TOEIC³¹, TOEFL³² or IELTS³³, to gain entrance to ENL third level educational institutions or to improve their study or employment prospects in their home countries. Graddol (ibid: 83) believes that due to the focus on the L1 user as the model for emulation, EFL methodology is flawed because the learner is permanently posited as a ‘failure’, regardless of level of proficiency achieved. He (ibid: 82) believes the pedagogy may have been purposely designed in this way as a ‘gatekeeping device’ to create elites where only those wealthy enough to travel to ENL countries could succeed in being proficient L2 users of the language. Even if one were to reject this idea, Graddol (ibid: 84) believes that EFL accepts a great deal of failure on the part of learners by placing importance on successfully passing exams rather than actual levels of proficiency, placing ‘considerable stress and resentment’ on learners. However, he (ibid) does believe that ELT is addressing such flaws and highlights two practices introduced to combat this:

- i. The European language portfolio, which outlines a learner’s experience and accomplishments when learning the language – in essence, reflective learning, which is seen as a means of documenting and assessing learners’ advances rather than purely assessing them through testing
- ii. The Common European Framework of Reference for languages (CEFR) which outlines common guidelines for levels of achievement for all languages and focuses on learners’ abilities rather than failures (ibid).

³¹ TOEIC = Test Of English for International Communication

³² TOEFL = Test of English as a Foreign Language

³³ IELTS = International English Language Testing System

English as a Second Language (ESL)

ESL differs from EFL in that learners require English in their daily lives, usually because they live and work in an English-speaking environment. Dörnyei (1990: 48) states that ESL involves learning the target language by being directly exposed to it or through formal education alongside regular contact with the target language community in either a local or multicultural environment. According to Graddol (2006: 84) ESL developed in two ways in the 19th century. The first was through the spread of the British Empire, where certain members of an ‘existing social elite’ within the colonised country were educated in not just the English language but also English culture and customs, including Christian ethics. The effects of this are still evident in some post-colonial countries such as India, where its use, although widespread, it is still largely reserved to the middle classes. Another result of the effects on colonised countries was the emergence of ‘New Englishes’ – the varieties that emerged alongside the indigenous/local L1s, such as Singapore English. Where such English varieties exist, children are usually taught a more standard form of the language at school (ibid: 85). ESL users may speak English at work while using their L1 and/or a ‘new’ variety of English at home and in their local ethnic community, such as members of the Jamaican ethnic communities in Britain who generally speak Jamaican English as well as another variety, namely a standard or ‘local’ British variety (ibid). Such speakers may be bi- or multi-lingual, using English for professional and some personal interactions and using their L1 and perhaps another language (a lingua franca), or code-switching in their community, depending on the linguistic make-up of their surroundings. ESL also became prominent due to immigration to countries such as the USA, Australia and Britain, where a variety of

L1 speakers all needed English as a means of assimilation by creating ‘a new national identity’ (ibid). Today where ESL is taught to incoming immigrants in an ENL country, the curriculum usually includes aspects of citizenship to help assimilate those immigrants into their new country of residence and thus further enhance their identity as English language users (ibid). ESL learners usually need to attain quite a proficient level of the language in order to carry out daily professional and personal interactions. Such learners are usually adults who have immigrated to an ENL or Inner Circle country to improve their life conditions. It is imperative that they have a broad knowledge of the language, from general to more specialised jargon, depending on their occupations. Language skills development is also dependent on profession and the needs or desires of the individual and can vary from basic to proficient level.

World English (WE)

There are a number of criteria for a language to be considered a world language: a high number of L1 speakers; use over a broad geographical region; and a stable political and economic situation to ensure language spread without great opposition (Thorne, 1997). Although Rajagopalan (2004) does not refute the idea that English is indeed the mother tongue of millions of people around the globe, WE is a separate entity from English, in that it does not belong to any one group of people (it is not anyone’s L1), including L1 English users. Instead WE is defined as,

‘a hotchpotch of dialects and accents at different stages of nativization (or, contrariwise, fossilization³⁴) where there are no real rules of the game; if anything, the

³⁴ When a language learner is acquiring another language but is unable to achieve L1-like ability in certain linguistic forms and thus his/her language repertoire falls short of the TL norms, the forms become fossilized – errors in the L2 speaker’s usage (adapted from Crystal, 2003: 188).

rules are constantly being revised or reinvented even as the game progresses’ (Rajagopalan, 2004: 115).

Recognising the existence of WE means one has to review current approaches and practices in English language teaching (ELT): ‘ELT is poised to undergo some dramatic changes as native varieties of English give way to WE as the most coveted passport to world citizenship’ (ibid: 111). Rajagopalan (ibid) indicates that while the concept of WE is gaining ground, the notion that it does not ‘belong’ to anyone is causing concern, particularly for some L1 English users. Due to this ‘blurred’ idea of a ‘native speaker’ in WE, Rajagopalan (ibid: 113) believes that L1 English speaker models are no longer valid for ELT purposes and that the whole approach to ELT needs to be revised to incorporate this view so English can adequately serve as a world language. Two of the main revisions called for are:

- i. The abandonment of the concept that an L1 English user is the only suitable model for ELT
- ii. The rejection that native-like ability is the ultimate goal for any learner of English (ibid: 114).

The main reason why WE supporters believe an L1 English speaker is no longer a suitable role model for ELT purposes is because of the pertinent fact that communication between an L2 English speaker and another L2 speaker is far more common in the world than between L1 and L2, or even L1 to L1. Rajagopalan (ibid: 114-5) continues by stating that in fact L1 English speakers are ‘communicatively deficient and ill-equipped’ to effectively communicate with WE speakers and therefore should be primed to adequately deal with various accents of both L1 and L2

varieties. This point is strengthened, if one agrees with it, when one considers that WE will continue to grow in importance and L2 English speakers could soon outnumber L1 speakers ten fold and where, 'being a rigorously monolingual speaker of English may actually turn out to be a disadvantage when it comes to getting by in WE' (ibid: 116). This is because monolingual speakers are hindered in terms of communicative competence in WE, which has mostly interlingual or multilingual features (ibid: 117). Another drawback of utilising ELT practices which emulate an L1 English speaker is that L2 speakers including L2 English language teachers are deemed inferior and are subject to discrimination from L1 speakers, particularly in terms of employment (ibid: 114). Bruton (2005) states that international intelligibility is the goal but is unsure whether a 'universal WE' is possible. He (ibid) also believes that L1 English users as well as all speakers of English should be able to accommodate all varieties of WE.

Brutt-Griffler (2002: 109) also promotes the idea of an all-inclusive WE variety unifying different varieties of L1 and L2 Englishes. She believes all users (L1 and L2) of WE are of equal status, which echoes D'Souza's (1988) hope that WE will include all varieties to contribute equally to its description. Meanwhile, McArthur (1996: 14) terms WE as, 'a Western-educated international élite', and is of the opinion that WE is actually a shared 'standard variety' rather than a 'language at large'. WE has also been defined in terms of specific contexts of use. For Bolton (2003: 4), WE consists of 'idealised norms' of a variety which is, 'internationally propagated and internationally intelligible' which he believes is 'increasingly associated with American print and electronic media'. Brutt-Griffler (2002: 110), in a similar vein, associates WE with business, technology, science and academia. It is deemed that WE cannot be an all-inclusive, codifiable variety but is rather a performance variety which

is recreated anew every time English speakers (L1 or L2 users) around the world communicate together through the medium of English.

English as a Lingua Franca (ELF)

Firth (1990) was the first person to label English as a Lingua Franca when discussing English's international status and sought for a comprehensive description of it, which he wrote about more extensively in a 1996 paper³⁵. English as a Lingua Franca refers to English communication between speakers from different L1s (L2 English users) but not including L1 users of English. It proposes the idea of community and shared values and that it is tolerable to mix L1 and L2, as original lingua francas did (Jenkins, 2000: 11). This term implies that it is acceptable to maintain particular features from the speaker's L1, namely one's accent (ibid). Seidlhofer (2001b: 146) states that ELF is, 'an additionally acquired language system' which enables speakers of differing L1s or speech communities to communicate together. ELF proponents believe that ELF is not anyone's native language (Lesznyák, 2002, Seidlhofer, 2001b, House, 1999). Samarin (1987: 370) asserts that a lingua franca does not refer to fixable or codifiable grammar, vocabulary or phonology, 'since lingua franca indicates an aspect of the use of any language, it suggests nothing about the structure of that language'. Other researchers support the view of ELF being in a continuous state of original creation and collaboration between speakers involved in any one particular communicative process (Mauranen, 2003: 516, House, 2002: 259). Knapp and Meierkord (2002) are of the opinion that ELF refers more to accommodation and other communicative strategies than to language forms and pragmatics. Meanwhile,

³⁵Firth, A. 1996. 'The discursive accomplishment of normality. On "lingua franca" English and conversation analysis'. *Journal of Pragmatics*, 26: 237–59.

McKay (2002: 29) questions the possibility of the existence of an ELF community. Jenkins (2000: 11) believes that the name English as a Lingua Franca, ‘symbolically removes the ownership of English from the Anglos’ so that it belongs to no one group in particular but to everyone who uses it. Walker³⁶ (2005b) goes further by stating that ELF describes rather than prescribes what is necessary for intelligibility. Crystal (1997) states that approximately 80% of all communication in English occurs between L2 speakers using ELF.

Academics such as Seidlhofer and Jenkins seek to establish ELF principles of description, use and teaching to inform ELT for international and cross-cultural purposes (Seidlhofer, 2001b, Jenkins, 2000, Dürmüller, 2003). The proponents of ELF call for the establishment of a pronunciation core for primarily pragmatic and political reasons. The main difference between ELF and other varieties of English for teaching and learning purposes is that in ELF, L1 English speakers and ESL users (or ‘Outer Circle’ users) have been mostly excluded from the research carried out by Firth, House, Meierkord and Jenkins and continue to be practically excluded from the lingua franca corpora being developed by Seidlhofer (2005) – VOICE³⁷ – and Mauranen (2006) – ELFA³⁸. Martin Dewey at King’s College London is also undertaking empirical research into lexis and grammar for ELF³⁹. The purpose of Dewey’s research is to report on the effects of lexico-grammatical changes on pragmatics and vice versa with a view to altering English language pedagogy by acknowledging English as a lingua franca in the world today and the effects this has on the nature of the language and how it should be taught as an L2/other language. It

³⁶ Comments made at the ELF Symposium, IATEFL Conference, Cardiff, 2005.

³⁷ VOICE = the Vienna-Oxford International Corpus of English.

³⁸ ELFA = English as a Lingua Franca in Academic Settings.

³⁹ Dewey, M. 2007. ‘English as a Lingua Franca: an empirical study of innovation in lexis and grammar’. Paper presented at IATEFL Conference, Aberdeen, 2007.

will be interesting to see how successful Seidlhofer, Dewey and other ELF researchers will be in this endeavour. This exclusion may be a reaction to the previous practice whereby English spoken by anyone but so-called native speakers was always considered anti-native speaker English. Jenkins (2005) believes the link between accent and identity is mainly relevant to ELF learners because, in her opinion, the adoption of a native-like accent is not particularly advantageous to them⁴⁰, due to the general contexts of their use of English, which will usually be with other L2 users of English. Graddol (2006: 87) views ELF as the ability to pragmatically use the language for intercultural communication. He (ibid) concurs with Jenkins (2000: 226) that the best pronunciation models for ELF are successful bilingual L2 English users who retain features of their L1 accents as a means of maintaining their L1 identity. Jenkins (2000) considers it more beneficial for L2 speakers to acquire her proposed core features of an ELF model to enhance spoken intelligibility and to be able to adjust their pronunciation to suit the needs of the interlocutor with whom they are in communication. In this way, ELF speakers are able to retain elements of their L1 identity but need to have confidence in their L1-influenced accents for ELF communication. For this to happen, she believes the idea of accent reduction must be replaced with the concept of accent addition, 'to add to their repertoire a number of core (pronunciation) items that they can use when they engage in EIL interactions' (ibid: 210).

This may be achieved through five pedagogic stages:

- 1) inclusion in the syllabus of core items for productive and receptive use
- 2) inclusion of an array of L2 English accents for receptive purposes
- 3) inclusion of a range of L1 English accents for receptive purposes

⁴⁰ However, the use of a native-like accent can be socially advantageous in some contexts.

- 4) inclusion of non-core items for receptive purposes
- 5) inclusion of accommodation skills

(ibid: 209-210).

L2 English users can choose to maintain their L1 identity while speaking English intelligibly and understand other English users, which would involve adopting the first three stages. They can also try to comprehend L1 and L2 English accents, which would involve adopting all five stages. Whichever they choose, Jenkins states that such learners should be allowed to retain their L1 accent and thus their L1 identity (ibid)⁴¹. Jenkins also makes the observation that members of the Outer Circle who have had to fight for acceptance of their varieties of English are slow to extend such rights to members of the Expanding Circle, while many L1 English users believe the language belongs to them and that L2 English users should adjust their speech to replicate L1 users (ibid). ELF cannot be implemented unless it is accepted internationally by members of the ELT profession and indeed by L2 English users themselves. Jenkins believes this is critical, but attitudes to pronunciation and accent are extremely difficult if not impossible to alter (ibid). She⁴² (2007a) stresses that ELF phonology is not a reduced form of English – it merely replaces standard forms with others in the same way as some ENL varieties do. For example, in ELF phonology, /t/ and /d/ can replace /ʔ/ and /ɖ/ in the same way as New Zealand ENL speakers replace /ɟ/ for /e/ in standard RP and GA (ibid). Jenkins (2000) believes that the main drive for ELF acceptance and adoption lies with teachers⁴³, many of whom have expressed reservations about ELF (Jenkins, 2007b). She (ibid) cites that one problem

⁴¹ See Chapter 3, Section 3.6.3 for more on accent and identity.

⁴² Jenkins, J. 2007. 'ELF: English as a Lingua Franca', iT's teacher's magazine, Issue 103, Spring 2007: 8-10.

⁴³ See Chapter 3, section 3.4 for more on L1 and L2 English language teachers

is the lack of published materials but the main problem is much deeper and more controversial than just practical reasons. Jenkins (ibid) is of the opinion that it is necessary for L1 users of English to adopt accommodation strategies so they too can be involved in ELF interactions and for ELF to be included in the L1 English language school curriculum (Graddol, 2006, Jenkins, 2000).

English as an International Language (EIL)⁴⁴/English for International Communication (EIC)

‘EIL membership is by definition membership of an international rather than of an L1 English community’

(Jenkins, 2000: 203).

EIL is usually cited as the usage of a core of English features which are common to all L1 and L2 varieties (Modiano, 1999a). The term EIL was initially promoted by Larry Smith in the late 1970s. EIL, as opposed to EFL, does not reflect any one cultural background and Jenkins (2000: 74) believes no one culture should be incorporated in its teaching. Smith (1983) believes EIL should be taught to both L1 and L2 English users for international communication between the world’s English speakers and should be a distinct variety of the language. This assertion is echoed by Taylor (1991: 425), who proposes the need to train L1 English users to accept and accommodate L2 English users as part of EIL instruction. Pennycook (1994) supports the view that rather than seeking a distinct variety of International English, it should be examined in terms of its speakers and their use of it. Some academics tend to view EIL as Standard

⁴⁴ From this section onwards in this study, EIL shall be referred to as EIC – English for International Communication

English (SE) as used by educated speakers of the two main standard British and American varieties (Preisler, 1995, Honey, 1991, Davies, 1989). More recently, EIL has been advocated by linguists such as Jenkins, Seidlhofer, Widdowson, Walker and Mauranen as a distinct variety of English with no L1 English users. EIL reflects the reality that far more English communication occurs between L2 English users than between L1 to L2 English users, or even between L1 English users only. Jenkins (2000: 1) defines EIL as being ‘able to use English as a lingua franca in communication with other L2 English users’, i.e., as an international language, rather than as a foreign language in communication with its L1 users and Modiano (1999a: 26) concurs with this. This implies that L1 English users are not automatically members of the EIL community and Jenkins (2000: 227) believes that, ‘if they (L1 English users) wish to participate in international communication in the 21st Century, they too will have to learn EIL’. By this she means that rather than actively learning a separate form of the language, ENL speakers will have to become more exposed to EIL language forms and accents, so they can accommodate such speakers and therefore communicate more easily and efficiently with them, in international contexts. Seidlhofer (2003: 9) states that users of EIL (L2 speakers of English) play an active role as agents in its spread and linguistic development and actively contribute to the shaping of the language and the functions it fulfils. Widdowson (1997) believes EIL is, in fact, ESP – English for Specific Purposes. He states that EIL is English that is used for professional and academic purposes rather than for general communicative purposes, such as ‘airspeak’, as used by pilots and air traffic controllers. In order to address this limitation, McKay (2002: 12) suggests two sorts of EIL - ‘local EIL’, where English may be used in multilingual societies for widespread communication, and ‘global EIL’ between countries for international contact. The main reason for

omitting L1 English users from EIL seems to be that they constitute the minority, whereas Expanding Circle L2 users far outnumber L1 users and this trend will continue in the foreseeable future (Graddol, 2006, 2000). Also, due to the belief of Jenkins (2000) and other proponents of EIL, an L1 English model is inappropriate for EIL pedagogy and therefore L1 users should be excluded from the definition. Lester (1978: 13) defines International English as ‘a contact language made up of contact languages’. Samarin (1987: 372) views International English in a similar light to Lester but differs in that he believes it originates from the ‘standard languages of politically and economically dominant nations’ rather than from contact languages. However, he (ibid) does refer to it as a lingua franca rather than a standard language form, referring to it as, ‘a functional tool, lacking the elegance and sophistication of a standard language’. Modiano (1999a: 26) does not limit the use of EIL to L2 users only and includes L1 users in the definition which is the view of EIL taken for this study and referred to as EIC.

1.6. Ownership of English: L1 English Users vs L2 English Users

‘Indeed, if there is one predictable consequence of a language becoming a global language, it is that nobody owns it any more. Or rather, everyone who has learned it now owns it – ‘has a share in it’ might be more accurate - and has the right to use it in the way they want’

(Crystal, 2003: 2-3).

While the initial spread of English may be traced to the effects of British colonial power, there is a growing body of opinion that the ownership of English is no longer

exclusive to Britain or other Inner Circle⁴⁵ countries. The notion of a native speaker of a language is altering due to many facts and forces, mainly the trace/historical effects of colonisation and current emigration. After World War II, there was huge scale emigration worldwide. According to Rajagopalan (1999: 203), ‘these new contexts of ‘diaspora’ have led to highly fluid and endemically unstable linguistic environments, where multilingualism, rather than monolingualism, has become the norm’. He (ibid: 204) believes that rigid categorisations, such as ‘language x’ or ‘a monolingual speaker of language x’ in no way reflects the true nature of languages or how they are used around the world. Ragajopalan (ibid: 203) states that linguists and language theorists have clung to ‘the existence of a certain enigmatic creature called the ‘native speaker’, regardless of the fact that this is now ‘at best a convenient myth ...and at worst the visible tip of an insidious ideological iceberg’. His views echo those of Ferguson (1983: vii), who states: ‘the whole mystique of native speaker and mother tongue should preferably be quietly dropped from the linguist’s set of professional myths about language’. Paikeday (1985) wrote about the death of the native speaker while Rampton (1990) called for the term ‘native speaker’ to be replaced by other terms which reflect proficiency, variety or origin and use, such as, ‘expertise’, ‘affiliation’ and ‘inheritance’. Davies (1991: 148) lists six criteria for native speakers including the target language being acquired during childhood, having intuitions about the language’s grammar systems, having sufficient discorsal and pragmatic control of the language and being able to use the language creatively⁴⁶. He (ibid: 150-1) does accept that L2 users can achieve these criteria and thus be thought of as native speakers of a target language, but insists that while it is possible, the task is so great that it is ‘not likely’ that many will ever achieve it. Prodromou (1997) also notes that

⁴⁵ Term coined by Kachru to refer to ENL countries, namely Britain, the United States, Canada, Australia, New Zealand and Ireland.

⁴⁶ As opposed to EIL and ESP functionality mentioned earlier.

the term 'native speaker', if taken to refer to those whose L1 is English, includes many speakers from Asia and Africa. The papers in Singh et al. (1998) show how illogical, absurd and prejudiced it is to justify differentiating between 'native' and 'non-native' speakers of English. However, it is generally obvious who is being referred to when the term is applied. As Medgyes (1992) points out, it is difficult to define the differences between a hill and a mountain, but the words themselves are useful and are commonly used. The difficulty is rather with the values that are attached to the terms, and for many in ELT, the term 'native' and 'non-native' imply limited definitions or negative value judgements, particularly for 'non-native'. Some claim that ownership of and therefore authority over English has long passed from the native speaker (Braine, 1999, McArthur, 1996, Widdowson, 1994). Mass emigration, international travel and tourism, international business, along with higher educational standards and career opportunities, are some of the forces which are operating to change English from being conceived of as the sole property of L1 English users, to belonging to anyone who uses it, in any way they see fit, regardless of whether it is one's native language or not (Crystal, 2003).

Bickley (1982: 87) summarises the position as this: 'English does not 'belong' to any one group of people. The use of English is always culture-bound, but the English language is not bound to any specific culture or political system'. While this belief is gaining credence, some still view ownership as exclusive to L1 English users and believe that the English language is being misused and contaminated by L2 users, who make up the majority of English speakers in the world today. Ragajopalan (1999: 203) believes this is due to, 'deeply-ingrained folk beliefs' which have entered the sphere of linguistics and which have become, "'self-evident' axioma". Widdowson

(1994: 378-9) theorises that the main reason for upholding General American (GA) and Received Pronunciation (RP) as the only two standard models of English is that it implies that these varieties are the purest and best and therefore empowers such speakers while simultaneously giving the impression that other varieties are substandard. Ahulu (1997: 19) notes that those who advocate Standard English (SE) tend to hold positions of authority and influence in the fields of 'education, the media, employment and government, who influence decisions relating to language policy and national curricula'. Kachru (1986: 31) points out that while English may be perceived negatively as being tainted or misused, the fact is that 'English is acquiring various international identities and thus acquiring multiple ownerships'. An oft-used quote by African writer Chinua Achebe (1975: 62) demonstrates how users of English change the language to suit or reflect their needs, surroundings, culture and use: 'I feel that the English language will be able to carry the weight of my African experience...But it will have to be a new English, still in communion with its ancestral home but altered to suit its new African surroundings'.

Kachru (1986: 98) believes that 'the planning for the spread of English is steadily passing into the hands of its non-native users. These users have developed their own norms that are not identical to the norms labelled RP and GA'. This current trend of L2 users of English taking ownership and control of English is reflected in other publications. A 2005 article in the renowned British newspaper, the *Guardian Weekly*, noted the current trend in English language learning and use throughout the world. It stated that English is being used in many parts of the world as a lingua franca, often between L2 English users with no L1 English users present, as is the case between Asian countries, where it is not an L1. The article continues by demonstrating that,

‘people are learning it (English) for extrinsic⁴⁷ rather than intrinsic⁴⁸ reasons’ (Aglionby, 2005), such as to improve employment prospects and ability to communicate when travelling internationally. Such people are not learning English to learn about the culture of English-speaking countries. Rather, they are using English for their own purposes, to be used just as much, if not more so, with L2 English users than with L1 English users. It must be stated here that people learning and using English all have a variety of differing needs, wants, motivations and aspirations for doing so and that motivation can be complex and include both intrinsic and extrinsic needs. English can also be a neutral language between two L2 users. Widdowson (1994: 384) is of the opinion that to be considered a proficient speaker of a language, one must, ‘possess it, make it your own, bend it to your will, assert yourself through it rather than simply submit to the dictates of its form’. He (ibid) believes the use of English should not be restricted to standard forms but should enable all users around the world to use it in such a way as to reflect their needs, lives, cultures and any other purpose, as they see fit, to ‘own’ the language. Widdowson (ibid: 385) states that while the varieties of English are obviously related to and originate from a common ancestor, they are not under any obligation to adhere to this form and L1 English users are not entitled to sole custody of the language. He (1997: 137) believes language has a ‘linguistically changeable character’ because it ‘has its origins in the mind’, which varies greatly from person to person, and, once mastered by users, becomes theirs to employ as they wish. Therefore, linguistic imperialism cannot, and specifically in the case of English, did not succeed (ibid).

⁴⁷ External factors which are outside of a person’s own view of himself/herself, ideas or opinions, such as to improve employment prospects or to be viewed in a more positive light by others, such as one’s colleagues or peers.

⁴⁸ Internal factors which refer to one’s view of oneself, such as one’s self-esteem and self-confidence.

From the literature, it emerges that there is more than one definition of a ‘native speaker’, with different attributes and characteristics. There are three main criteria when considering whether an individual is a ‘native speaker’, which confirm Rampton’s (1990) ‘inheritance’, ‘affinity’ and ‘expertise’. The first criterion is ‘Early Childhood Acquisition’, which is normally the most cited when deciding whether a person is a native speaker or not (Davies, 1991). In some cases children start out using English as the L1 but in later life replace English with a different language as the L1 – this fact somewhat negates or questions the legitimacy of this claim for native-speakerism. However, it remains an important criterion for native speaker categorisation. ‘Affinity’ involves viewing not only the L1 as the ‘dominant’ or ‘home’ language but also involves the cultural component connected to the particular L1 which can be ‘learnt and encoded or even imprinted early’ (ibid: 150). The use of the terms ‘encoded’ and ‘imprinted’ suggest that while cultural leanings are not innate, they can be deeply embedded in a person’s psyche and are a strong indicator of identity and affiliation. The third aspect - ‘expertise’ - refers to a deep rooted knowledge, even intuition about the language, in particular grammar and an ability to use the language correctly in terms of discourse and pragmatics as well as creatively (ibid). Davies (ibid) points out that of the three criteria, this is the one that L2 users are most likely to achieve with sufficient practice. Sifakis and Sougari (2005: 480-1) note in their study of English language teachers in Greece that the majority of teachers (more than 70%) believe English belongs to L1 users or to those with L1 competence. The researchers found these views somewhat contradicted their own views on pronunciation teaching, where intelligibility rather than accuracy should be the main focus. See Chapter 3, Section 3.4 for more on this debate concerning L1 and L2 English language teachers.

For these reasons, linguists and English language theorists are reviewing the appropriacy of L1 English norms. The work of Jennifer Jenkins in particular has been prominent (and sometimes controversial) in the area of English pronunciation in prioritising Lingua Franca Core (LFC) pronunciation forms based on limited empirical testing, suitable for speakers of all and any L1 who use English for international communication. It also means that as the language ‘belongs’ to everyone who speaks it, the speakers, regardless of whether they are L1 English users or not, are free to use the language as they see fit, introducing neologisms and innovations, just as such items are introduced into the language by L1 English users without being viewed as errors or deviations.

1.7. Defining an International Language

‘something paradoxical is indeed happening to English. At the same time as it is becoming a lingua mundi, a world language, and a lingua franca, a common language of commerce, media and politics, English is also breaking into multiple and increasingly differentiated Englishes, marked by accent, national origin, subcultural styles and professional or technical communities’

(Kalantzis and Cope, 1999: 2).

An international language is by definition a language that is used not only by its L1 users, but also by a large proportion of L2 users, enabling its speakers to participate in international communication (McKay, 2002: 5). Crystal (2003: 9) states that a language becomes ‘international’ due to ‘the power of its people – especially their political and military power’. While such power is necessary to establish an international language, Crystal (ibid: 10) continues by observing: ‘but it takes an

economically powerful one to maintain and expand it'. He (1997: 3) asserts that an international language is defined by being given a 'special role that is recognised in every country', which is assigned by making it an official language of a country or by exclusive status denoted to a language by necessitating its study as a foreign language. Crystal (2003: 4-5) notes that English has special status in over seventy countries and is the main foreign language taught in schools in over one hundred countries. By its very nature, the English language is not tied to any one L1 English-speaking community or culture: 'to be considered an international language, a language cannot be linked to any one country or culture; rather it must belong to those who use it' (McKay, 2002: 1). However, in reality, English does tend to be associated with particular cultures and ethnicities, namely white, Westernised cultures⁴⁹.

Defining English for International Communication (EIC)

EIC, or EIL as it has generally been referred to in the literature, (see this chapter, section 1.5.5) has been defined as an international variety of English used by both L1 and L2 users. Widdowson (2003: 45) highlights the fact that generally, 'spreading is transmitting...it does not alter according to circumstances...but...language is not like this'. While the term 'language spread' is sometimes used to describe what has happened and is continuing to happen to English, it does not reflect the true situation, which is that English is being changed to suit the needs of its many and diverse speakers – it is being altered, sometimes as a natural consequence and sometimes deliberately. As previously mentioned, this spread and change of English is referred to in a number of ways by English Language (EL) scholars, namely World English,

⁴⁹ See Chapter 3, section 4 for more on issues of whiteness and nativeness in ELT.

Global English, New Englishes, and so forth⁵⁰. Some EL specialists, such as Carter and McCarthy (1997), and Nair-Venugopal (2003), have noted that there cannot be just one form of International English, as there are far too many varieties of the language around the world.

Jenkins (2003: 60-1) presents three important aspects of the effects of the internationalisation of the English language:

- a) The language is becoming more diverse as more people, particularly L2 English users, are using it.
- b) English is changing due to the influence of the various L1s and other languages of its L2 speakers around the world and their local conditions.
- c) Amongst all varieties of English, even L1 varieties, cross-cultural differences are evident, particularly so in accent but also in vocabulary and grammar, though to a lesser degree.

This author's definition of EIC concurs with McKay's (2002: 12) four basic points about the nature of EIL (the term McKay uses):

- 1) English is used both globally, amongst countries for international communication, and locally, as a lingua franca in multilingual societies.
- 2) It cannot be claimed that that the cultures of the Inner Circle countries reflect the true culture of English, as it is now an international language.
- 3) It follows then, that EIC is part of the culture of any country that uses it.
- 4) One of the main roles of EIC therefore, is to allow all its speakers to communicate their culture and beliefs to others – both locally and internationally.

⁵⁰ These have already been outlined in Chapter 1, section 1.2.2.

Brumfit (2003) sums up the view of English for International Communication (EIC)

by stating:

‘if English is genuinely to become the language of ‘others’, then these ‘others’ have to be accorded – or perhaps more likely, accord themselves – at least the same English language rights as those claimed by mother-tongue speakers. And this includes the right to innovate without every difference from a standard native speaker variety of English automatically being labelled ‘wrong’. This is what it means by definition for a language to be international – that it spreads and becomes a global *lingua franca* for the benefit of all, rather than being distributed to facilitate communication with the natives’

(Brumfit, 2003: 44).

Jenkins (2000) deems such innovations should be acceptable, as long as they are comprehensible to most EIC speakers. She believes it is L1 English users who should change their perception of English as it is used within an EIC context,

‘There really is no justification for doggedly persisting in referring to an item as ‘an error’ if the vast majority of the world’s L2 English speakers produce and understand it. Instead, it is for L1 speakers to move their own receptive goal posts and adjust their own expectations as far as *international* (but not *intranational*) uses of English are concerned’

(Jenkins, 2000: 160).

Kachru (1986: 21-2) also defends innovations in L2 varieties of English and believes that instead of (L1 English users) perceiving them as shortcomings within the language repertoire of L2 users, they are reflections of the international nature of English, as they are the result of linguistic, cultural and other such aspects of the first languages of English for International Communication (EIC) speakers. Jenkins (2003: 22) sums up this point by stating that EIC, encompassing its many varieties, must be accepted as a legitimate form of the language rather than as strayed or substandard: ‘the New Englishes should be considered in their own right, and not in terms of their differences from a standard variety’. She (ibid: 92) believes that due to the ratio of L1 to L2 English users around the world, with L2 English users far outweighing L1

English users, and the continued strengthening of the economy in the East, EIC will become far more ‘international’ in nature and less influenced by any L1 variety. Graddol (2006: 84) asserts that the question is no longer which native speaker (NS) variety should provide a model for EIL. He (ibid) notes that texts which record language for reference and instruction, such as dictionaries and grammar books, are moving away from referring to any one L1 model variety as sole evidence of the language as it is used by its speakers.

‘Not only has English become international in the last half of the century, but scholarship about English has also become international: the ownership of an interest in English has become international. We are no longer a language community which is associated with a national community or even with a family of nations such as the Commonwealth aspired to be. We are an international community’

(Brumfit, 1995: 16).

Brumfit’s comment implies that EIC is well on its way to being a distinct form of language, whether accepted as legitimate by L1 English users or not. If this is the case, the issue is no longer in the hands of L1 English users to decide what is or is not adequate – it is for the EIC community to decide, based on mutual intelligibility, negotiated by interlocutors themselves, depending on the context. Kachru (1986: 98) asserts that EIC standards differ from those of RP and GA, therefore implying that RP and GA are unsuitable as models for EIC instruction. This leads to the assertion that another model⁵¹, one which adequately serves the needs and desires of EIC users, must be established.

Due to alterations in grammar, lexis and phonology resulting from the internationalisation of the English language, Lee (2002: 1) believes it is necessary for such alterations to be investigated in terms of intelligibility: ‘it is important to

⁵¹ This could involve the promotion of accommodative strategies along with adoption of an ELF core.

examine what kinds of changes are occurring in the use of English today and how these changes may affect intelligibility'. The results from such an investigation should lead to some form of the language being codified, as a general model of EIC, to ensure intelligibility amongst its speakers. Jenkins (2000: 148) believes that EIC's main function is to ensure perceptive intelligibility for L2 users, as reception should take priority over production, since L2 English users are less competent in using contextual clues to process speech top-down, as L1 English users do. This implies then that EIC would be used more as a guide for accommodating L2 English listeners, as a tool to ensure greater intelligibility, rather than as a model for production. This would ensure that users of EIC have the freedom to use it or another variety of English, depending on their listeners.

Currently, the concept of EIC may be viewed negatively by some speakers of English. It is worth noting the parallel Kachru (1986) draws between such opinions and previously held views of other L1 varieties of English, which were perceived as somewhat deficient by some British English speakers:

'In several studies the distinctiveness of, for example, American, Australian, or Canadian Englishes has actually been claimed on the basis of such localized innovations. The reaction of the users of British English toward such variations and innovations was not always one of acceptance. Such innovations were considered signals of language decay, language corruption, or language death at the hands of those who were not in touch with the "real genius" of the language. Later, this attitude was extended to the English of non-native users'

(Kachru, 1986: 27).

As these L1 forms have come to be accepted as distinct varieties of the English language, it is possible that EIC will in turn be recognised as a legitimate variety of English. Jenkins (2003: 80) highlights the fact that a number of academics believe EIC is a unique form of English, as by its very nature, it has no L1 English users, since it is generally spoken by L2 users,

usually in the absence of L1 English speakers. If English for International Communication (EIC) is to be accepted by the wider community of English language speakers and academics, L1 English users may not view EIC as a sign of decay or corruption of the English language, since they cannot claim it as an L1 variety. It follows then that L1 English users should equip themselves with a knowledge of this variety if they wish to participate in EIC.

For the sake of this study, the term EIC⁵² - English for International Communication shall be used to refer to all varieties and uses of English in the world by both L1 and L2 users, while maintaining a politically neutral stance on this widespread adoption and adaptation of the language. The current work does not add anything further to this approach but it does define the term to be as inclusive as possible of all speakers (L1 and L2), all varieties (Inner Circle, Outer Circle and Expanding Circle), applications and contexts of use. The term 'English for International Communication' was originally used by Brumfit (1982) for a book title which also included an article by Widdowson (ibid) and which has in turn been used as an internationally-recognised award for proficiency in English – TOEIC – Test of English for International Communication.

1.8. Aspects of Pronunciation

Pronunciation is focussed on in this study (all five research questions in this study refer to speech, with particular reference to pronunciation) as previous studies point to it being the most important aspect in determining successful communication by a speaker, regardless of other aspects of language, such as grammar or use of

⁵² This term refers to how English is used rather than how it is structured. EIC can also be defined or indeed include English for Intercultural Communication.

vocabulary (Lam and Halliday, 2002, Celce-Murcia et al., 1996). Pronunciation may be defined as the production of sound in two senses:

- 1) The significant sound is used as part of a code of a particular language
- 2) The significant sound is used to achieve meaning in its context of use

(Dalton and Seidlhofer, 1994: 3).

Therefore, pronunciation is the production or reception of a particular sound that one uses to achieve meaning in discourse. It involves attention to the particular sounds of a language, such as vowels and consonants – phonemes (segmental aspects). This aspect of pronunciation is focussed on specifically in this study's research questions 2 and 3:

2. Is the speech slow-down facility effective in increasing the intelligibility of speakers' pronunciation?
3. Can a pronunciation training programme focused on individual subjects' problematic English phonemes increase their spoken intelligibility?

Generally, pronunciation also refers to aspects of speech beyond the level of individual sounds, such as stress, intonation and rhythm – suprasegmental aspects. Therefore, a broad definition of pronunciation includes both segmental and suprasegmental features.

'...pronunciation is responsible for intelligibility'

(Seidlhofer, 2001a: 56).

Intelligibility⁵³ is also affected by other speech phenomena, including allophones, assimilation and juncture phenomena. Allophones are sounds which are alternative means of saying or producing a phoneme (also termed a variant). According to Seidlhofer (ibid: 59) they are ‘non-distinctive and often depend on the sound environment’. For example, /p/ in the English phoneme inventory can have at least two allophones: produced with spread lips, e.g., *peel*, and produced with rounded lips, e.g., *pool* (Underhill, 1994: viii). This means that allophones can be difficult for L2 users to discriminate – both productively and receptively – and this can hinder intelligibility. Seidlhofer (2001a: 59) asserts that in order to successfully help learners of English with allophonic discrimination, English language teachers need to be accurately equipped with knowledge of articulation – how English sounds are produced.

Assimilation is an aspect of connected speech, which is naturally-produced, fluent speech. When words are produced in the stream of speech, the sounds at the end of some words can have an effect on the neighbouring sound(s) of the following word – the phoneme(s) of a word changes to become more similar or even identical due to the neighbouring sound, which is a result of inducing speed in natural speech, where the speaker moves his/her articulatory settings more efficiently and thereby is able to speak at a faster, smoother rate (Underhill, 1994: 60). This phenomenon is more commonly found at word boundaries, largely with consonants, and in rapid, informal speech, rather than in slow, carefully-produced speech (Underhill, 1994: 61, Roach, 2000: 138-9). For example, /d/ can change to /g/: ‘good girl’ /gʊd gɜːl/; /s/ can change to /ʃ/: ‘this shop’ /ðɪʃ ʃɒp/; and /t/ can change to /p/: ‘hit man’ /hɪt p mæn/

⁵³ See Chapter 2, section 1 for a detailed discussion of intelligibility.

(ibid: 60-1). While L1 English users have little or no problem with assimilatory features, L2 users can find rapid, fluent English speech unintelligible due to the altering effects of assimilation. Again, English language teachers can help learners by outlining the main kinds of assimilation in English, which has quite regular patterns.

Juncture phenomena are also a result of connected speech and occur at phonetic boundaries to demarcate grammatical units such as morphemes, words or clauses (ibid: 68, Crystal, 2003: 248). The boundary between two words is quite apparent to L1 English users but can be more difficult for L2 users. For example, when said at speed: 'grey tapes' and 'great apes' may sound the same to L2 users and thus hinder intelligibility. Teachers can draw L2 English students' attention to the features which can help them to correctly identify the intended phrase:

- 1) the reduction or extension of vowel sounds at either side of the juncture
- 2) the delayed or advanced articulation of consonants at either side
- 3) variations in the level of syllable stress at either side of the juncture
- 4) other allophonic phoneme variations at either side of the juncture (ibid).

Segmental Features: Consonants and Vowels

Segmentals or phonemes may be defined as 'the smallest sound that can make a difference in meaning' (Underhill, 2005: viii). Therefore, if in a word, one phoneme is changed for another, the word is altered - for example, *bin* changes to *fin* and to *chin*, if the first phoneme is changed from /b/ to /f/ to /tʃ/. In RP (see Chapter 2, Section 2.3.2), the main ELT pronunciation model, there are forty-four phonemes: twenty vowels (including eight diphthongs) and twenty-four consonants. The distinction

between vowels and consonant sounds are not easily defined scientifically. In general phonetics, they are distinguished according to how they are produced in the oral cavity and their auditory characteristics (IPA, 1999: 4). Vowels are produced without obstruction to the flow of air as it passes from the larynx to the lips (Roach, 2000: 10). Consonants are defined as sounds which are produced when the vocal tract is partially or fully closed (IPA, 1999: 6). This distinction is essential to the way phonemes are described in the framework underpinning the International Phonetic Alphabet – IPA (ibid) – to which this study refers in the pronunciation diagnosis and data analysis sections (see Chapter 4). However, there are some cases of uncertainty or disagreement, such as for the sounds /h/ and /w/ in English (Roach, 2000: 11). Both sounds are treated as consonants as they can precede vowels, even though they are produced without obstruction of the flow of air from the larynx to the lips (ibid). Therefore, the difference between vowels and consonants is not the manner in which they are produced, but their distribution (ibid). The IPA (1999: 6) points out that vowels act as syllable nuclei while consonants define the margins of syllables. On the IPA chart, consonants and vowels appear in separate sections according to the different techniques involved in their articulation, with a more open articulation for vowels and a more closed articulation for consonants (ibid: 6-7). Consonants are described in terms of place of articulation, such as bilabial (sound made by lower lip coming into contact with upper lip) and labiodental (lower lip making contact with top front teeth), and manner of articulation, such as plosive⁵⁴ and nasal⁵⁵ (ibid: 7-8). Pairs of consonants with the same place and manner of articulation are differentiated according to whether they are voiced (lenis) or voiceless (fortis), such as /p/ (fortis) /b/

⁵⁴ A stricture is formed (when two articulators move against one another so no air can escape the oral cavity), air is compressed behind it and then released under pressure causing an audible sound known as a plosive (Roach, 2000: 32).

⁵⁵ Air is released through the nose (Roach, 2000: 58).

(lenis), /k/ (fortis) /g/ (lenis) and /t/ (fortis) /d/ (lenis) (Roach, 2000: 35). Vowels are described in terms of an abstract ‘vowel space’ rather than place of articulation (IPA, 1999: 10). The four-sided space, termed a ‘vowel quadrilateral’, shows the position and activity of the tongue in the mouth in vowel production (ibid). Jenkins (2003: 45) notes that many difficulties experienced by L2 users of English are due to the English vowel system. This includes the fact that English has far more vowels than many other languages (20 in English compared with 5 in Spanish). English has a large number of diphthongs and widespread use of the mid central vowel schwa in English in unstressed syllables, despite spelling varieties.

1.9. The Context of This Research Thesis

The notion of an international form of English – EIC – which can be codified to ensure that all speakers, regardless of their variety of English or L1 background, can communicate intelligibly and effectively with one another is currently much debated by ELT theorists. Due to the English language’s ever-increasing importance and spread as the world’s main lingua franca, many varieties, both L1 and L2, have evolved. English is currently used by people from a wide range of language backgrounds, whose L1 and other factors⁵⁶ influences the type of English they speak and the pronunciation they use. Presently, L2 users of English far outnumber L1 users by as much as 4:1 (Kachru, 1996: 241). This can cause intelligibility problems when such users communicate in international and intranational settings. Previous studies by Derwing and Munro (Derwing and Munro, 1997, Munro and Derwing, 1995a, 1995b) indicate that in terms of successfully processing a speech signal, the most

⁵⁶ Other factors include one’s culture, community, social class and educational background.

important aspect is intelligibility, followed by comprehensibility and then accentedness⁵⁷. In the area of oral communication, the notion of a LFC has been presented as a suitable means to achieve the goal of intelligible communication between the world's different varieties of English speakers. This research is an investigation into whether a slow-down speech tool can increase the intelligibility of L2 users of English for EIC. This is undertaken as part of a much wider attempt by EL academics to investigate themes concerned with EIC, particularly in the area of speech intelligibility with particular reference to pronunciation, specifically segmentals. Segmentals are focussed on for a number of reasons – most previous pronunciation studies focus on suprasegmentals, so it was thought that the area of segmentals deserved more investigation. Also, because many L2 users process language bottom-up (see Chapter 3, section 3.5.2), segmentals are necessary for users to apply and identify for intelligible communication.

This study deals with two current and somewhat contentious issues in English Language Teaching (ELT) and research – EIC and LFC. The issue of intelligibility is also contentious in that it is very difficult to define comprehensively, but is done so here in a way that should satisfy the aims of this limited research. In this study, the notion of EIC is discussed in politically neutral terms, as currently there is no conclusive, comprehensive description of it. In fact, there is no agreement in the ELT community as to whether EIC is a legitimate linguistic concept or not⁵⁸. Perhaps instead of seeking a new model of English, all that is needed is to view ELT in a

⁵⁷ Accentedness refers to a particular accent being applied to speech which may indicate where a person is from, his/her social class or level of education and so forth (adapted from *Compact Oxford English Dictionary*, 2003).

⁵⁸ That is why in this thesis the term EIC is used to refer to an international variety of English.

different light. The pronunciation aspect of EL classes and the manner in which it is taught should be approached differently.

One of the first EL scholars to empirically assemble a ‘Common Core’ (a list of the characteristics of English pronunciation considered to be essential for global intelligibility) is Jenner (1989). In 1998, Macedo called for a global standard of intelligibility (1998: 6). Jenkins (2000: 95) calls for, ‘an international core for phonological intelligibility: a set of unifying features which, at the very least, has the potential to guarantee that pronunciation will not impede successful communication in EIL settings’. Although both Jenner (1989) and Jenkins (2000) advocate the notion of a core of phonological elements to increase mutual intelligibility, Jenner (*ibid*) mainly focuses on the L1 English listener, whereas Jenkins (*ibid*) is mainly concerned with L2-L2 English communication, as, she believes, it is far more likely that L2 users of English will communicate with other L2 users. Both these proposals along with others are presented in more detail in Chapter 2, section 2.2.

1.10. Conclusion

Chapter 1 has presented the current status of English in the world today and how that status has been achieved. It also discusses descriptive, ideological and pedagogical approaches to English and its teaching as a second or foreign language. The issues surrounding the international status of English and its pedagogical, social, psychological and other implications are covered in more detail in Chapters 2, 3 and 4. In addition, Chapter 1 focuses on aspects of English pronunciation, which is the main concern of the study. Chapter 2 presents and discusses the body of knowledge in

the area of English as an international language, focussing on pronunciation in particular. and pedagogical approaches to its teaching with particular reference to pronunciation. Chapter 3 presents conclusions from the body of knowledge and makes suggestions regarding the creation of a comprehensive pedagogic model for English pronunciation as it is currently used as a language for international communication. Chapter 4 outlines the data collection and analysis for the study's tests. Chapter 5 presents the research design and methodology for testing of the slow-down tool for speech receptive and productive purposes. Chapters 6 and 8 discusses the main findings of the research and how they relate to the existing literature referred to in this thesis, highlighting similarities and differences. Chapter 9 concludes the thesis with closing remarks and recommendations for further research.

CHAPTER 2: ENGLISH FOR INTERNATIONAL COMMUNICATION AND RESEARCH REVIEW

Chapter 1 introduced the topic of the study and indicated contentious issues concerning the internationalisation of the English language, specifically ownership and owners' rights. Chapter 2 presents and reviews past research and literature concerned with CALL, pronunciation pedagogy and ELT speech models as well as looking at past attempts at formulating a pronunciation core for EIC and whether this will be possible for ELT in the near future. This chapter will provide insights into matters which are central to ELT and in particular, pronunciation, given that English is now used for international communication amongst far more L2 users from an array of first language backgrounds and varieties of English than among L1 users. The findings from this chapter will help to inform the design of the tests as outlined in Chapter 5.

2.1. Speech Intelligibility

'The evidence suggests that speech intelligibility as a construct warrants re-examination in relation to the forces of globalisation ... in multilingual and multicultural contexts of global English, and the use of English as a lingua franca'

(Nair-Venugopal, 2003: 37).

Intelligibility is a complex notion encompassing many elements, such as accurate hearing, linguistic processing, language ability/level and context of use. The term intelligibility has different meanings for different people in different situations (Jenkins, 2000) and a precise definition of the term is still lacking in Applied Linguistics. Jenner (1989: 21) defines intelligibility as, 'what all native speakers of all

varieties have in common which enables them to communicate effectively with native speakers of varieties other than their own.’ This definition is quite vague and does not give any insight into particular speech features which enables a speaker to be more or less intelligible to a listener. In this study, part of Smith and Nelson’s (1985) narrower and more concrete definition of the term is adopted, which is that intelligibility refers to *word* recognition only. Where intelligibility is the main focus of enquiry in this study’s research questions (see research questions 2, 3 and 5 below), intelligibility refers to accurate word recognition through identification of phonemes:

2. Is the speech slow-down facility effective in increasing the intelligibility of speakers’ pronunciation?

3. Can a pronunciation training programme focused on individual subjects’ problematic English phonemes increase their spoken intelligibility?

5. Can experience with L2 accents affect how intelligible L1 and L2 users find such speech?

Morley (1991: 513) believes pronunciation is vital for intelligibility and is an essential component of communicative competence in the three fundamental aspects of language: pronunciation, vocabulary and grammar. He notes that many adult learners of English find pronunciation one of the most difficult aspects of the language to acquire and need explicit help from the teacher in this area (Morley, 1987). Pronunciation is the main linguistic area where mutual intelligibility is at stake, due

mainly perhaps to the influence of a language learner's mother tongue¹, which in the case of EIC, includes a wide range of diverse, mutually unintelligible languages (Jenkins, 2000: 1). Nair-Venugopal (2003) acknowledges that intelligibility has long been the focus of English language pedagogy mainly through prescribed norms or models. A lack of intelligibility means the speaker has difficulty in communicating and is seen as not being fluent or competent in the language. Nair-Venugopal (ibid) agrees with previous ELT scholars that due to the effects of globalisation, not only has English become the main world language, it has produced multiple forms and models of the language worldwide. Due to this fact, he notes that the concept of 'Global English', as proposed by Crystal (1997) may be unattainable as there is so much disparity in the different varieties of English which exist in the world today and makes the point that, 'variation is at the heart of the view of English as a global language' (Nair-Venugopal, 2003: 37). He (ibid) correctly acknowledges that this variation may lead to a lack of intelligibility between speakers of different varieties of English, which in turn challenges the usefulness and success of English as the world's leading lingua franca. The challenges of intelligibility may be tackled through exposure to and knowledge of other varieties of the language, some familiarity with different ethnic, cultural and social backgrounds, acceptance of new and different English varieties along with the ability to accommodate⁶⁰ a broad spectrum of varieties and pronunciation. Research question 5 seeks to clarify this by asking:

5. Can experience with L2 accents affect how intelligible L1 and L2 users find such speech?

⁵⁹ When a speaker's pronunciation of the L2 is influenced by his/her L1, this is a form of L1 interference.

⁶⁰ See Chapter 3, section 3.6.5 for a more detailed discussion of accommodation.

Nair-Venugopal (ibid) states that this problem is already being tackled and alleviated through global communication and entertainment systems, such as cable television, developments in transportation and technology and world travel. Bamgbose (1998: 11) believes intelligibility includes ‘recognizing an expression, knowing its meaning, and knowing what that meaning signifies in the sociocultural context’. Here, intelligibility includes aspects of culture and context. When presenting the theoretical background to the notion of intelligibility for communication, Cathford (1950) is seen as the main instigator (although he was strongly influenced by the work of Abercrombie (1949) in the endeavour to theorise intelligibility as a speech construct. He (in Nair-Venugopal, 2003: 38) stated that intelligibility is dependent on a minimum of four out of a possible five phases of a speech act:

- a) Selection (of words/utterances) – speaker-centred
- b) Execution (of words/utterances) – speaker-centred
- c) Transmission (of words/utterances) – from speaker to listener
- d) Identification/recognition (of words/utterances) – listener-centred
- e) Interpretation/inference – is dependent on the listener’s response being in line with the speaker’s intended message – listener-centred.

The concept of intelligibility has greatly been affected by worldwide mass migration, a huge growth in the number of people using English and the development of technologies and mass communication, all of which have altered the English language. Nair-Venugopal (ibid: 39) believes that intelligibility is now paramount in situations and contexts where English is used as a world language or lingua franca between speakers of different varieties and backgrounds and this is why it is focussed on specifically in 3 of the 5 research questions in this study (see Research Questions 2, 3 and 5 in the earlier part of this section). Smith and Nelson (1985) believe intelligibility is negotiated between speaker and listener, with which Bamgbose

(1998) concurs by stating that both participants contribute to ‘the speech act and its interpretation’. Intelligibility is not one-sided – it is negotiated by both speaker and listener, so when a speaker is deemed unintelligible, it may be, at least in part, due to the listener’s inability to decode the message rather than solely the fault of the speaker. Smith and Nelson (1985) distinguish between intelligibility, comprehensibility and interpretability⁶¹ and define intelligibility as the recognition of words or utterances, which is echoed by Kenworthy (1987: 13), ‘[T]he more words a listener is able to identify accurately when said by a particular speaker, the more intelligible that speaker is.’ However, this again is slightly ambiguous, as there are many ways in which a listener can identify a word, namely through segmentals, suprasegmentals and repair strategies⁶². It must be noted that L2 users of English differ from L1 users in terms of what they find intelligible. L2 users may not share a mutual language or cultural background and therefore may be ‘less sure of the forms of the language, the typical syntactic structures, and the conventional vocabulary’ (Brown, 1990: 60). Jenkins (2000: 78) believes, therefore, that intelligibility refers specifically to the production and reception of phonological form⁶³. As this study focuses on segmental production and reception only, intelligibility in this study is in line with Jenkins in focusing on approximate phonological production as targeted in the phoneme pronunciation training programme (see Chapter 5) and this is reflected in the research questions 2 and 3:

⁶¹ Comprehensibility refers to the literal meaning of a word or utterance while interpretability refers to the implied meaning (by the user/speaker) of a word or utterance.

⁶² Repair strategies can be instigated by the speaker (‘self-initiated’), such as repetition, rephrasing, further elaboration or clarification, so the listener has a better grasp of what the speaker is talking about. Once the speaker notices that the listener did not hear or understand what was said, s/he may then repeat the utterance or say it in another way, using other words/phrases or grammar structures that s/he perceives the listener will better understand, aiding the listener in the communicative process. The listener can also prompt the speaker (‘other-initiated’) by asking the speaker echo questions (‘she lives where?’) or requesting repetition or clarification from the speaker (Crystal, 2003: 396).

⁶³ See Chapter 2, section 2.5.3, ‘Top-Down and Bottom-Up Processing’ for more on this topic.

2. Is the speech slow-down facility effective in increasing the intelligibility of speakers' pronunciation?
3. Can a pronunciation training programme focused on individual subjects' problematic English phonemes increase their spoken intelligibility?

However, because the study's subjects and four independent judges in Test 5 also rated the intelligibility of subjects' speech, intelligibility also refers to Kenworthy's (1987) definition. As intelligibility can be negotiated by both speaker and listener, certain factors can increase a listener's ability to decipher L2 users' English speech, such as the ability to employ contextual clues while listening, or more specifically familiarity with the speaker's (L1) accent (Kenworthy, 1987: 14). This is explored more fully through research questions 4 and 5:

4. Are there fewer problems for EIC users in understanding speakers with the same L1 background?
5. Can experience with L2 accents affect how intelligible L1 and L2 users find such speech?

These factors will be referred to again in the Results section (Chapter 6). Speech may be unintelligible due to L1 influences, especially L1 phoneme transfer or inability/difficulty in producing an English phoneme which is absent from the speaker's L1; sound substitutions which can lead to listener confusion, such as, 'sick

boys' or 'thick⁶⁴ boys'; omission of sounds; and use of incorrect word or sentence stress (ibid: 16).

Kenworthy (ibid: 20) believes the simplest way to assess intelligibility is to get people to listen to speakers and comment on whether they are easily understood or not. She (ibid) is of the opinion that results of these studies are usually in line with other more objective methods of assessment⁶⁵. She (ibid) notes that English language teachers are unreliable assessors, as they have been exposed to and are more familiar with many L2 users' accents, therefore finding them more intelligible than those who are not English teachers. According to Kenworthy (ibid: 20), 'teachers should not be used as judges of improvement in pronunciation', but rather 'listeners who have not had an abnormal amount of exposure to non-native speech nor any previous contact with the speakers being assessed'. She also states that spontaneous speech is preferable to reading aloud when obtaining a sample of speech, as 'studies have shown that learners tend to make more pronunciation errors when reading aloud than when speaking spontaneously, because the written forms of words may induce 'spelling pronunciations' or spelling interference, especially in words which have cognates in the learner's native language' (ibid: 21). Also, spontaneous speech is what the subjects will be engaging in outside of the classroom (ibid). These observations have influenced the experimental design of this study, such as the use of four independent judges who are non-language specialists who have not had a great deal of exposure to L2 English speech in the final test of this study, Test 5. In Test 5, the judges assess extracts of spontaneous speech (as well as extracts from the listen-and-repeat training

⁶⁴ Meaning 'stupid'

⁶⁵ While Kenworthy (1987) does not explicitly state which objective methods of assessment she is referring to here, she does refer to the study by Smith and Bisazza (1982) who assessed L2 (and L1) English-speaking subjects using the Michigan Test of Aural Comprehension – a forty-minute listening test in two parts.

programme) rather than that of subjects reading aloud. Some attempts at finding a ‘common core’ for English, concentrating on aspects necessary for speech intelligibility while easing the linguistic learning load for L2 English learners have been undertaken, such as work by Jenner (1989) and Jenkins (2000), which are discussed in more detail in Chapter 3, section 3.1.

2.2. Standard English (SE)

Standard English has been defined as,

‘the variety of the English language which is normally employed in writing and normally spoken by ‘educated’ speakers of the language. It is also, of course, the variety of English that students of English as a Foreign or Second Language (EFL/ESL) are taught when receiving formal instruction. The term *Standard English* refers to grammar and vocabulary (*dialect*) but not to pronunciation (*accent*)’

(Trudgill and Hannah, 2002: 1)

Many authorities in ELT (Honey, 1997, Smith, 1992, Crystal, 1994, Widdowson, 1994, Trudgill, 1999, Strevens 1983), cite grammar, vocabulary and orthography as features of SE (Standard English) while omitting pronunciation. However, there are others who believe pronunciation is included in SE (Giles and Ryan, 1982). Modiano (1999a: 7) in particular defines SE as a lingua franca, a spoken standard including only ‘forms of language which are comprehensible to competent speakers (L1 and L2) of the language worldwide’. He (ibid: 10-11) concludes that accent is important and that SE cannot be spoken with anything other than a standard accent, which is widely intelligible to the majority of English speakers. Mugglestone (2003) demonstrates how pronunciation underwent a process of standardisation in the UK that is continuing. While she points out that ‘polite’ speech became known as ‘educated’ speech, which was held up as SE pronunciation, she questions this as an ideological

target. Bex (1993: 249) refers to SE as, ‘a powerful social myth rather than a describable linguistic variety’. There are, therefore, mixed views on whether there is a ‘standard pronunciation’ for English or not. One argument which could negate the existence or at least the influence of SE pronunciation is that it is not spoken by the majority of British or American L1 users. While SE can certainly be applied to written English, spoken English, particularly spontaneous speech, usually does not resemble citation form, therefore it is difficult to apply the same rules for written SE to spoken English (Milroy 1999:21, Trudgill 1999: 118). Jenkins (2003: 31) concludes that ‘there is a fair degree of consensus that accent is not involved in Standard English’.

SE is taken as a norm widely used in ELT and to which all other varieties of English are compared (although it is not associated with any particular region), providing ‘a unified means of communication’ and is what is generally thought to be ‘good English’ (Thorne, 1997: 91). Widdowson (2003) believes that because SE is presented to foreign learners of the language mainly through grammar books and dictionaries, it is prescriptive⁶⁶ rather than descriptive⁶⁷, presenting norms and rules to be conformed to. All other varieties of English are termed non-standard English, implying that they are either incorrect or simply different (Thorne, 1997: 91). The question of which model or models should be used for ELT is currently much debated by ELT theorists and scholars. SE is commonly thought of as the language forms used by L1 users, even though it is an idealisation rather than an empirically identifiable entity (Milroy 1999: 18). There are a number of problems associated with applying SE to EIC, particularly, the difficulty in defining exactly what SE is and whether this includes or should include pronunciation. SE seems to be inextricably linked with native

⁶⁶ Dictated by a set of rules outlining the ‘correct’ use of the language.

⁶⁷ Observations of how the language varies in different situations in speech and writing, depending on user and context.

speakerness. Preisler (1995) stresses that the ‘one’ language which characterises international encounters is ‘Standard English’ in its ‘two main varieties’, by which he clearly means British or American ‘native-speaker’ varieties. Both Honey (1991) and Quirk (1991) corroborate that SE - either the British or American variety – is seen as the chief language of international communication. Philipson (1992) traces SE’s position in the world as a superior language variety associated with highly educated members of the elite through the consolidating and imperialist powers of the US and Britain. This in turn has caused other varieties of English and other languages to be referred to as ‘vernacular’, ‘lingua franca’ or ‘international language’ (ibid). Brutt-Griffler (2002) disagrees with Philipson on how English achieved its superior status in the world – she believes this is due to resistance to imperialism rather than it being imposed. As argued in Chapter 1, section 1.6, if EIC should adopt SE as its target, it is very difficult to make a case for the ownership of and authority over English having passed from the ‘native speaker’. For ideological, social, political and other reasons, the British and American SE varieties are deemed questionable as the only suitable pronunciation models for ELT. Graddol (1997: 10) believes that because L2 users far outnumber L1 users of English, L1 models are no longer appropriate for EIC and are unsuitable considering the ‘global future’ of English.

Ahulu (1997: 19) seeks an expanded description of SE to address its international use: ‘[W]e need a concept of ‘Standard English’ or ‘correctness’ that reflects educational as well as social reality’ – a view Ahulu (ibid) postulates should be shared by both L1 and L2 English users. He (ibid: 21) argues for the broadening of the definition of SE to include ‘divergent’ L2 traits although he mainly refers to grammar rather than phonology. While he acknowledges the limitations of describing any ‘New Englishes’

without proper codification, which he believes should be presented as ‘modifications of the standard’ (ibid: 19) he also deems that the omission of L1 English norms from L2 English settings to be ‘unrealistic’ (ibid). According to Warschauer (2000: 515), English speakers in the Outer Circle are more likely to use their own variety of English and even Expanding Circle members seem to be discarding SE/L1 models. Lowenberg (2000) also notes that the norms accepted by educated L1 users are no longer applicable and that its use in countries where English has official status has created adaptations which are now ‘de facto’ norms. It has also been observed that L1 users of SE tend to move away from these norms when involved in EIC situations, to communicate more effectively and be understood by many more members of the EIC community (Warschauer, 2000: 515).

2.3. English Language Teaching (ELT) Pronunciation Models

‘there’s still a deeply-entrenched bias towards native-speaker English accents among both native and non-native English speaker, and it’s largely the result of prevailing ubiquitous standard native English ideology’

(Jenkins, 2007a: 10).

While there is no standard accent in ELT, Received Pronunciation⁶⁸ (RP) and General American⁶⁹ (GA) have traditionally been held as prestige accents and are thus the principal pronunciation models for ELT (Jenkins, 2005). The issue of a standard form of English is problematic for various reasons. First of all, there is no single variety of

⁶⁸ RP is associated with the South-East of England, the British public school system and traditional ‘BBC English’ (Crystal, 2003: 387-8).

⁶⁹ The majority accent of American English which is regionally neutral and used by most commentators on radio and tv – also referred to as Network English or Network Standard (Crystal, 2003: 198).

English – there are L1 varieties, such as British, American, Australian and Hiberno⁷⁰, and L2 varieties, such as Indian English and Chinese English. The US remains the world's only superpower and 70% of the world's L1 English speakers use AmE (American English), which for political, economic and social/cultural reasons, secures GA's position as a valid model for English language instruction (Modiano, 1999a: 7). However, RP remains a prestigious and widely used model in ELT, but its status as a leading model for pronunciation instruction is under scrutiny, for a number of reasons, which will be discussed in more detail below.

Outline of Received Pronunciation (RP)

Received Pronunciation is a prestige variety associated with government, the law, the financial world and the Church and its speakers are generally thought of as well-educated with a high social status (Thorne, 1997). In Montgomery's study (1996) RP speakers were rated higher than those with regional accents in terms of general competence, but were judged less favourably in terms of personal integrity and social attractiveness. In Timmis' study (2002), L2 students and teachers of English voiced a preference for L1-like pronunciation, although many saw this as an idealisation rather than a realistic, achievable goal. These results have also been echoed in other studies, such as Jenkins (2006b), Coggle (1993) and Giles et al (1990). Widdowson (2003) provides an interesting and insightful explanation into why RP is held by many in the ELT profession as the main standard pronunciation model for English language instruction. One motive is to, 'retain exclusive rights to a profitable formula and prevent other people from exploiting it to their own commercial advantage' (ibid: 36).

⁷⁰ The term for the variety of English in Ireland.

By doing so, the British maintain their status in the world as the proprietors of 'proper' English, which ensures plenty of business for British English language schools and institutions and British produced ELT materials and literature. Another reason is 'quality assurance' which Widdowson (ibid) explains by referring to well-known brands, such as Coca-Cola, which is seen to be the best quality cola, while all others are inferior to it. In the same way, he argues that the promotion of British English as 'a guarantee of quality' ensures that it will be widely respected and sought after throughout the world while maintaining standards of 'an exclusive quality' guaranteeing, 'clear communication and ... intelligibility' (ibid). For the English language to disperse into a number of differing varieties does not allow international communication easily unless these differences can be traced back to 'the stable centre of the standard'. By standardising British English, it maintains its forms and prevents its deterioration and decline, which Widdowson (ibid) believes is somewhat 'chauvinistic' and that the other countries where English is the L1, notably those in Kachru's Inner Circle, should also be referred to as owners of the English language, allowing them the same rights to the language as British speakers. Some ELT practitioners are loath to discard RP and GA and as yet, there is no widely accepted replacement as a suitable pronunciation model.

Disadvantages of RP as a Pronunciation Model for ELT

Walker (2002: 2) and Brown (1991) highlight the fact that RP is quite unintelligible, even to L1 English speakers. Walker (ibid) states that RP is difficult for L2 users to adopt because of its larger vowel system and greater number of diphthongs. He also asserts that while RP is a prestige accent, it can arouse hostility or dislike in others, a

view which has been echoed in Montgomery's (1996) study⁷¹. Jenkins (2003) documents features of RP which, in her view, further prove its unsuitability as a model due its difficulty for L2 English users to acquire, such as its large amount of diphthongs and non-rhotic 'r', complicated word stress rules, lack of cohesion between pronunciation and spelling and wide-ranging use of weak forms. Its association with the English public system and social elite does not reflect the life of the average British person and Jenkins (2003: 125) feels it is, 'more of an embarrassment than an advantage in many parts of the world, including Britain'. Another argument made against the use of RP as a suitable and valid English pronunciation model is that it is demanding for learners to attain both productively and receptively (Brown, 1991). Modiano (1999a: 8-9) believes RP is not a suitable pronunciation model for ELT because many phonological features 'are not used, recognised, or else are considered wrong by many people who speak other varieties'. He (ibid) also cites grammatical differences between BrE (British English) and AmE as further evidence of RP's unsuitability as an ELT model. He (ibid) proposes that L2 learners/users of English should be the ones to decide which models are suitable for educational purposes. Jenkins (2005: 151) makes the point that RP is used by only three per cent of the British population, making it a minority accent. It therefore cannot be thought of as a standard accent, in terms of being the norm and/or used extensively. Trudgill and Hannah (2002: 9) concur with this view and state that since RP is not the accent of the vast majority of L1 speakers in the UK, knowledge of it does not help L2 users when communicating with most L1 users when they arrive in Britain. Jenkins (2005: 151) points out that standard then actually refers to 'a level of pronunciation assumed by many to be better in some way than the others...is...a level

⁷¹ See previous paragraph for more details of Montgomery's (1996) study.

of excellence to be aspired to'. For Jenkins (ibid), this assumption is not acceptable as it merely reflects the value judgments of an elitist group. Trudgill and Hannah (2002) believe if L2 users adopt an RP accent, they could be viewed negatively by other speakers of English who deem them to be from the upper classes. The decision to adopt a standard accent such as RP should be made by both EFL/ESL teachers and learners (Jenkins, 2005: 151). L2 users can choose to use RP, depending on the situation or context of use, such as with other RP/L1 speakers, or to use their L1-accented English, as long as they are intelligible to their interlocutors. According to Jenkins (ibid), L2 users should be able to 'make an informed choice' about which accent to use, and this can largely be achieved through awareness-raising procedures such as questionnaires dealing with attitudes to L2 varieties of English and questions about accents. She mentions the oft-cited fact that L2 users of English far outweigh L1 users and believes that due to this fact, L1 norms are unsuitable as teaching models. She notes that challenges to L1 English norms with regard to replacing them with L2 norms have so far proved contentious (ibid).

Outline of General American (GA)

Over the course of the last two centuries, an accent of English developed in the United States which is known as General American (Collins and Mess, 2003: 6). Jenkins (2000: 204) notes that while RP has links with classism, GA has links with racism. RP is spoken by a very small minority of speakers in the UK compared with GA, which is spoken by about one third of Americans (Butcher, 2005:15). While GA as a teaching model is spreading around the world, mainly due to the economic and social influences of the US, Modiano (1999a: 8) believes that many in the US are

unconcerned about ELT standards outside of their own country and that compared with Britain, very few Americans are involved with ELT worldwide except for some notable academics in the field and that for most Americans, it is a 'non-issue'. This implies that GA's position is not likely to overtake that of RP's as the main pronunciation model in ELT unless L2 English users demand it. It remains to be seen whether this will occur, prompted mainly by the US's political power and social status worldwide, or whether L2 users will seek an alternative international pronunciation model.

Suitability of RP or GA as Pronunciation Models for ELT?

The advantages of choosing RP or GA as pronunciation models are obvious and well-documented. These include the fact that both varieties have been widely-studied, described and documented in great detail. They are both thoroughly applied in pronunciation course books and ELT materials while high-quality recordings are readily available for both teachers and learners of English (Walker, 2002). However, in an international context, their prestige can no longer be maintained or their use in ELT guaranteed. One of the most commonly cited problems with using either one of the two prestige accents as models for pronunciation is that most L2 English speakers will never be able to achieve an L1-like accent, despite their efforts. The chief point here is that not all aspects of an L1 user accent are necessary for intelligibility (ibid). Research question 3 goes some way to uncovering the importance of a specific feature of pronunciation by asking:

3. Can a pronunciation training programme focused on individual subjects' problematic English phonemes increase their spoken intelligibility?

Although suprasegmental features are deemed necessary for intelligibility, ironically, Walker (ibid) states they usually have the opposite effect. Another serious problem cited with using these prestige accents as pronunciation models is that it isolates the vast majority of English-language teachers, who do not have these accents. This leads to teachers feeling inadequate about teaching pronunciation as they are unable to mimic the ‘standard’ model⁷² (ibid). As Walker (ibid) points out, if L1ETs feel inadequate about adopting such accents, what does that imply for both L2ETs and learners of English? If the prestige models of GA and RP are abandoned, there is the question of what should replace them. Walker (ibid) believes the Lingua Franca Core (LFC), first proposed by Jenkins, is suitable, as it is ‘a list of nine priority areas which all students of English must be competent in, both receptively and productively, if they are to be understood anywhere in the world by any listener’⁷³. He (ibid) is of the opinion that if students are taught using the LFC, they will be intelligible to both L1 and L2 users of English, both in speaking and listening to English without reference to any standard accent, allowing learners to retain their national identity. This in turn legitimises L2ETs⁷⁴ as being suitable and aptly equipped to teach English pronunciation to learners of the language.

Turning to political reasons, many L2 English users of English do not aspire to a GA or RP accent due to their political views concerning the US or Britain. Walker (ibid) states that accent reflects identity. Therefore, while students are free to choose which, if any, English accent they wish to achieve, they should not be forced to adopt a particular accent (ibid). If the prestige models of GA and RP are abandoned, there is

⁷² See Chapter 3, section 3.4 for more on L1ETs vs L2ETs.

⁷³ See this chapter, section 2.4 for an outline of Jenkins’ LFC.

⁷⁴ L2ETs = L2 English-speaking English language teachers

the question of what should replace them. Some linguists believe that the main ELT pronunciation models should not be abandoned in favour of a more international paradigm and that learners should be motivated to achieve as high a level of standard pronunciation as possible (Randazzo, 2001, Hüttner-Kidd, 2000). Sobkowiak (2005: 141) in his highly critical paper opposing the LFC, states that despite the difficulty involved in achieving L1-like pronunciation, the LFC, 'will easily bring the ideal down into the gutter, with no check-point along the way'. However, he (ibid) fails to acknowledge that despite English being used as a lingua franca internationally for quite some time, it has not broken into a number of distinct languages as Latin did and there is no sign of this happening, despite the growing number of L2 varieties around the world. Sobkowiak (ibid) along with others (Trudgill, 2004) who do not wish to abandon the pronunciation models RP and GA, refuse to acknowledge that using RP and GA as pronunciation models in ELT environments has largely proved unsuccessful and that a more accessible model which can be shared by all users of English to increase intelligibility is a more viable and workable option. Any English users who are highly motivated and who wish to aspire to an RP or GA accent are free to do so, although it will not be the aim of the LFC pronunciation class. According to Jenkins (2000), many English language learners and teachers are uncomfortable with using RP or GA as models for pronunciation due to social, political and other reasons and Walker (2002) concurs with this view. Indeed, Jenkins (2003: 125) states 'learners are more frequently voicing a desire to preserve something of their L1 accent as a means of expressing their own identity in English rather than identifying it with its L1 English users'. She (2006) cites responses from L2 users as evidence for this. While Jenkins (2003) states that British and American teachers with regional accents are declining to use RP or GA pronunciation models for teaching, this argument

cannot be automatically extended to L2ETs. A number of studies, namely that of Timmis (2002), and articles, such as Lupiano's (2003), indicate that some L2 learners and teachers actually aspire to an L1 standard accent such as RP or GA. Jenkins (2000) is of the opinion that an L1 model should not be held as a goal of production for learners. Instead, it should be maintained as a reference point, to prevent L2 varieties from becoming so diverse that they are unintelligible to each other. She echoes the standpoint taken by Dalton and Seidlhofer (1994) when she asserts that a standardised pronunciation model, such as RP or GA, is invariably viewed in terms of what is deemed correct, and thus desirable. Jenkins (ibid) counteracts this stance by stating that such an accomplishment is neither realistic, as it disregards issues such as language use, nor desired, as many L2 English users wish to retain their L1 identities when communicating in English. Rajagopalan (1999 : 203) states, '[T]he view defended by Quirk (1990) that so-called standard English should be considered the sole pedagogically suitable model for teaching English all over the world, no longer finds much favourable resonance among scholars'. There has been a great interest and a lot of research undertaken in Applied Linguistics to determine a suitable pronunciation model for ELT to ensure all speakers of English can engage in EIC. Again, research question 3 goes some way to exploring this, investigating whether focussing on segmentals can improve an L2 speaker's intelligibility:

3. Can a pronunciation training programme focused on individual subjects' problematic English phonemes increase their spoken intelligibility?

2.4. Current Pronunciation Pedagogy

Levis (2005: 369) notes that the teaching of pronunciation has gone from the extremes of being the main aim, such as in the Reformed Method and Audiolingualism, to being 'mostly ignored', as in the Cognitive Movement and early Communicative Language Teaching. Levis (2005: 376) states, '[C]urrently, pronunciation theory, research, and practice are in transition'. There is a move away from viewing Received Pronunciation (RP) and General American (GA) as the only valid pronunciation models to use in the ELT classroom, while simultaneously there is much debate and empirical research into how they can be adequately replaced by a model which satisfies all the political, social, psychological and other issues associated with pronunciation and the internationalisation of the English language. While much of the recent literature on pronunciation in English Language Teaching (ELT) focuses on the international status of English, it will be interesting to note how much of this has actually been applied to current teaching practices. Levis (2005: 369) believes that pronunciation in ELT has tended to be, 'determined by ideology and intuition rather than research'. However, with much current research attempting to determine the most suitable methodology for teaching pronunciation from an international perspective, perhaps ELT pedagogical practices will change in the coming years. CALL is becoming more of a feature of pronunciation instruction, in ELT classrooms and in software packages (mainly for independent learning). Research questions 1-3 explore this issue further, through the application of the slow-down tool:

1. Is the speech slow-down facility effective in improving listeners' speech reception?

2. Is the speech slow-down facility effective in increasing the intelligibility of speakers' pronunciation?

3. Can a pronunciation training programme focused on individual subjects' problematic English phonemes increase their spoken intelligibility?

Focussed and effective teaching to improve pronunciation, specifically to increase intelligibility, is sought by many learners, teachers and academics in ELT (Rajadurai, 2007, Gibbon, 2005, Derwing and Munro, 2005, Widdowson, 2003, Jenkins, 2000, 1999, 1998, Walker, 2001b, Morley, 1991, Celce-Murcia, 1987). One problem with pronunciation teaching in ELT is that the written form of the language is usually used to represent spoken English, which for obvious reasons is ineffective and indeed erroneous (Cook, 2003: 285): the spoken language does not resemble citation form due mainly to connected speech features which alter the form of words through elision, assimilation and weak forms, and a speaker's particular accent. Also, the written form of the language does not show suprasegmental aspects of speech, such as intonation, rhythm and pitch, which signal the speaker's implied meaning, as well as the type of speech delivery – whether the speech was produced at speed or not, whether the speaker was male or female, and whether s/he was angry, surprised, and so forth. Pronunciation is usually presented alongside grammar and vocabulary in ELT coursebooks and is largely based on ENL⁷⁵ norms and models (Vaughan-Rees, 2006, Sifakis and Sougari, 2005, Jenkins, 2000, Brumfit, 1982). However, this was not always the case, and many textbooks simply overlooked pronunciation altogether,

⁷⁵ ENL = English as a Native Language

with one teacher's book in 1989 citing: 'the course book does not include any formal teaching of pronunciation. It is assumed that teachers can deal with any particular pronunciation problems as they arise' (cited in Vaughan-Rees, 2006: 26). This attitude was also extended to many teacher-training courses, so language teachers had little training or direction in how to deal with pronunciation problems as they arose in the English language classroom (Vaughan-Rees, 2006, Derwing and Munro, 2005). It has also been shown that the norms which some coursebooks present, particularly in the area of stress and intonation, are often misguided or cannot be neatly categorised and do not accurately present language as produced by its speakers (Levis, 1999, McCarthy, 1991). Derwing and Munro (2005: 380) state that a lot less pedagogic research has been done in pronunciation than other areas of language, such as grammar and vocabulary, and believe that much of the pedagogical practices and materials for pronunciation teaching are based on 'commonsense intuitive notions' rather than empirical research. However, this trend seems to be changing in light of the increased numbers of L2 speakers and teachers of English and with advances in pronunciation research methods and material design, including Computer Assisted Language Learning (CALL). It seems the increased attention now given to pronunciation in ELT is mainly a result of mass migration, international tourism and a huge growth in international communication in the last twenty years. Currently, pronunciation tends to be integrated with speaking and listening activities (Cauldwell, 2002), segmentals are taught alongside suprasegmentals with the prioritisation of suprasegmentals for increasing intelligibility⁷⁶, and in some cases, the examination of authentic speech by students for discourse analysis (Golombek and Jordan, 2005). Cook (2003: 281) highlights the fact that speaking like an L1 English user is usually

⁷⁶ Both Derwing and Munro (2005) and Walker (2002) note that while this belief is widely held in ELT, few studies undertaken actually support this assertion.

the goal of language teaching and is measured by how close the learner can approximate native speaker norms and that this is repeatedly reflected in ELT materials where the model is predominantly an L1 user of the language. According to Cook (ibid), one can only ever have one native language⁷⁷ – the one s/he is born with: therefore the goal of approximating to an L1 user in language learning is ‘unattainable’ and leads to frustration for both teachers and students.

Some attempts, however, have been made to ease the burden of learners of English and concentrate on essential elements of the language, which should be the focus of pedagogy. In the area of pronunciation, Jenner (1989) attempted to draw up guidelines for a ‘common core’ of pronunciation features common to all L1 speakers of all varieties of English which enables them to be intelligible to each other⁷⁸. This was followed up two years later by Bradford (1991), who assembled the ‘essential ingredients’ for a pronunciation programme. There were two versions:

- 1) For international classes with more than one L1
- 2) For monolingual Japanese L1-speaking classes

In 1984, Penny Ur (1984: 7) called for a pronunciation model to accurately reflect real speech as it is produced by English speakers outside of the ELT classroom, which is ‘informal...spontaneous and colloquial in character’. She states that learners of the language need to be able to develop the linguistic skills to adequately deal with this kind of speech (ibid). Two main criteria were focussed on in ELT pedagogy from around the late 1980s onwards:

⁷⁷ This could be debatable in the case of bilingual speakers

⁷⁸ See this chapter, section 2.2.4 for more on Jenner’s Core

- 1) The importance of suprasegmentals in pronunciation teaching was being promoted, so instruction in this area would be viewed as being equal in importance to segmentals
- 2) An attempt to reduce the learning load for students

(Vaughan-Rees, 2006).

The publication in 1992 of Cauldwell's, 'Of streams and bricks: new ways of presenting the spoken language to learners' was seen as a 'vital improvement' in understanding speech and how it should be approached pedagogically (Vaughan-Rees, 2006). While speech tended to be presented to learners as distinct units, or 'bricks' (citation forms) in the English language classroom, outside, in more natural speech contexts, learners were exposed to speech, 'as a stream' (ibid). This echoes the observation made by Ur back in 1984. With the application of computer technology in speech/pronunciation research, it was possible to access and analyse the smallest elements of authentic speech, which led Vaughan-Rees to state that '[G]uesswork and intuition would be things of the past' (ibid). This led to new developments for incorporating pronunciation into the mainstream ELT class by the middle of the 1990s (ibid). The next seminal piece of research into understanding pronunciation and how to simplify it for teaching purposes came with Jenkins in 1996 (and with her more seminal work in 2000). She re-thought Jenner's earlier work and drew up guidelines for a pronunciation core which determined how to address the most common pronunciation problems experienced by L2 users of English in order to increase their intelligibility for international communication. Jenkins (1996) therefore believed that L1-like pronunciation should not be the goal and that an L1-like accent could in fact hamper international communication. Jenner was simultaneously promoting

intelligibility as the main goal for international communicative purposes. This in turn led to a reassessment of how L2 teachers of English were being viewed in ELT, recognising that they were in fact more knowledgeable, more sympathetic and better equipped to teach pronunciation, as they had been through the experience of learning English as a foreign language themselves⁷⁹.

2.5. ELT and Technology – Computer Assisted Language Learning

Warschauer and Meskill (2000: 303-4) note that most of the language teaching theories in the last few decades were accompanied by teaching technologies, such as initial software programmes for drill practice, to teach grammar. Since the 1980s, there has been a shift in teaching methodology to a more communicative approach, ‘which emphasises student engagement in authentic, meaningful interaction’ (ibid). The communicative approach in language teaching has implications for CALL and has been tackled from two different angles (Warschauer and Meskill, ibid: 304):

- 1) Cognitive Approaches: based on the Chomskian idea that language learners form ‘a mental model of a language system’. Rather than this being due to repeated use, it is due to, ‘innate cognitive knowledge in interaction with comprehensible, meaningful language’ (ibid). CALL designed to support this approach, such as software for concordancing text-reconstruction and multimedia simulation, enables learners to access ‘language in meaningful context’, allowing each student to build their knowledge of the language individually.

⁷⁹ Walker (2001) cited in Vaughan-Rees (ibid)

- 2) Sociocognitive Approaches: based on the idea that language use incorporates social aspects. Learners should have the chance to use language as much as possible ‘for authentic social interaction’, to expose students to authentic language and to bridge the gap between classroom teaching and English as it is used outside the classroom, in more natural, authentic settings. Warschauer and Meskill (ibid: 305-6) cite the internet as a useful tool, for example, it enables the occurrence of computer-mediated communication which allows students to use ‘authentic target language’.

Almost two decades ago, there was very little use of computers for language instruction, apart from a few specialists (Warschauer and Healey, 1998: 57). Warschauer and Healy note that the wide application of the internet and multimedia networks has led to a significant increase in CALL (ibid).

CALL: Computer Assisted Language Learning

‘Technological and pedagogical developments now allow us to better integrate computer technology into the language learning process’

(Warschauer and Healey, 1998: 67).

In this age of technology, its central position in ELT is obvious in the proliferation of specialised conferences and organisations, such as EUROCALL, CALICO and WorldCALL, and journals, such as *Computer Assisted Language Learning* and *Language Learning and Technology* devoted to the subject. TEFL organisations have also prioritised CALL with special interest groups, such as IATEFL’s Learning Technologies SIG. With its importance in the field growing every year and the means

by which it can be incorporated into a language learning programme continuously diversifying and expanding through the use of podcasts, hand-held devices and so forth, CALL is a significant area of research and expansion in ELT. CALL has existed for over forty years incorporating three main phases, each with a distinct technology and pedagogy:

- 1) Behaviouristic CALL: based on the behaviourist learning approach, it was formulated in the 1950s and applied in the 1960s and 1970s and was widely adopted in the US (Warschauer and Healey, 1998: 57). It is sometimes thought of as a secondary element in the wider area of computer-assisted instruction. It involved repetitive drills – known as ‘drill-and-practice’ or, mockingly, as ‘drill-and-kill’ (ibid). The computer was used as a ‘mechanical tutor which never grew tired’ and enabled students to work independently at their own pace. The most widely-known system, PLATO, consisted of hardware operating from a central computer (mainframe) with separate terminals for individual use featuring a wide range of drills and grammar explanations with translation tests offered at a number of stages. It was surpassed by the advent of the PC (ibid).
- 2) Communicative CALL: Operated from the late 1970s to the early 1980s when the behaviouristic method was being questioned theoretically and pedagogically and then discarded, particularly with the advent of the PC (ibid). Communicative CALL was in line with cognitive theories that claimed, ‘learning was a process of discovery, expression, and development’ and employed PCs in class to promote the use of the target language as much as possible with implicit grammar instruction while encouraging the production of original utterances by students (ibid). It included text reconstruction

programmes so students could work out patterns of the target language and its meaning, and simulations, to encourage paired or group discussion and thus, discovery (ibid).

- 3) Integrative CALL: In the late 1980s and early 1990s, language theorists and practitioners sought to make language use in the classroom more authentic by applying it to social contexts and moving from a behaviouristic view to a more socio-cognitive one (ibid: 58). At the same time, behaviourist CALL was being criticised for using the computer for marginal language instruction rather than incorporating it more centrally (Kenning and Kenning, 1990 cited in Warschauer and Healey, 1998: 57-8). This method combines multimedia networked systems with the latest approach to language learning. This encourages authentic language use with skill work (notably, reading, writing, speaking and listening) by increasing the integration of computers in the language classroom. Students become more adept at applying various computer tools, including publishing, informational and communicative tools, during their language learning (ibid: 58).

Current CALL Practices and Research

‘At this point, what is most clear as a result of research is that students tend to enjoy using computers, and that we need much more work to identify the factors involved in using software effectively for language teaching. Teachers will continue to refine their techniques with CALL over time and, it is hoped, continue to contribute to research being done in the area’

(Warschauer and Healey, 1998: 62).

Contemporary CALL application reflects all three stages previously mentioned. The methodology adopted in the current study reflects the needs of teachers when using stand-alone CALL software and is mainly based on the recommendations of Warschauer and Healy (1998: 58-9). They (ibid) maintain that CALL can do the following:

- 1) enable access to authentic L1 models of the language
- 2) provide a language learning curriculum
- 3) undertake a needs assessment or diagnosis of students' problems
- 4) ascertain appropriate action to be taken and design practice activities within that skill area
- 5) record and evaluate students' work
- 6) be freely available at no cost to students

Indeed, during the 5 tests carried out in this study, CALL applications were used to achieve the 6 features as listed above. Some software packages that incorporate these criteria include: *Dynamic English* by DynEd (for EFL), *Ellis* by CALI (for EFL), *English Discoveries* by Berlitz and *Project Star* by Hartley (for US-based ESL users) (ibid: 59). However, the problem with these software packages is that they cannot be adapted and teachers are unable to customize the contents to incorporate the needs of their students (ibid). The slow-down is an adaptable tool which allows users to insert their own recordings and slow them down to any desired speed for whatever purpose.

Pronunciation in CALL

'Pronunciation work in particular has benefited from multimedia'

(Warschauer and Healey, 1998: 59).

The majority of pronunciation software packages now include voice recording and playback options, so users can record and compare their pronunciation with the model(s) on the programme. These include *Streaming Speech* (Cauldwell, 2003) and *Connected Speech* (2001, Protea Textware)⁸⁰. Many also include diagrams or video clips of the mouth or articulators to indicate how they should be positioned when making particular sounds in English. Others also include voice recognition technology so users can gauge how close their sound approximations are to the target language, such as *Connected Speech* (ibid). Feedback also takes the form of graphical representations of speech – the user can see her/his speech graphically overlaid onto that of a pronunciation model, to see how close s/he is to the target production.

Overview of CALL

‘Among the greatest potential benefits of computer-assisted language learning (CALL) are the opportunities it could provide for individualized instruction and for exposure to a wide range of voices and contexts through extended listening practice. At present, however, it seems that most available software is of the “one size fits all” variety, designed to appeal to a mass market. Moreover, much of the recent CALL software appears to exploit the impressive multimedia capabilities of computers, rather than present content that is linguistically and pedagogically sound’.

(Derwing and Munro, 2005: 390-1).

As can be seen from the previous sections, there are many advantages as well as disadvantages to CALL. However, with the development of technological applications and its ever-increasing use both in conventional classroom teaching and for independent language study, CALL is growing in terms of its function and use and its

⁸⁰ See Chapter 3, section 3.11 for a review of these two ELT pronunciation materials

effectiveness and reliability. ELT is embracing CALL in all areas of language learning and is continuing to seek advances in CALL applications which can increase language learning methods and ensure their success. The CALL application tested in this study is a novel speech tool which slows down speech without tonal distortion. When L2 users hear L1 speech they frequently complain that it is too fast for them to catch what is being said. The slow-down facility is seen as a possible means of helping L2 English users to catch those elements of speech which are produced at speed by L1 English users, namely features of connected speech. The following section looks at some previous investigations into the use of slow speech and its effects on L2 users' linguistic processing and reception skills.

Advantages and Disadvantages of CALL

The following two subsections detail the strengths (advantages) and weaknesses (disadvantages) of CALL, in order to offer a balanced view of CALL capability and input for language learning. This is followed by an overview of CALL, including a look at developments in CALL over its forty-year history.

Advantages of CALL

- 1) Access to authentic language
- 2) Can support teaching aims and methods (Warschauer and Healey, 1998: 58-9)
- 3) Can enable teacher autonomy, as teachers can include their own teaching aims and design lesson material and activities using CALL software, which the use of textbooks alone can hinder or prohibit (ibid: 58)

- 4) Can expose learners to the target language in a meaningful and authentic way in ‘new discourse communities’, such as computer-mediated communication (ibid)
- 5) Enables independent language exploration, independent language learning and independent language use inside and outside the classroom
- 6) Can respond to individual learner’s needs, interests and instructional styles (ibid)
- 7) Increases autonomy of students, which empowers them (ibid)
- 8) Can encourage use of all four skills: listening, reading, writing and speaking which are necessary for overall mastery of a language (ibid)
- 9) Provides more pedagogical and practical possibilities within the classroom
- 10) CALL tools provide access to social and cultural aspects of the language as well as linguistic (ibid)
- 11) Allows ongoing assessment of students’ language development by providing access to students’ online oral and written work with CALL technology (ibid: 59)
- 12) Enables tracking of individual students’ learning progress (ibid)
- 13) Extremely suitable for ‘data-driven learning’ as computers can store, manipulate and retrieve huge amounts of information (ibid: 61)
- 14) Enables time, geographical and linguistic barriers to be transcended (ibid: 63)
- 15) Supports active and engaging learning (ibid)
- 16) Enables students and teachers to communicate and work with each other without having to meet face-to-face – allowing privacy, collaborative learning and ease of communication

- 17) Can apply computer knowledge gained through use of CALL for wider educational, social or professional purposes (ibid: 61)
- 18) When sympathetically designed and implemented, CALL can reflect learners' needs and interests (ibid)
- 19) When CALL is applied successfully and without much difficulty on the part of users, it can motivate students
- 20) Prepares students for EIL communication by providing 'access to online environments of international communication' and connecting L1, bilingual, ESL and EFL programmes (ibid: 59 and 63).

Disadvantages of CALL

- 1) May be expensive to implement, operate and/or maintain
- 2) May not be effective for promoting or aiding language learning
- 3) When CALL is difficult to implement and/or unsuccessful for learning purposes, it can demotivate students
- 4) May be difficult for teachers or students to operate, particularly teachers who may not have received adequate training in technologies such as Wimba⁸¹ or other new online multimedia or software programmes
- 5) Arranging synchronous online communication can be difficult to schedule (Warschauer and Healey, 1998: 63)
- 6) Training in these technologies may be time-consuming, particularly if there are regular changes to the programmes (Warschauer, and Meskill, 2000: 308)

⁸¹ Wimba is a company which provides voice technology for online interactive language teaching and learning.

- 7) Can be difficult for teachers to plan their targeted class material or learning aims around the technology
- 8) If the technology fails, the teacher may have difficulty in delivering the planned class material in that teaching period
- 9) Burden can be placed on teachers to respond to student emails, voicemails and so forth

2.6. The Use of Slow vs. Slowed Speech in English Language Research

In this study, 'slow speech' is defined as sentences 'uttered as a sequence of readily identifiable words' (Brown, *ibid*: 3) – that is, words with very stable phonetic forms. This type of speech is referred to by Brown (1990) as 'slow colloquial', which she believes is necessary for teaching English listening skills as it allows a more precise description of a phoneme at some central point, which illustrates most pronunciations of the phoneme (*ibid*: 18). She (*ibid*: 3-4) also believes the English language teacher can provide a clear model and can ascertain if a learner is copying the model correctly. Therefore, according to Brown, slow colloquial is a teachable speech model. She (*ibid*: 4) recommends 'slow colloquial' as the only practical model for all but the very advanced students. In contrast, 'slowed speech', which is the result of applying the slow-down facility to authentic, naturally-produced speech, is defined as a sequence of words with an unstable but identifiable phonetic form due to the slowing down of the speech stream.

Brown (*ibid*) rightly points out that L1 English speech cannot be described as 'slipshod' or 'careless' as all members of an L1 speech community use and understand it (*ibid*: 4). She also points out that it is essential for students to learn to

understand an informal speech style, as this is what they will generally encounter in English-speaking environments,

‘Students whose education has been largely couched in slowly and deliberately spoken English are often shocked to find, when they enter a context in which native speakers are talking to each other, that they have considerable difficulty in understanding what is being said’ (ibid: 6).

Brown comments on the style of speech of newsreaders and public speakers (such as actors, teachers and lecturers), which has significantly changed in the last forty years or so to a more informal, conversational style (ibid: 6-7). This book is mainly concerned with this ‘public’ style of speech than private intimate speech (ibid: 7). The reasons for this are that within ‘private’ speech there are ‘stretches of obscure acoustic blur’ which can be difficult to segment (ibid: 7). Also, the ‘public’ style of speech is generally used to convey information (ibid: 7). Brown limits many of her examples of ‘informal’ speech to newsreaders and ‘highly educated men’, as she considers theirs the style of speech foreign students will typically encounter in lectures and conferences (ibid: 95). Unfortunately this means the book’s readership is limited to educated foreign speakers only, without catering to the much wider, and nowadays perhaps more general English language learner, who learns English not solely, if at all, to enter the educational realm in English, but to live and/or function in an international English-speaking context for a range of reasons, such as business, travel, work, entertainment and so on.

This study applies a slow-down speech tool to test its effectiveness in improving speech reception and production. The final detailed study – Test 5 – uses the slow-down facility as part of a self-access pronunciation training programme (using a booklet and audio CD), to determine whether the speech tool can increase the user’s pronunciation intelligibility for segmentals only. The Test Group’s training

programme incorporates three lessons for each targeted phoneme: the first is at a speed of 100%, as produced by the model speaker in the original recording, the second lesson is slowed to a speed of 80%, while the third lesson is the same as the first two except that it is slowed to a speed of 60% of the original. In this and other tests in this thesis using the slow-down tool, the speech is said to be ‘slowed speech’⁸² rather than ‘slow speech’⁸³ because the natural tonal features are maintained using the slow-down facility. Brown (1990: 39) noted a great difference between slow speech and naturally-produced speech, ‘[O]ne of the most striking differences between slow colloquial pronunciation and informal speech lies in the way the structure of syllables and words is simplified and altered in informal speech’. She (ibid: 76) continues by recognising the importance of enabling L2 users to recognise speech as it is naturally produced outside of the English language classroom, ‘[W]e must be careful to draw a distinction between the ‘idealised’, slow colloquial form and the phonetics facts of normal informal speech’. She does not offer any solutions to this dilemma, however. Cauldwell (1996: 521) notes that L2 language learners/users experience difficulties when processing naturally-produced fast speech and this problem has been exacerbated by the lack of training and suitably-designed teaching materials to address this issue in the English language classroom. He (ibid) promotes the use of authentic, fast speech and recommends that learners spend time with the actual speech signal in a language class. Generally, recordings are used by teachers as a means of introducing other classroom activities, such as testing comprehension or introducing

⁸² This is a sequence of words which become more readily identifiable from the speech stream when slowed. The structure of words are unstable – meaning they do not accurately reflect citation form – they include features of connected speech but, on close inspection, have an identifiable phonetic form.

⁸³ This is what Brown (1990) refers to as ‘slow colloquial’, where a sentence is produced as a sequence of readily identifiable words with a stable phonetic form, which does not reflect naturally-produced speech which includes elisions, assimilations, weak forms and other features of connected speech. While Brown (ibid) stated that this form was a suitable model for teaching, it does not reflect the true form of authentic speech and does not help learners to bridge the gap between the classroom and what they experience in the ‘real world’, which is naturally-produced, ‘messy’ (Cauldwell, 2002) speech.

skills work, such as a writing activity based on the theme or content of the recording. The slow-down speech tool is offered as a means of bridging the gap between the English language classroom and the real world, in terms of accessing authentic fast speech for analysis and practice for both speech reception and production.

The three research studies using slow/slowed speech did not have access to a speech slow-down tool but instead relied on less effective means to slow speech. This includes using a speech compressor-expander (Derwing and Munro's Study 2001 and Zhao's Study, 1997) to modify speech rates. The slow-down tool used in this study uses much more advanced technology to slow speech recordings (see Chapter 5, section 5.1 for an explanation of the slow-down technology) than a speech compressor-expander, which stretches or compresses the speech signal uniformly, without differentiating between length of vowels and length of consonants, which results in a poorer quality signal as vowels do not need to be stretched as much as consonant sounds when slowing speech. Another means of slowing speech outlined in Griffith's study (1990) was by increasing pause length, which results in speech sounding unnatural and adversely affect the authenticity of the speech, particularly in terms of natural speech production incorporating connected speech features and the tonal contours which indicate a speaker's implied meaning. Previous research studies in Applied Linguistics have incorporated slow speech to uncover answers/solutions to a variety of research questions. The following paragraphs outline these main studies and their findings.

Derwing and Munro's Study (2001) on Preferred Speaking Rates

This study tried to uncover the speaking rates⁸⁴ preferred by forty-two L2 listeners (L1 Mandarin speakers and speakers from various L1 backgrounds) which they rated on a 9-point scale from 1 = 'too slow', 5 = 'just right', to 9 = 'too fast' (Derwing and Munro, 2001: 328). The speakers used in this study were ten L1 Canadian English and ten L2 (L1 Mandarin) adult English speakers who read narratives from an ESL text designed for Intermediate level (to eliminate or at least reduce any possible comprehension problems). These were then modified/slowed to different speeds and played to L2 listeners. A speech compressor-expander was used to modify the recorded narratives to three speeds:

- 1) The 'Mean Mandarin' rate⁸⁵ (3.8 syllables per second)
- 2) The 'Mean English' rate⁸⁶ (4.9 syll/s⁸⁷)
- 3) A 'Reduced Rate' = 10% slower than the Mean Mandarin Rate (3.4 syll/s)

Subject listeners heard each extract four times – at the original speaker's speaking rate as well as the three modified speeds above. All extracts and speeds – 80 test items – were presented in a random order to listeners. The two listener groups differed in their favoured speech rates. The overall findings concluded that no great improvement in speech rate was noted when the speech rate was reduced, except for one Mandarin L1 listener and some listeners from the mixed L1 group. Derwing and Munro (ibid: 334) conclude, however, that 'it cannot be claimed categorically that a reduction in speech rate has a negative impact on listeners' impressions', as they noted in their study that listeners differed in their speech rate preferences. Another point to make about this

⁸⁴ Speaking rate is defined by Derwing and Munro (2001: 324) as 'a combination of articulation rate and pause time, usually expressed in syllables per second'.

⁸⁵ Based on the mean value of the Mandarin-L1 speakers' narratives in this study.

⁸⁶ Based on the mean value of the English-L1 speakers' narratives in this study.

⁸⁷ Syll/s = syllables per second

study is that all the L2 listeners had an advanced level of English, had all been speaking English for a minimum of 4 years and had lived in Canada from between 6 months and 15 years⁸⁸.

Zhao's Study (1997) on Effects of Speech Rate on Comprehension

Zhao (1997) found that when listeners control the speech rate themselves rather than having it determined by researchers, it results in increased comprehension. In this study, the speech rate was slowed using computer technology. In this test, listeners first heard twenty sentences and had to complete a multiple-choice test based on their comprehension of the sentences. The following three test items involved L2 English speaking subjects listening to longer passages made up of fifteen to twenty sentences instead of individual sentences, as in the first part of the test. After each passage, subjects again had to answer a multiple-choice test to gauge their comprehension. Subjects controlled the speech rates by using a 'slower' or 'faster' button on the computer screen and were told to select their preferred rate from a range of six options – the original speed (100%), one faster speed (75% speed of the original) and four slower speeds (125%, 150%, 175% and 200%). The passages were altered by expanding (to slow down) or compressing (to speed up) them on an analogue machine. Zhao (ibid) found that listeners' comprehension scores were better with slowed speech rates and he believed this was mainly due to the fact that subjects' determined their preferred speech rate themselves rather than the researcher or someone else deciding on the rate and this is why he believes Rader's (1991) and Derwing's (1990) studies failed to achieve similar results with slowed speech rates.

⁸⁸ The average time spent living in Canada for the L1 Mandarin listener-subjects was 1.7 years while it was 4.7 years for the L2 mixed language group.

Once a user interface is available for the slow-down facility, it will enable users to slow recorded speech signals to any desired speed.

Griffith's Study (1990) on Speech Rate and L2 Comprehension

Griffiths (1990) sought to uncover the speech rate (SR) which most benefited L2 comprehension by testing three pre-recorded oral passages (corresponding to the subjects' language level) at three speech rates of 200 wpm⁸⁹, 150 wpm and 100 wpm on a group of fifteen lower-intermediate L2 English-using adult subjects. He (ibid: 312-4) notes that SR and pause phenomena are two temporal variables worthy of investigation for L2 pedagogy because 'few L2 studies of temporal variables⁹⁰ have been conducted'. He (ibid) also believes that advantages gained from manipulation of SR for ELT needs further empirical research, adding that SR manipulation has not been included, for the most part, in ELT materials. This is the main reason why SR is investigated in this study in the area of pronunciation training with a view to increasing intelligible phoneme production - there has been little to no research done in this area of Applied Linguistics. Griffiths (ibid) looks at increasing SR with a view to maximising time (referred to as 'time benefits') in the ELT class. This differs from the aim of this study's final test – Test 5, where speech is slowed to determine whether this enables subjects to observe particular phoneme production in the flow of connected speech for more intelligible phoneme production. Therefore, the two studies differ in their research purposes and objectives.

⁸⁹ Wpm = words per minute

⁹⁰ Temporal variables include SR here.

In Griffiths' study, speech is slowed by increasing pause length, which differs from the way in which the speech tool tested in this study slows speech⁹¹. He (ibid) found that passages delivered at 'moderately fast speech rates'⁹² resulted in reduced comprehensibility while slow speech rates showed similar comprehension scores to those for average rates.

The methodology for the tests in this PhD study, particularly Test 5, is designed to address the gap in previous research in the area of slowed speech – to test L2 speakers' speech production in terms of intelligibility rather than comprehension. This is part of a wider investigation in Applied Linguistics into intelligibility for EIC. Another difference between this study and previous research is that a slow-down tool has been applied, which slows speech without tonal distortion to specific slowed speeds. Previous studies manipulated speech by various means, mainly using computer technology to expand or reduce speech signals, which in some cases led to distortions. Other studies slowed speech in a way that was subjective from the researcher's point of view, as in Derwing and Munro's (2001) study above, which determined mean rates based on the speakers in their particular study – which would not reflect the mean speaking rates for speakers in general.

⁹¹ See Chapter 3, section 3.8 for more details on the slow-down speech tool.

⁹² This author would like to stress that while this study categorises 200 wpm as a 'moderately fast speech rate', 150 wpm as 'average' speech rate and 100 wpm as 'slow speech rate, these definitions are subjective. There is no established or uniform agreement in Applied Linguistics regarding what is considered fast, average or slow speech rates as these differ from person to person.

2.7. Incorporating EIC in ELT

Approaches to ELT are being altered in many ways, not just how it is taught, for example, using CALL, but also what is being taught. There has been much research and debate in ELT circles over the last two or three decades into not only describing English in terms of how it is used internationally, such as through corpora studies including Seidlhofer's VOICE⁹³ but also attempts to identify norms or core characteristics which can be used for pedagogical purposes, to enable all speakers of English to communicate efficiently and effectively with one another. Some have sought to identify norms of local varieties of English for its teaching at local level (Bangbose, 1998) while others wish to establish standards for the teaching of English internationally (Jenkins, 2000, Seidlhofer, 2001). Widdowson (1982: 13) believes that categorising an international form of the language for pedagogical purposes is '[T]he best service we can offer the world' and can be achieved by identifying more effective pedagogical practices. He (ibid) refers specifically to speech, stating that '[T]his might indeed involve some deliberate reduction of linguistic complexity' (which he believes will only be temporary) in order to assist in the transition to a new teaching model. Widdowson (ibid) stresses that any reduction will not be taken as a means of altering the language. He (ibid) states such reductions will occur naturally in order 'to meet changing needs and circumstances'.

Cook (2003: 283) believes that corpora and other descriptions of L1 speech are not the main source of information for materials specifically designed for L2 users. Instead, he (ibid) holds that 'the language of L2 users' is what should be incorporated in ELT materials to adequately address the needs of L2 users. He (ibid) also advocates

⁹³ See the following paragraph for more on the VOICE project.

that ELT materials should reflect ‘favourable images’ of English use amongst L2 users rather than the typical scenarios portraying English used by L1 speakers only. He (ibid: 281) opines that the goal for L2 learners of English should be ‘successful L2 users’ rather than the ‘unattainable goal’ of L1 users which is the goal of traditional ELT methodology. There has been a lot of work in recent years in documenting L2 English use for the purposes of description and analysis, to inform ELT methodology and material design. Seidlhofer (2003) claims that work on EIC pragmatics is still in its initial phase and present empirical findings are based on a somewhat limited database. In order to achieve a more general description of the features of EIC, Seidlhofer (ibid) proposes the need for a broadly-based corpus. The Vienna VOICE Project, of which she is a founding member, is formulating a corpus of ELF spoken interactions for the purposes of research and pedagogy (www.univie.ac.at/voice/). The pedagogic purpose of VOICE is to inform linguistic descriptions of L2 speech (how L2 speakers actually use the language) and will also be accessible for linguistic research purposes (ibid). The focus of the compilation of this corpus is on face-to-face communication amongst quite competent L2 speakers of English from a wide range of L1 backgrounds whose primary and secondary education or socialisation did not occur in English (ibid). The corpus includes speech events such as private and public dialogues, private and public group discussions, casual conversations and one-to-one interviews (ibid).

Modiano (1999b: 23) believes that English language pedagogy should focus on ‘cross-cultural communicative ability’ and should be based on a descriptive model. The first measure to achieve this is to reduce or indeed remove the current focus of pedagogy based on near-native proficiency (ibid). If and when this occurs, Modiano

(ibid) states that, '[D]ismantling antiquated notions of prestige accents naturally follow'. This is central to English being viewed as an international language where the language is a 'public domain' belonging to all users (ibid). He (ibid) does stress however that the international variety/varieties of English must ensure comprehensible communication amongst a sizeable population of English users around the world. Modiano (ibid: 27) also maintains that for EIC instruction, teachers should cover 'international features' of English while offering other suitable language forms with explanations of how they are used in different speech communities. Jenkins (2007a: 9) echoes Modiano's views concerning EIC pedagogical practices when she maintains that ELF proponents seek to raise L2 users' awareness of English's role as a world language and students should have a choice of language targets which include both L1 and L2 varieties. She (ibid) does also state that 'it will be some time before reliable results are available' from current research into ELF practices so that a distinct ELF variety can be codified for pedagogical purposes, therefore, 'it will be some time before it's possible to even think about teaching ELF'.

Previous Proposals for EIC Pronunciation in ELT

For a number of years now there have been calls in ELT to approach the teaching and learning of English from an international perspective. However, a widely-accepted, effective, comprehensive method by which to apply it is still lacking in ELT. This section outlines some proposed means of approaching the teaching of English pronunciation from an international perspective. They generally tend to focus on the most important aspects of pronunciation which all speakers of English share and/or can produce to ensure intelligibility between all users of EIC, which are also designed

to be easier for L2 users to learn than the two main ELT pronunciation models – RP and GA⁹⁴.

Gimson's 'Rudimentary International Pronunciation' (RIP)

Gimson (1978: 45) is the first proponent of an international pronunciation of English and believes its development should be either an artificial construction or one which is formed by mixing existing forms, 'whose origin would have no obvious national or geographical origin', which would solve the problem of 'parochiality'. He also believes that GA could be a viable pronunciation model for EIC as he notes its use in reference materials is increasing, implying that its application and recognition in the world is surpassing that of RP (ibid). Gimson (ibid: 47) believes any model of EIC should meet three main criteria:

- i) it should be easy if not easier to learn than any 'natural' model
- ii) it should be easily intelligible to the vast majority of L1 users
- iii) it should enable the user to comprehend 'the major natural varieties of English'

It is obvious here that Gimson omits the importance of the chosen variety being intelligible to the vast majority of L2 users of English, who now far outnumber L1 users. However, his work was first published in 1978 when the L1 English user was still very much at the centre of ELT as the model for imitation and deemed the main interlocutor with which an L2 user would communicate. His proposed model is a precursor to Jenkins' (2000) in a number of ways. Gimson (ibid) advocates the retention of consonantal clusters, vowel quality and tonic stress while reducing the

⁹⁴See this chapter, section 3.1 for more on RP and GA pronunciation models

importance placed on intonation. However, he (ibid) differs from Jenkins' LFC in that he supports the use of weak forms, which, he believes, ensures more efficient communication. He (ibid) is also of the opinion that an EIC model should include correct word stress placement, which Jenkins dismisses as being necessary for intelligibility. Gimson's (ibid: 48) 'Rudimentary International Pronunciation' is one of the foremost works in the search for a simplified pronunciation model for ELT involving a reduced number of phonemes to be adopted along with a broader frame of reference for identifying phonemes in the English language system. Jenkins (2000) also advocates the use of postvocalic /r/ when used in orthography, as Gimson did. Jenkins' work (ibid) has followed up Gimson's (ibid: 52) recommendation, 'various simplified forms will need to be tested for both intelligibility and ease of learning'.

Quirk's 'Nuclear English'

Following on from Gimson came Quirk's 'Nuclear English', which also sought to simplify the language 'to constitute a nuclear medium for international use' (1982: 19). Quirk (ibid) stipulates that Nuclear English must include the following stipulations:

- 1) Compared with any variety of 'natural full English', it must be much simpler and faster to learn
- 2) It must enable its users to communicate satisfactorily - this must be the main outcome of ELT
- 3) It must enable its users to continue in further education, if necessary
- 4) It should contain commonly used lexical and grammatical aspects of 'natural English'

- 5) It must not refer to any specific cultural elements and no reference to literature or the arts so no users have any advantage over others when using it in international communication

Nuclear English (NE) is not a ‘natural language’ but should not have to compete in the education sector with foreign languages and as such, should be viewed as an ‘interdisciplinary subject’ similar to mathematics (ibid). It is a means of allowing all its users to be equal to each other, with no ‘stigma’, as some basilect⁹⁵ or pidginised⁹⁶ language forms can have. Its use is not restricted to particular speakers or contexts (ibid). Like Jenkins’ LFC, Quirk (ibid) believes NE should also be learned by L1 English users for international communication. He (ibid: 26) believes it should be open to all speakers in all contexts and situations of use. NE is mainly concerned with grammatical forms, such as the use of simplified, widely applied question tags (ibid).

Jenner’s ‘Common Core’

In 1989, Bryan Jenner published his ‘common core’ for pronunciation teaching⁹⁷. He (ibid) notes that while English pronunciation teaching is based on an ideal target of an L1 user, he recognises that some L2 learners fail to ever achieve this goal and that many do not wish to sound like an L1 user of English. He (ibid) attempts to formulate a pronunciation model which allows learners of English to retain their L1 accents, if they so wish, and to reduce the learning load by concentrating on elements of pronunciation which are achievable and which target spoken intelligibility. Jenner

⁹⁵ A sociolinguistics term used in the study of the development of creoles, refers to a linguistic variety (‘lect’) which differs the most from the prestige language (‘matrilect’ or ‘acrolect’) (Crystal, 2003: 49).

⁹⁶ A sociolinguistics term used to refer to a language whose structure has a notably reduced grammar, vocabulary and stylistic range and which has no L1 speakers – generally created when two communities with mutually unintelligible L1s wish to communicate together (Crystal, 2003: 354).

⁹⁷ *Speak Out!* 4, 1989: 2-4

(ibid) believes that since all native speakers, despite their variety of English or accent, are generally intelligible to most other L1 English speakers, there has to be a ‘common core’ of sounds which all speakers use and recognise. He attempts to uncover these core sounds to highlight them for English pronunciation teaching purposes, so that all learners of English can attain them to ensure their spoken intelligibility to all English speakers. He prioritises certain aspects of the ELT pronunciation-learning load, namely maintaining vowel quantity/length and all consonants but omitting aspiration⁹⁸ and rhoticity⁹⁹, retaining syllabic structure – closed with consonant clusters, distinguishing syllabic quantity between strong, weak and reduced syllables, upholding rules for English stress-timing and maintaining intonational features, such as prominence¹⁰⁰, tonic stress¹⁰¹ and pitch¹⁰² features (ibid: 3). He states that if the learning goal is an L1-like accent, a single L1 variety should be chosen as the pronunciation model and the prioritisation of pronunciation elements should be altered (ibid).

Jenkins’ ‘LFC’/‘Common Core’

Jenkins (1998) believes both Gimson’s and Quirk’s attempts at reducing the English pronunciation teaching load could not be successful as they both attempt to impose

⁹⁸The production of certain consonant sounds - /p, t, k/ - involves the compression of air in the oral cavity followed by an audible burst of noise when the air is released through the vocal chords to produce the consonant – this audible burst of noise at the post-release phase is known as aspiration (Roach, 2000: 34).

⁹⁹ When /r/ is pronounced following a vowel, such as *car* /kɑ[r]/ or *cart* /kɑ[r]t/, as produced in certain dialects or accents, such as Hiberno-English and Scots English (Crystal, 2003: 400).

¹⁰⁰ What enables stressed syllables to be perceived compared to unstressed syllables due to one or more of the following factors: the stressed syllables are produced louder, stronger, with a different vowel quality or at a different pitch from neighbouring syllables (Roach, 2000: 94-5).

¹⁰¹ The main stressed element (word) in a sentence which gives particular meaning to the statement as intended by the speaker (Crystal, 2003: 467).

¹⁰² Very similar to low- and high-pitched notes in music, every voiced syllable is produced in speech in a perceptual manner, giving prominence to a particular syllable produced at a pitch different from neighbouring syllables, which means that syllable is more stressed than others (Roach, 2000: 94).

their models in a top-down manner, failing to take the nature of language development into account, which, according to Jenkins, is unplanned and occurs bottom-up. Jenkins differs from Jenner in that she (Jenkins) does not believe the aim of pronunciation teaching is to increase speakers' intelligibility when they communicate with L1 English speakers. Instead, she focuses on L2:L2 English communication, as it reflects the reality of the majority of L2 users of English – they are far more likely to communicate in English with another L2 user rather than an L1 user of English. Jenkins (2000: 2) also includes some guidelines for receptive communication for L1 English users. The aim of the LFC is to determine a set of 'nuclear norms' (ibid). To date, she (Jenkins, 2003: 126-7) believes it is the most detailed work with the most empirical research into establishing a pronunciation core for EIC, ensuring all L2 speakers of English are mutually intelligible to each other. ELF should not be seen as reducing standards, according to Walker (IATEFL, 2005), rather, it should be viewed as a different set of standards to increase intelligibility.

In Jenkins' approach (1998: 121), she concentrates on 'the productive focus of pronunciation teaching on the three areas that appear to have the greatest influence on intelligibility' in EIC. These three areas are particular segmentals, nuclear stress and articulatory setting. Jenkins (ibid) states that knowledge and control of these areas facilitate and promote mutual intelligibility. She (2005: 146-7) produces evidence from her research to back up her claims made about communication, which she categorised into two forms of data – miscommunication data and accommodation data, the subjects being advanced L2 English users from a variety of L1s. The miscommunication data was used to note which differences from L1 pronunciation targets cause intelligibility problems when an L2 English user listens to another L2

user from another L1 background. She (ibid) presents her findings in a table, comparing EFL pronunciation targets with her ELF (LFC) targets. The ELF targets are shown below:

1. **Consonants:** all consonantal sounds except /ʒ/, /ʒ/ and /ə/. Use of rhotic /r/ as only variety of /r/ sound and of intervocalic /t/ only
2. **Phonetic Requirements:** aspiration after /p/, /t/ and /k/ and maintenance of appropriate vowel length before voiced/voiceless consonants
3. **Consonant Clusters:** use word initially and word medially
4. **Vowel Quantity:** Use long-short contrast
5. **Vowel quality:** L2 (consistent) regional qualities acceptable
6. **Weak Forms:** unnecessary for intelligibility
7. **Features of Connected Speech:** unnecessary or inconsequential
8. **Stress-timed Rhythm:** does not exist
9. **Word Stress:** unnecessary and can also reduce flexibility
10. **Pitch Movement:** unteachable; incorrectly linked to L1 attitudes and grammar
11. **Nuclear (tonic) Stress:** critical for intelligibility

Jenkins (2005: 147) believes the LFC is much more relevant to ELF communication than mimicking an L1 accent and that it 'legitimises' L2 English accents. By adopting the core items of the LFC, Jenkins (ibid) concludes that L2 English users are given the same sociolinguistic rights as L1 users, by maintaining features of their L2 accents. She (ibid) admits that further research is needed into EIC interactions (between L2 users of different L1s) before the LFC can be seen as 'definitive'. Jenkins (ibid) believes the future of ELF, pronunciation in particular, is unpredictable. However, the large number of publications in the area ensures that it is gaining in recognition and

influence amongst academics. If it is accepted, English pronunciation teaching will be more in line with the socio-political view of World Englishes expressed in numerous publications. Jenkins (ibid) expresses her hope that teachers, academics and publishers will accept ELF, which will enable it to be included in ELT theories, materials and curricula.

Jenkins is of the opinion that the only way this model can be adopted successfully in ELT is if it is incorporated in teacher-training courses – for both L1ETs¹⁰³ and L2ETs¹⁰⁴. Her approach has received mixed reactions and has not been widely adopted since the publication in 2000 of her book, *English as an International Language*. Some have criticised her demotion, if not rejection, of the prestige pronunciation models RP and GA (see Sobkowiak's criticisms in the following paragraphs).

There is a distinction between ideological and practical arguments for and against the LFC, although proponents of ELF do not always address these issues and if so, do not often do so satisfactorily. Sobkowiak (2005: abstract) in his paper, 'Why not LFC?' outlines a number of ideological and practical arguments against the LFC, which he states is 'marred by a number of faults and weaknesses'. His arguments include the following:

- 1) Philosophical: Sobkowiak (2005: 133) deduces that facts are not the sole basis for determining value judgements. He (ibid) stresses that just because there are far more L2 users of English than L1 users, it is not a valid enough reason to

¹⁰³ L1ETs – L1 English Language Teachers

¹⁰⁴ L2ETs = L2 English Language Teachers (see Chapter 3, section 4 for a more detailed discussion on L1 and L2ETs)

change ELT standards. While he does note that Seidlhofer¹⁰⁵ comments that the LFC does not have to be adopted and that people can choose any model or variety of English depending on their linguistic context and purpose, he fails to grasp that proponents of the LFC do not deem that it should replace standard ELT varieties altogether. Advocates of the LFC present it as an alternative ELT standard which guarantees learners more communicative success by focussing on necessary aspects to ensure spoken intelligibility. It also offers an alternative to those L2 English users who do not wish to obtain an L1-like accent (whether for political, social or other reasons) as well as those who will never attain one, despite their best efforts.

- 2) Logical: Sobkowiak (ibid: 134-5) believes the LFC contains errors of logical inference which can have 'serious practical consequences'. He (ibid) criticises Jenkins (2000) for surmising that the LFC should not be based on an RP speaker model due to RP's limited use amongst L1 English users. Sobkowiak (ibid: 135) believes this fact does not automatically lead to the appropriation of norms: 'Jenkins and others do not seem to understand that sheer statistics is not the only and sufficient criterion to regard some behaviour (linguistic or other) as an error'. He (ibid) believes Jenkins' premise lacks reference to empirical and normative criteria, which could overturn its perceived incorrectness. This point, while valid, is debatable. Sobkowiak (ibid) does not mention specifically which other criteria he is referring to. Further debate supported by sufficient empirical evidence is needed before this point can be satisfactorily negotiated.

¹⁰⁵ A well-known proponent of EIC and the LFC.

3) Ideological: here Sobkowiak (ibid: 136) refers to more informal linguistic matters connected with Jenkins' LFC, namely 'political correctness and scientific objectivity'. He (ibid) deems that the current debate in ELT concerning appropriate pronunciation models is 'an area of fierce and strongly emotional disputes' which is more concerned with issues of political correctness, sociolinguistics and psycholinguistics than with theory. Sobkowiak (ibid) refers to some of the sociolinguistic aspects of the LFC as 'journalism' which he believes should be replaced solely by scientifically-based argumentation. He (ibid) postulates that linguistic issues should not be mixed with political-ideological ones, such as the LFC-proposed view that L1 English users have no say in the development of the language internationally, as cited by Widdowson (1994 in Sobkowiak, ibid). Again, this point is somewhat debatable and in itself, is not sufficient to negate the validity of the LFC.

4) (Socio)linguistic: according to Sobkowiak (ibid: 137-8) the LFC is 'an artifice' due to 'a language-planning problem' and a 'logical misunderstanding' because language models should not be imposed, as language develops naturally in an unplanned manner through a bottom-up process. Just as Esperanto is an artificial language form with no L1 users, Sobkowiak (ibid) believes EIL (of which the LFC is proposed as a central component) is similarly an artifice because, strictly speaking, it also does not have any L1 users. However, EIL and the LFC are not comparable to

Esperanto – they are not artifices. The LFC is formulated from examples of speech as it is naturally produced – by L2 users and also by L1 users.

Sobkowiak (ibid: 138-9) also cites the fact that many L2 users of English, particularly those from Europe, express a desire to obtain an L1-like accent to boost their self-image. Again, this point is debatable – without reference to empirical research or evidence, one cannot make a sweeping statement regarding the desires of all L2 users of English. He (ibid: 139) continues by citing English language teachers as ‘sympathetic listeners’ (Thompson, 1991 in Sobkowiak) and claims that L2 users have more difficulty with L2-accented English speech. However, L2 users can have just as much if not more difficulty with L1 English speech – depending on the interlocutor’s accent, willingness to accommodate the L2 user, and so forth.

Sobkowiak (ibid) deems it is essential for L2 English users to have a ‘high level of pronunciation’ which he believes should be based on a standardised, authentic L1 English speech model. The term ‘high level of pronunciation’ is somewhat subjective – for LFC proponents such as Jenkins, this means ‘intelligibility’, while for others such as Sobkowiak, this refers strictly to a standard L1 English speech model – again, this point is open to debate.

- 5) Pedagogical: As previously discussed, Sobkowiak (ibid: 140-1) is concerned that teaching standards are lowered by the proposition of reducing the linguistic load on L2 English learners by adopting the LFC, which he believes will ‘easily bring the ideal down into the gutter, with no check-point along the

way'. He (ibid: 140) believes simplifying or reducing pronunciation standards to be 'demotivating' and agrees with Randazzo (2001 cited in Sobkowiak) that EL teachers should avoid consciously deterring learners from the goal of L1-like appropriation. However, the LFC proposes to ensure all L2 users of English are intelligible in EIC interactions (as Jenkins notes many fall short of achieving an L1-like accent) and that any L2 users who wish to achieve L1-like pronunciation are free to do so. Sobkowiak (ibid) seems to overlook these points, which weaken his argument. The LFC is not proposed to completely replace current standard pronunciation models in ELT, merely to bridge the gap between what is realistic and achievable for the majority of L2 users as opposed to what is limited to a few highly-motivated, proficient L2 users. Sobkowiak (ibid: 142) does however present a valid argument concerning English language teachers' pronunciation. He (ibid) questions the ability of teachers to adequately teach English pronunciation if they themselves lack an L1-like accent which their students may adopt, if that is their wish. However, many L1ETs as well as L2ETs cannot and do not produce standard L1-like accents such as RP (including this author) but can use ELT materials which incorporate such accents for their students to access, and indeed mimic.

- 6) Psychological: Sobkowiak (ibid: 143) opines that L1-like pronunciation is 'an asset' to many L2 users, aside from just facilitating the communicative process between L2 users. He (ibid) believes the gains by such highly-motivated L2 users far outweigh the concerns of a speaker losing his/her identity. He (ibid: 144) states that during his entire career as an English language teacher in Poland, he has never come across a Polish learner of English who does not

wish to achieve L1-like English pronunciation. However, Sobkowiak falls into the trap yet again of over-generalising the desires and needs of all L2 users of English worldwide. Therefore, this point is again open to debate and is liable to differ between individual L2 users – depending on their communicative needs, context of use, and so forth.

Sobkowiak (ibid) continues by criticising LFC proponents for not undertaking empirical research into the extent of L2 users' fear of losing their L1 identity by adopting an L1-accent and proposes such an argument may be an attempt by LFC scholars 'to foster the lowering of pronunciation standards'. Jenkins' (2007b) more recent work is indeed an investigation into this area by interviewing L2 users on their views about attaining L1-like accents versus the LFC core. From this author's observations, it seems that Jenkins' interviews are flawed however, as interviewees are primed into accepting that the LFC is a more acceptable and practical model than a standard one such as RP or GA. Such subjective and intrusive research cannot be deemed wholly accurate or acceptable in terms of empirical standards and her findings, which she (ibid) reports as 'mixed', reflect this.

Another critic of Jenkins' work is Lynda Taylor (2006), who is involved in English language testing and assessment. She refers specifically to five areas discussed in Jenkins' (2006) paper which she clarifies from an English language tester's standpoint. The points discussed are presented below:

- 1) Attitudes and expectations of learners and teachers: Jenkins (ibid) criticises most internationally-accredited English exams for encouraging both learners and teachers to strive for L1-like proficiency, deeming anything less to be

undesirable and penalising it through the current English language examination system. Taylor (2006: 52) highlights the fact that learners' and teachers' attitudes and expectations vary, and they are all valid – even when there is a preference for L1 varieties. She seeks to make learners and teachers more aware of the diversity of the English language as it is used worldwide. She (ibid: 52) notes: “we must avoid acting as ‘liberators’ only to impose a new ‘bondage’”.

- 2) Role of L1 English speaker model: while in the past all language proficiency tests were based on ‘native speaker’ criteria, Taylor insists this is less so today (ibid). She (ibid) also asserts that the deficit view of linguistics has been abandoned in language assessment procedures and replaced by performance descriptors which instead concentrate on what a speaker can do, such as ALTE Can-Do Statements and the Common European Framework of Reference (ibid).
- 3) Focus on accuracy or ‘correctness’: as mentioned in the previous point, Taylor (ibid) notes that assessment criteria in speaking tests have moved away from L1 competence to a range of things that a speaker can do, such as appropriateness of language items, comprehensibility, coherence and so forth. Examiners can be trained and assessed on a regular basis to ensure that they consistently apply assessment criteria based on students’ language and communicative abilities rather than perceived deficiencies. In pronunciation assessments, the use of non-standard forms are only penalised when they impede communication (ibid). According to Taylor, Jenkins’ (2006) assertion that all English language tests are based on L1 criteria is therefore unfounded.

- 4) Relationship between testing and teaching/learning: Taylor (ibid: 54) notes that the effects of changes in testing on teaching and learning methodology and attitudes is more complex than previously thought, leading her to state that '[I]t may be naïve' to think that a major change in English language testing procedures would result in 'desired changes' in teaching and learning practices'. This point makes Jenkins' (2006) assertion for such changes ineffective and ungrounded. Taylor (ibid) also mentions the paired face-to-face format (two candidates and two examiners) introduced in the Cambridge ESOL speaking test as an exemplar of a means of adequately taking linguistic, socio-cognitive, pedagogic and other factors into account.
- 5) Treatment of accommodation in testing: Jenkins (2006) finds assessment of a speaker's ability to accommodate to be unsatisfactory in most internationally-accredited English language tests, and she believes most students are penalised rather than rewarded when they aptly use accommodation techniques. Taylor (ibid: 55) states that speakers are not to be penalised in such situations, as tests also reward candidates for communicative effectiveness and ability to interact along with their use of grammar, vocabulary and pronunciation.

Taylor (ibid) stresses that despite Jenkins' (2006) protestations that English language testing policies and practices largely refer to L1-speech norms, this is not the case. While it is doubted that Jenkins has carried out sufficient empirical research to support her evidence, her study can be taken to be impressionistic rather than complete.

2.8. A Pronunciation Model for EIC?

Traditionally, it is held that an L1 English model is necessary for pronunciation instruction in ELT, so learners will be intelligible to their interlocutors and vice versa:

[T]he form of English taught in an EFL country should be determined only by the degree in which it will enable non-native speakers to cope with the linguistic aspects of internationalism as it affects their own lives...This form should be 'Standard English' in its two major regional forms.

(Preisler, 1999: 263-4).

It also provides a uniform point of reference for speakers of other L1s communicating in English, ensuring they share some common ground and increasing spoken intelligibility. As RP and GA are the prestige pronunciation models in ELT, mainly due to their world image as bastions of the English language as well as their worldwide political and economic might, they are the obvious choice as standard models for pronunciation instruction. However, with the global spread of English and its application and use changing from communication between L2 English users and L1 English users to mostly interactions between L2 English users and English being learned and used more as a language for everyday general interaction amongst L2 English users than merely in formal communication, the adequacy of a standardised L1 model for the vast majority of L2 users in the world today is currently being questioned. Jenkins (2000: 203) believes 'English is an international language with all the sociolinguistic implications for its pronunciation that such a shift involves' and that EIC pronunciation pedagogy should include 'a consideration of the notion of standard accent and of the facts of accent variation'. She (ibid) continues by stating that because of such sociolinguistic and other implications, one should not require L2 English users to 'sound' British or American. If so, L2 users have the right to retain

their accents when speaking English, so long as they are intelligible to their interlocutors – research question 5 investigates one aspect of this:

5. Can experience with L2 accents affect how intelligible L1 and L2 users find such speech?

Abercrombie (1949) believes that it is not necessary for L2 English users to acquire an L1-like accent. He (ibid) believes the focus should be on attaining an intelligible pronunciation. Modiano (1999a: 10) believes that rather than placing restrictions on the language, an international variety of English would provide, ‘guidelines which facilitate both an erudite language as well as an English geared to accommodate international exchange’. He (ibid) does, however, note that this is more difficult for pronunciation guidelines than for grammar or lexis, as so many deviations in pronunciation are possible, ranging from comprehensible or intelligible to incomprehensible. In order to evaluate pronunciation, Modiano (ibid) believes standard English should comprise internationally intelligible features for L1 and proficient L2 English users. This excludes strong regional L1 or L2 accents or dialects as well as pidgins and creoles. Jenkins (2003) maintains the reason why the argument over which accent, if any, to use as a suitable pronunciation model has not been resolved is due to the unavailability of a suitable substitute.

Norrish (1999) believes the model of English to be taught depends on the context of the learners. Bowen (1999: 1) states, ‘[M]ost foreigner language learners would agree that the improvement of their pronunciation is a desirable and necessary objective’¹⁰⁶. This seems an obvious goal for most language learners, and studies such as Timmis’

¹⁰⁶ Bowen however does not clarify whether ‘improvement’ refers to L1 norms or not.

(2002) support this. The question remains: which pronunciation model is most desired by learners of English? Another question following on from this may be: which pronunciation model best serves the needs, desires and abilities of the majority of English language learners worldwide?

Many sociological studies concerning accent have shown that speakers tend to use the accent of the speech community which they identify with most, notably, the accent of the group of which they are members¹⁰⁷ (Labov, 1972). While varied accents of L1 English users tend to be accepted, simply because they are ‘native’, L2 English users’ accents tend to be viewed as foreign, incorrect and even incomprehensible. English language educators promote L1-like accent acquisition to induce intelligibility (McKay, 2000). Jenkins (2000) sees the resolution to this dilemma between intelligibility by L2 English users on the one hand and maintenance of identity through accent on the other by focusing on aspects which promote maximum intelligibility, including distinguishing between long and short vowels while focusing on particular core sounds and nuclear stress, which is necessary in English to convey meaning. Three of this study’s five research questions look specifically at the notion of intelligibility (with particular reference to segmentals), to explore this issue further and add to the body of knowledge in this area:

3. Can a pronunciation training programme focused on individual subjects’ problematic English phonemes increase their spoken intelligibility?
4. Are there fewer problems for English for International Communication (EIC) users in understanding speakers with the same L1 background?

¹⁰⁷ See this chapter, section 2.5.4.3 for more on issues pertaining to accent and identity.

5. Can experience with L2 accents affect how intelligible L1 and L2 users find such speech?

Jenkins (ibid) also deems it necessary to focus on articulatory settings¹⁰⁸, as this would help learners to obtain the core sounds as well as mastering nuclear stress. Jenkins (ibid) asserts that in order to ensure intelligible pronunciation for EIC, it is imperative that particular pronunciation features are identified to ensure mutual intelligibility between L2 English users. These pronunciation features are not necessarily the same as those which ensure intelligibility between L1 English users.

Jenkins (2005) goes on to present implications for ELT, mainly that pronunciation teaching needs to be changed to incorporate the needs of EIC users, who are far more likely to use English in communication with other L2 users than L1 users. It is this author's opinion that while old theories about pronunciation teaching are being rejected, there is nothing as yet to take their place and no new materials for teaching lingua franca/EIL are being published. At the moment, EFL/ESL teachers have to adapt such existing materials for local use – dictation and minimal pair activities are recommended for acquiring 'comfortable production of those core items not already in their (learners) repertoire' (ibid: 150), as are accommodation skills and exposure to a wide variety of L2 accents, to help learners understand other L2 English accents, which is deemed a necessary part of EIC. For such changes to occur, Jenkins (2005, 2000) believes teachers must be willing to adopt ELF practices – namely her LFC and other grammatical and linguistic elements uncovered through the research of

¹⁰⁸ Articulatory settings refer to the movements of the articulators (jaw, tongue, lips) to produce sounds.

Seidlhofer, Maurenan, Dewey, Jenkins and others currently investigating issues concerning EIC¹⁰⁹. For this to happen, the ELF approach – when (and if) it is fully empirically defined and codified must be included in teacher training programmes, particularly due to sociolinguistic and socio-psychological reasons (ibid).

Walker (2002) asks, ‘if we abandon RP, GA or indeed any other regional or national native speaker accent, what on earth do we put in its place?’ The question of which variety of English should serve as a suitable model for English language instruction is complicated and somewhat problematic, as there are various issues involved, notably which accent to use as a target, constant change of the language along with synchronic variation, the influence of other emerging economic powers, such as China (which could see English language learning being abandoned or at least reduced in favour of other languages) and the number of speakers of any particular variety and its geographical location. There are also other important issues to consider, such as those noted by Carter and Nunan (2001: 4), which include issues of personal and national identity and the ‘political and ideological baggage’ which L1 varieties of English carry for some L2 users.

McAllister (2001: 116) notes that, ‘most adult L2 learners will permanently speak the L2 with a foreign accent’ and that the term ‘accent’ implies to L1 English users that L2 users inaccurately produce English phonetic forms which L1 users can neither identify nor accept as L1 speech. Milroy (1994), Brown et al (1994)¹¹⁰ and Jenkins (2000: 26) amongst others, are of the opinion that Standard English, ‘represents an idealised abstraction’ which does not reflect the true nature of natural communication,

¹⁰⁹ See Chapter 1, section 1.5.4.

¹¹⁰ Here both Milroy and Brown are quoted in Jenkins (2000: 26).

which is varied and inconsistent, especially in speech, and, as Jenkins (2000: 54) notes, 'still more at the phonological level'. Regional L1 varieties are generally being more socially accepted¹¹¹ which means standard forms such as RP are no longer deemed a 'prerequisite to social status' (Thorne, 1997: 92). In EFL/ESL pronunciation teaching, the means by which L2 English language learners rid their English speech of L1 interference is called 'accent reduction'. 'Accent addition', where EFL/ESL learners add a number of accents to their repertoires and then choose which to use depending on the situation or interlocutor, is something Jenkins (2005) believes learners and teachers should focus on, particularly those who are learning English for international communication, although in reality, this seems rather idealistic and time-consuming.

McKay (2002: 1) observes that due to the status of English as an international language, its teaching and learning must be approached very differently from that of other foreign languages. Jenkins (2000: 4) holds that phonology and 'phonological attitudes' must be reviewed when seeking a form of international English. She (ibid: 227) postulates that in the future, L1 English-speaking children may have to study the LFC in secondary school as 'a compulsory component of their existing English studies', along with other foreign languages. Dalton and Seidlhofer (1994: 6) emphasise that it is essential for teachers of English to establish pronunciation models for guidance as a point of reference (which they refer to as 'a common pronunciation core') rather than for imitation. Walker (2002) believes that in the design of a suitable pronunciation model, other issues apart from the phonological need to be considered,

¹¹¹ This can be observed on British TV and radio where 'BBC English' (essentially RP) is widely being replaced by a variety of regional accents amongst programme presenters, including Manchester, Newcastle and Bristol.

namely sociological, psycholinguistic and political. Graddol (1997) is of the opinion that the ability to negotiate meaning will become a requirement for global citizens.

Brown (1990: 1) recognises that the teaching of the spoken form of language is given increasing attention both in research and in the teaching of pronunciation and listening comprehension. This is a crucial issue for both students and teachers, as teachers holding EFL certificates such as CELTA¹¹² generally have little training in phonetics, which in turn impinges on the teaching of pronunciation and listening comprehension (ibid). Language teachers can help their students to understand the foreign language by directing them to find their way around the sounds of the language. This is mainly achieved by assisting them in recognising the most important cues for meaning, which, Brown believes, involves considering the way English is typically spoken by L1 English users, which is the main aim of her book (ibid: 2). However, with changes in the position of English as an international language, the way BESs and L2 English users speak English will also have to be included in any work on the teaching and learning of the English language. Brown perhaps does not include such speakers due to the fact that this book first appeared in 1977, when English as an international language was receiving little pedagogic attention. However, with the second edition published in 1990, Brown should have updated her work more conclusively to include the more international status of English and repercussions for ELT. She (ibid: 4) points out that native speech cannot be described as ‘slipshod’ or ‘careless’, as all members of a group use and understand it. She (ibid) asserts that it is essential for students to learn to understand an informal speech style, as this is what they will generally encounter in English-speaking environments. She also criticises English

¹¹² CELTA - Certificate in English Language Teaching to Adults is a four-week intensive, internationally recognised English language teaching course awarded by the University of Cambridge Local Examinations Syndicate (UCLES).

language educational approaches, as they do not adequately prepare students to deal with the language as used outside of the classroom:

‘Students whose education has been largely couched in slowly and deliberately spoken English are often shocked to find, when they enter a context in which L1 English users are talking to each other, that they have considerable difficulty in understanding what is being said’

(Brown, 1990: 6).

This is in part due to the use of listening materials which do not accurately portray spoken language as produced by L1 and competent L2 users of the language, which includes features of connected speech, rather than the careful, inauthentic examples which are usually represented in ELT listening materials. One possible application of the slow-down tool in the English language classroom is to slow down authentic speech samples, so students can observe the means by which competent speakers produce fluent speech using connected speech features, such as elisions, assimilations and weak forms. Research questions 1, 2 and 3 investigate the effectiveness of the slow-down tool for increasing speech reception and production:

1. Is the speech slow-down facility effective in improving listeners’ speech reception?
2. Is the speech slow-down facility effective in increasing the intelligibility of speakers’ pronunciation?
3. Can a pronunciation training programme focused on individual subjects’ problematic English phonemes increase their spoken intelligibility?

In an online article (www.teachingenglish.org.uk/think/pron/global_english.shtml), Jenkins states that if L2 learners use English in international contexts with other L2

English users from different first language backgrounds, they should be given the choice of acquiring a pronunciation that is more relevant for EIC than traditional pronunciation syllabi offer. Up to now, the goal of pronunciation teaching has been to enable students to acquire an accent that is as close as possible to that of an L1 speaker. But for EIC, this is not the most intelligible accent and some of the non-core items may even make them less intelligible to another L2 English user (ibid). Jenkins (ibid) notes that L1 English users have different accents depending on where they were born and live and asks why L2 English users of an international language should not be allowed to have the same. She (ibid) is of the opinion that students should be given plenty of exposure in their pronunciation classrooms to other L2 accents of English so they can understand them more easily, even if a speaker has not yet managed to acquire the core features. For EIC, this is much more important than having classroom exposure to native speaker accents (ibid). Research question 5 investigates this more specifically:

5. Can experience with L2 accents affect how intelligible L1 and L2 users find such speech?

Jenkins (2000: 195) believes current pronunciation pedagogy needs to be overhauled – not only in the English language classroom but also on teacher-training courses (such as CELTA) and in academic research, as classroom techniques are strongly influenced by linguistic research and teacher training. This involves informing English language teachers about the LFC and how to apply it in their teaching work along with a justification for its relevance and use in increasing spoken intelligibility in EIC (ibid). Jenkins (ibid: 201-2) believes teachers need to expose their students to a wide variety of L2 accents for purposes of accommodation (again research question 5

explores this possibility), which she states 'should be mandatory' on higher level teacher-training courses such as DELTA, as sociolinguistic issues concerning L2 accents as natural variation rather than deviation from a 'norm' (namely RP or GA pronunciation models) should be addressed for the purposes of EIC. Jenkins (ibid: 227) also states that L1 English adults should learn the LFC in special classes designed to teach productive and receptive strategies for EIC. It seems improbable to this author that L1 English users will learn the LFC as part of an EIC programme in the near future. If and when L1 users will learn the LFC remains to be seen, although teaching L1 users accommodative strategies seems a more realistic goal than expecting them to learn discrete items of the LFC.

On the issue of assessing pronunciation in tests, Jenkins (ibid: 214) calls for it to be less subjective in terms of examiners' observations and biases and focus instead on speakers' aptitude in particular aspects of phonology and ability to accommodate interlocutors. For this to occur, Jenkins (ibid) outlines two necessary changes to pronunciation testing criteria:

- 1) An overhaul of testing descriptors to focus on core aspects instead of the current focus on aspects characteristic of an L1-like pronunciation. For this, Jenkins (ibid) states that examiners need to be retrained and must familiarise themselves with a wide range of L2 accents, in order to assess when an exam candidate is accommodating to his/her interlocutor.
- 2) Comprehensive objective criteria outlining pronunciation accomplishment with the main criterion being that candidates understand each other (L2:L2/EIC) instead of an examiner's subjective judgements of a candidate's pronunciation. Jenkins (ibid: 215) is aware that constructing a means of measuring this accurately is 'likely to prove extremely difficult'.

Modiano (1999a: 4) is of the opinion that L2 users should be allowed their 'linguistic rights' and therefore an international variety of English should be established to enable all users, both L1 and L2, 'an equal say in the definition and development of the tongue'. He (ibid) believes there should be one form of SE, 'based on a *descriptive* as opposed to a *prescriptive* model' and that it should be based on the language as used by 'proficient speakers of the language, whoever they may be'. Macedo (2001) feels there should be a global standard of intelligibility. He (ibid) concludes that models of English such as RP or GA should not be seen as goals for student production. Jenner's (1989) 'Common Core' (see Chapter 1, section 1.4.2) attempts to draw up a list of characteristics of English pronunciation considered to be essential for global intelligibility. Quirk (1985 cited in Davies, 1989: 458) believes a 'standard of standards' will transpire in the same way that national standards have arisen as a result of language users accommodating to each other. Crystal (1997: 13) envisages a variety which he terms 'World Standard Spoken English' which will be used by English speakers when communicating with people from different speech communities. This will go hand-in-hand with a speaker's own variety of English or indeed L1, so s/he code-switches from one variety or language to the other when the need arises. Medgyes (1999: 185) echoes the view held by Crystal that while an international form of English does not currently exist, it will in the future. Although both Jenner and Jenkins advocate the use of a core of sounds to increase mutual intelligibility for international communication, the difference is that Jenner focuses mainly on L2 to L1 interactions, whereas Jenkins (2000) is mainly concerned with L2 to L2 communication (this study aims to be more inclusive by looking at L2-L2, L2-L1, L1-L2 and L1-L1 interactions). This last point, however, cannot be taken to reflect the view of all L2 English users of English. In Timmis' (2002) study, L2

English Teachers (L2ETs) are slightly more in favour of conformity to L1 norms than L1 English Teachers (L1ETs). This survey (ibid) also shows that UK-based L1ETs are the least in favour of conformity to L1 norms, although the differences between the different groups (L1ETs and L2ETs) are not so great¹¹³. Modiano (1999a: 11) believes an international variety of English can be developed through a knowledge of the aspects of English which enable international communication as opposed to communication with ‘a geographically restricted audience’. He (ibid) states that this international variety can be taught ‘at educational institutions where Standard English is defined from an international perspective’. He (ibid) asserts that this will mainly come about through research which focuses on ‘learner expectations’ and ‘the communicative effectiveness of the educational standard’ as well as ‘sociological implications’ which are ascertained by focusing on how the language is used.

The large number of publications in the area of EIC ensures that it is gaining in recognition and influence amongst academics. If it is accepted, English pronunciation teaching will be more in line with the sociopolitical view of World Englishes expressed in many publications. Jenkins (2005) expresses her hope that teachers, academics and publishers will accept ELF, which will enable it to be included in EFL/ESL theories, materials and curricula. She (ibid) goes on to present implications for EFL/ESL teaching, mainly that pronunciation teaching needs to be changed to incorporate the needs of EIC users.

¹¹³ See Chapter 3, section 4 for more on Timmis’ (2002) study.

2.9. L1 English Teachers (L1ETs) vs L2 English Teachers (L2ETs)¹¹⁴

“Teachers’ views about pronunciation extend beyond the language classroom and are bound to reflect their beliefs about more general issues, such as their identity as teachers and users of English in an expanding-circle country, their understanding of pedagogic practice, and of relationships between knowledge and power, identity and communication”

(Sifakis and Sougari, 2005: 482).

Problems associated with the terms ‘native’ and ‘non-native’ have already been discussed in Chapter 1, section 1.6. The terms have also been applied to English language teachers, and indeed, continue to do so despite calls from some in ELT to alter this: ‘[I]t seems unfair, to say the least, to group into a *non-* category the vast majority of English teachers in the world’ (Suárez, 2000: 2). Reliable statistics show L2ETs are by far in the majority with around 90% of all English language teachers worldwide being L2 users of English (ibid). As already noted in this chapter, section 2.1, many L1 and L2 English language teachers currently feel they lack the necessary skills for adequately teaching pronunciation (Derwing and Munro, 2005, Breitkreutz, Derwing and Rossiter, 2002). L2ETs can feel even more inadequate about their ability to teach pronunciation because they are not native speakers (Lester, 1978). Approximately 80% of the world’s English language teachers and ELT experts are BESs¹¹⁵ (Canagarajah 1999a: 41). Canagarajah (ibid: 42) believes the centrality of the L1 speaker, which he terms the ‘native speaker fallacy’ is ‘both linguistically inaccurate and politically damaging’.¹¹⁶ It can also be deemed politically damaging if ELT requires L2 users to adopt a new identity that emulates L1 speakers of English,

¹¹⁴ Author’s own acronyms – L1ETs = L1 English Language Teachers; L2ETs = L2 English Language Teachers. The author preferred not to adopt the terms ‘native’ and ‘non-native teachers for reasons given in Chapter 1, section 1.2.

¹¹⁵ BESs = Bilingual English Speakers – term used by Jenkins (2000: 9) for both L1 English users who speak another language fluently and for L1 speakers of other languages for whom English is their L2 (fluent in English)

¹¹⁶ This has already been covered in detail in Chapter 1, section 1.6: ‘Ownership of English’.

principally of RP or GA speakers¹¹⁷. Canagarajah (ibid) also notes the persistent practice in ELT worldwide of the preference for hiring L1ETs, despite their lack of teaching credentials in some instances. The ‘native speaker fallacy’ (ibid) also promotes the idea that the L1ET is the expert in linguistic matters, which according to Canagarajah presents a ‘narrow definition of pedagogical expertise’ based on L1 pronunciation and intuition. For these reasons, many L2ETs feel they have to emulate an L1 accent in order to be credible English language teachers and be accepted by ELT institutions. McKay (2002) notes that as a consequence, many L2ETs focus more on the ability to achieve an L1-like accent than on their accomplishments as language teachers. Suárez (ibid) believes the legitimacy of L2ETs is not prioritised in ELT because it is a difficult issue which is ‘politely avoided or charmingly ‘neutralised’ by stating that both sides¹¹⁸ complement each other and can coexist in peace and harmony’. He (ibid) states the real reason for avoiding the issue is to avoid ‘embarrassing confrontations’ concerning extra-linguistic features, which could be contentious. It is this author’s assertion that the slow-down tool could be used by L2ETs to expose their students to authentic, L1 English speech while acting as mediators between the L1 varieties (particularly if they are the target for emulation) and the students’ L2 varieties.

Seidlhofer (1999), an L2 English speaker and a well-known scholar in Applied Linguistics, believes that in fact an L2ET is more adept at teaching ESL/EFL since s/he has already been through the process of learning English and can therefore identify with the students in terms of learning the language but also in terms of

¹¹⁷ The reasons for this have been discussed in Chapter 1, section 1.6 and Chapter 2, sections 2.3 and 2.4.

¹¹⁸ L1 and L2 English language teachers

making the language his/her own, to be used for their individual aims or uses. Rather than L2ETs being viewed as inferior to L1ETs, Seidlhofer (ibid: 238) is of the opinion that L2ETs' experiences with learning English are in fact 'an important resource' which she states should make L2ETs confident of their abilities as English language teachers rather than insecure. In a survey carried out by Tang (1997) during a teacher retraining course in Hong Kong aimed at uncovering perceptions of L1 and L2ETs, all of the respondents (all bilingual L2ETs) believed L1ETs to be superior in speaking, 92% stated L1ETs were better at pronunciation, and similar findings were reported for listening, vocabulary and reading with L1ETs being seen as far superior in these language areas than L2ETs. A similar finding was made by Seidlhofer (ibid) in her survey of Austrian L2ETs where 57% reported feelings of insecurity about their L2 English speaker status. Canagarajah (1999a: 84) notes that many L2ETs, 'feel compelled to spend undue time repairing their pronunciation or performing other cosmetic changes to sound native'. He (ibid) postulates that L2ETs' over-concern about their accents diverts their attention away from a more important issue, which is how to be a better language teacher on the whole, which he believes can in turn 'make them lose their grip on the instructional process or lack rapport with their students' which of course has more serious consequences for their teaching abilities than accent.

Over the years, there has been much debate in ELT concerning the superiority or ability of L1ETs over L2ETs (Homolová, 2004, Medgyes, 1992 and 1994). While many L1 and L2 English users feel they need to defend the status of L2ETs, some L2ETs themselves have deplored the idea of not aspiring to an L1-like accent and believe encouraging their students to aim for this is essential, even if it may not be

achieved or indeed achievable (Sobkowiak, 2005, Lupiano, 2003). One L2ET, Beatriz Lupiano (2003), commented in a prominent ELT publication¹¹⁹ that English language learners should at least aspire to L1-like pronunciation, as low expectations usually lead to poor results. She believes it is the teacher's role to help students to, 'become the best learners they can be'. This view is also propagated by many English language schools and associations, particularly in Expanding Circle countries, which advertise for 'native English speakers only' or 'native speakers preferred' (Homolová, 2004, Lin et al, 2002 in Golombek and Jordan, 2005). This author's experience of teaching English in Japan verifies these trends, where 'native' English speakers are mainly sought as language teachers, despite the fact that they can have no formal training as language teachers – simply being a 'native' speaker is enough to qualify one as an English language teacher. In some Expanding Circle countries, Caucasian teachers are preferred to proficient L2 users or even L1 non-Caucasian teachers. In the school where this author was employed in Japan, there were two L1ETs of Korean ethnicity – one Canadian and one from the US. Both confirmed to the author in personal communication that while the American English language school openly hired them because of their 'inner circle' nationality, they felt that the Japanese students seemed disappointed at having a teacher 'with an Asian face' as the students felt they were not getting a 'real native' English teacher. The Japanese manager of an English language school where this author worked while teaching in Japan confirmed that a number of students and parents of students expressed their unhappiness at having an English teacher of Asian ethnicity even when the teacher in question was from an L1 English-speaking country such as the US or Canada. A similar generalisation was noted by Golombek and Jordan (2005: 522) when a Taiwanese English language teacher-

¹¹⁹ *IATEFL Issues*, Oct-Nov 2003.

trainee in their study reported the same attitude to whiteness and L1 superiority in Taiwan, leading the authors to comment that

‘many parents, administrators, and students equate native speaker status with Whiteness and these double filters of racism and native speaker superiority make it even more difficult for a non-White L2 speaker of English to gain credibility as a teacher of English’.

This outmoded view is upheld through the hiring practices of English language schools and the attitudes of students by placing the ‘native English speaker’ and/or Caucasian as the ideal teacher in ELT contexts, particularly in Expanding Circle countries, such as Japan. This observation has been echoed by Simon-Maeda (2004), who reported on racial stereotyping and discrimination against two English language teachers in Japan - a Filipino woman and a black South African woman. Golombek and Jordan (2005: 514) point out that the overriding criteria for hiring suitable English language teachers in some countries (particularly those in the Expanding Circle), still focus on colour, ethnicity or accent type rather than how intelligible the teacher’s speech is, or indeed, how qualified they are for the job. They (ibid) ask, ‘[I]n light of these contradictory realities, how then do non-native English-speaking teachers assert their right to teach English as a second or foreign language or, more specifically, English pronunciation?’ Obviously these difficult, controversial and shameful issues, mainly racism and notions of superiority based on ‘nativeness’ must be addressed through further research and pedagogical approaches both in the ELT classroom and on teacher-training courses. The focus must be on teaching ability and establishing effective means for legitimising L2ETs rather than colour, ethnicity or L1.

Norton (2001) states that L2 users of a language can assert their legitimacy (in the L2) by believing in their right to speak. They can achieve this by creating their own form of discourse. This is a way in which L2ETs (and L2 users in general) can gain

legitimacy for their speech varieties (ibid). In 1978, Lester (1978: 14) stated that a means of legitimising L2ETs was to teach international English rather than a standard L1 variety, as then the teacher would be ‘teaching a language that belongs to him’, although no comprehensive international English variety is readily available for pedagogic purposes. A concrete means of legitimising L2ETs has yet to be documented and it involves many issues, some difficult and even controversial. Nevertheless, as L2ETs make up the majority of English language teachers around the world and as pedagogical practices are being questioned¹²⁰, this issue will have to be addressed more thoroughly and an agreed resolution reached with a pedagogical approach adapted for both English language teacher-training courses and ELT classes world-wide.

As Walker (2002) points out, if L1ETs feel uncomfortable about adopting standard English accents such as RP¹²¹, what does that imply for both L2ETs and L2 learners of English? He argues that it is not necessary to mimic one of the prestige English accents as the number of L2 English users in the world far outnumber L1 speakers by about 4:1 and growing amongst L2 users (ibid). This last point, however, cannot be taken to reflect the view of all L2 English users, as has already been witnessed by the opinion of an L2ET, Lupiano (2003)¹²². Studies have also found conflicting results – L2ETs/users themselves may or may not express a desire to produce English with an L1-like accent but do not see it as an achievable goal for their students, or indeed for themselves. In Timmis’ (2002) study on attitudes to pronunciation amongst L1ETs

¹²⁰ Pedagogical practices under question include the validity and usefulness of using a standard model of English for pronunciation instruction.

¹²¹ I have personally experienced negative reactions, incidentally from British L1 users who are not involved in ELT, over my suitability and/or ability to adequately teach pronunciation to L2 users of English.

¹²² See references to Lupiano (2003) earlier in this section.

and L2ETs¹²³, he found that ‘accented intelligibility was seen by teachers as the more *realistic* rather than the more *desirable* outcome. There were mixed responses noted amongst teachers’ to L1-like pronunciation, with some viewing it as empowering while others considering the possible disadvantages of this. Many teachers, 34% in all, (30% of L2ETs and 39% of L1ETs), cited ‘no preference’ between an L2-accented but intelligible accent or an L1-like accent, believing it to be a matter of student choice and also dependent on contexts in which they will use English. Much has also been documented about L2ETs and views concerning their ability as English language teachers compared with L1ETs (Cook, 2002, McKay, 2002, Braine, 1999, Gnutzmann, 1999). There is a call amongst many linguists (Graddol, 2006, Jenkins, 2000, Seidlhofer, 1996, 1998, 1999, Widdowson, 2003, 1994) for the interaction of theory and practice and for the views of L2 English users, both teachers and learners, to be taken into account in any discussion concerning ELT before any conclusions or recommendations are made. The values associated with the terms ‘native’ and ‘non-native’ must be replaced with more positive evaluations, such as Rampton’s (1990) ‘language expertise’, ‘language inheritance’ and ‘language affiliation’, Cook’s (1992, 1999) ‘multicompetence’ and Jenkins’ (2000) ‘BESs’, ‘NBESs’ and ‘MESs’¹²⁴. Jenkins (2000) and Walker (2002) believe that if L2 learners are taught using the LFC, they will be intelligible to all users of English¹²⁵ without reference to any standard accent, allowing learners to retain their national identity. This in turn would legitimise L2ETs as being suitable and aptly equipped to teach English pronunciation to learners of the language (Walker, 2002).

¹²³ Involving over 184 responses from 45 countries for the (L1ET and L2ET) teacher questionnaire

¹²⁴ BESs = bilingual English speakers; NBESs = non-bilingual English speakers; MESs = monolingual English speakers

¹²⁵ All users of English include both L1 and L2 users.

Medgyes (1992: 346-7) outlines the advantages of L2ETs, which are:

- i) Only L2ETS can be upheld as examples of successful learners of English and thus as the most suitable models for imitation in the language classroom.
- ii) L2ETS can give students more effective insight into learning strategies
- iii) L2ETS can offer more information about the complexities and so forth of the English language, which most L1 users are not even aware of, as they are rarely forced to consider them
- iv) L2ETS are therefore better prepared and equipped to anticipate and deal with students' difficulties with English
- v) L2ETS are also more empathetic to the needs and difficulties of their students¹²⁶
- vi) With monolingual student groups, L2ETS can benefit from sharing the students' L1.

The readings in Braine (1999) show that the distinction between L1ETs and L2ETs still exists within ELT, which upholds the value of L1ETs while also documenting incidences of discrimination against L2ETs, which this author has also documented from personal experience earlier in this section. McKay (2002: 44) believes that the true abilities, strengths and advantages of L2ETs can only be fully realised in ELT when the native speaker fallacy is abandoned. Much has also been documented about L2ETs and their views concerning their ability as English language teachers compared with L1ETs. McKay (2002) presents the results of two such studies – one by Tang and one by Seidlhofer. Both, particularly that of Tang (perhaps more due to cultural

¹²⁶ Although this can also be true of L1ETs if they have learned another language

differences), show that L2ETs tend to view themselves as being inferior to L1ETs in terms of their ability to teach English. While much has been written about the advantages of L2ETs over L1ETs, such as Medgyes (1992), one cannot ignore the predominantly negative opinions L2ETs express when compared with their native English speaking counterparts, particularly in the area of pronunciation. At the present time, it seems that the majority of English language teachers, particularly those in state-run schools in the Outer and Expanding Circles, are largely unaware of the main issues of EIC¹²⁷ and how to implement these into their teaching (Sifakis and Sougari, 2005: 471).

It is vital in all areas of ELT that L2ETs be held in as high esteem as L1ETs, or even higher, given their achievements in being proficient L2 users and thus, the finest examples of language learners that their students could model themselves on. However, Seidlhofer (2001: 61) has noted ‘linguistic schizophrenia’ amongst L2ETs in that they are open to accepting the principles of ELF on the one hand, while classifying their own variety of English as ‘inferior and subordinate’. However, ELT organisations such as IATEFL and TESOL are continually recognising the importance of L2ETs in English language education, planning and pedagogy and this is reflected in the organisations’ journal articles and conference themes and presentations. This ensures that the problems faced by L2ETs in ELT are starting to be recognised and addressed and will hopefully lead to a global acceptance and recognition of the importance of L2ETs and their contributions to ELT globally, not least by L2ETs themselves.

¹²⁷ These issues have already been discussed here: specifically that intelligible pronunciation should be the focus rather than following prescribed pronunciation standards; that English is an international language and thus belongs to everyone who uses it; and that L2ETs can be as qualified at teaching English as L1ETs, if not better.

2.10. Summary

Previous research and pedagogical approaches to ELT have by and large failed to adequately address the issue of pronunciation for EIC and its implications for ELT. Traditional teaching standards and models must be altered to reflect the use and needs of English not just by various L1 users but also by the far greater number of L2 users. The present study therefore offers the following points for consideration in the design of learning material for speech reception and production for the study subjects:

- a) Inclusion of L2 and non-standard L1 accents for receptive purposes
- b) Use of non-standard L1 model(s) as acceptable for increasing intelligibility in speech production
- c) Application of CALL technology – in this study this is exclusively the slow-down speech tool - to enable learner subjects to access authentic speech for receptive and productive purposes

This chapter presented current approaches to pronunciation in ELT and discussed the drawbacks or limitations of this due to the status of English as the world's foremost language for international communication. Alternative approaches to pronunciation in ELT have also been examined and the formation of a suitable and effective pronunciation model for EIC has been considered. This chapter also included an overview of CALL along with a review of previous research into the effects of speech rate on listeners and on comprehension. This CALL section, particularly the review of previous research, informed the design and methodology of this study's tests in Chapter 6. Chapter 3 delves deeper into issues concerned with pronunciation in

general and implications for ELT. It also presents the CALL technology – the slow-down facility – which is applied in Tests 2, 3 and 5 in Chapter 6, to determine its effectiveness for speech reception and production.

CHAPTER 3: ISSUES INVOLVED WITH THE TEACHING OF ENGLISH

PRONUNCIATION

‘The phenomenon of what we call a foreign accent is a complex aspect of language that affects speakers and listeners in both perception and production and, consequently, in social interaction...only the last few decades have seen a systematic effort to investigate the impact of L2 accented speech on communication’

(Derwing and Munro, 2005: 379-380).

3.1. Introduction

Chapter 1 considered the main issues concerning the status of English in the world today and the main ways in which ELT pedagogy is shaped and delivered. Chapter 2 examined current and past pronunciation pedagogical practices; outlined the issues concerned with Standard English and the two main ELT pronunciation models (RP and GA); highlighted the need for more exposure to a variety of L1 and L2 accents; questioned whether pedagogy for EIC pronunciation is possible or indeed imminent; and reviewed CALL methodology and developments while also comparing previous studies on slow speech and slowed speech, which is particularly relevant to this study which tests the application of a tool to slow down speech for English pronunciation learning purposes. Chapter 3 also deals with issues affecting the teaching of English language pronunciation.

3.2. Pronunciation Teaching: Teachability vs Learnability

A *teachable* pronunciation item is ‘clear-cut’ and the rules are generally observed in other languages also - for example, the difference between voiced and voiceless

consonants (Jenkins, 2000: 2). A *learnable* item refers to an aspect of pronunciation which is not easily achieved through classroom teaching but more likely to be acquired outside of the language classroom after a great deal of exposure, due to the complex nature of the item, such as pitch movement (ibid). Jenkins (ibid: 133) states that phonological universals¹²⁸ can provide strong evidence of the level of difficulty of particular aspects of pronunciation depending on their ‘degree of markedness’. The ‘degree of markedness’ (ibid) means how similar or different a particular L1 is to English, such as the amount and type of same or similar vowels in an L1 compared with English. The greater the phonological differences between the two languages, the greater the degree of markedness. Based on such phonological comparison, one can predict where L2 English learners will have more difficulty with the English phonological system. This can be used to inform English language teachers of phonological aspects which can be learned in the classroom and others which can only be acquired through continued exposure outside of class (ibid). Jenkins has used this information to inform her LFC¹²⁹ and has omitted any pronunciation features which she believes do not increase intelligibility and which are perceived as difficult for learners to attain in the classroom (ibid). Research question 4 investigates whether similarities (specifically phonological similarities) between interlocutors’ L1s lead to a lesser degree of markedness and therefore greater intelligibility:

4. Are there fewer problems for English for International Communication (EIC) users in understanding speakers with the same L1 background?

¹²⁸ Aspects of phonology amongst languages, such as number of vowel and consonant sounds in a language’s phonology or a language’s syllable structure, such as C+V (consonant + vowel).

¹²⁹ LFC = Lingua Franca Core – term by Jenkins (2000)

3.3. Other Issues Involved in Pronunciation Teaching

Some English language scholars have debated the validity or deficiency of L2 varieties of English. The ‘deficit’ view of linguistics assumes that non-standard elements of a language variety are akin to errors (Jenkins, 2000: 30). Quirk, in his 1990 article, ‘Language varieties and standard language’, proposes that L2 varieties of English include incorrect forms of L1 English because they have been imperfectly learned and are therefore unsuitable as teaching models (Quirk, 1990). He (ibid) believes that the distinction between L1 and L2 users is valid and has been supported by research, which shows that L1 and L2 users differ in their intuitions about language: for example, their views can differ in terms of what constitutes a grammatically correct sentence. For this reason, Quirk (ibid) states that L2 varieties should not be legitimised or institutionalised and L2 users must constantly keep up to date with L1 English. He (ibid) proposes Standard English (SE) as the variety to be learned by L2 users in order to improve career prospects and to ensure they are intelligible to other speakers of English. He refers to any disagreement over ELT standards in Expanding Circle countries as, ‘half-baked quackery’ proposed by teachers with little training and academics with minimal experience of teaching foreign languages. He (ibid) believes that just because a particular language form is widely used and recognised amongst L2 users of English, such as ‘informations’, it does not mean it is correct or acceptable and language teachers have a ‘duty’ to teach SE, not to question notions of correctness or incorrectness. He (ibid) asserts that because students pay a lot of money to study in English language schools around the world, they have a desire and, indeed, a right to learn English ‘precisely’ - by which he means SE, as it is a means of communicating internationally, and as such, is a powerful tool for both professional and social purposes. Davies (1991) and

Sobkowiak (2005) also identify the L1 user¹³⁰ as the ideal model speaker and thus, the ideal teacher of English in foreign/second language situations.

Kachru (1991) argues against Quirk's view of 'deficit linguistics', asserting that institutionalised L2 varieties of the language are acceptable because they are both practical and functional. In his opinion, it is not practical to expect English language teachers around the world to maintain constant observation of continuous changes in English. Institutionalised L2 varieties are functional because they reflect local norms and communicative strategies employed by their speakers for interaction, which, he observes, is primarily in intranational contexts. Kachru (ibid: 6) believes that just because L1 users can have 'radically different internalisations' from L2 users, it does not negate the validity of institutionalised L2 varieties, as these reflect the L2 culture and contexts of use, including multilingualism. According to Kachru (ibid), Quirk's beliefs are incorrect as they view the spread of English from a monolingual perspective, which does not accurately reflect the realities of multilingual societies and does not represent what occurs in such societies – linguistically, sociolinguistically, educationally, or pragmatically. In a later publication entitled, 'Six fallacies about users and uses of English', Kachru (1992) cites further reasons why Quirk's view of the role of L1 and L2 varieties in ELT is incorrect. These reasons revolve mainly around the assertion that L2 varieties reflect important communicative aspects of a particular L2 culture, such as issues of politeness, persuasion and phatic communication, which are likely to differ from SE/L1 varieties. Kachru (ibid) also disagrees with Quirk that L2 varieties are interlanguages in different stages of transition to becoming 'native-like'. Kachru (ibid) believes that L2 varieties are legitimate in their own right. He

¹³⁰Davies (1991) and Sobkowiak (2005) however do not indicate precisely which L1 user they are referring to (RP, GA or other speaker). Obviously an ideal model speaker would have to be a person who also has adequate linguistic and pedagogical training to teach English but what about the L1 teacher's accent or variety of English?

(ibid) also states that because such large numbers of L2 users are involved in ELT globally, from teaching to language planning and policy making, there should be a ‘paradigm shift’ from Inner Circle varieties being central in ELT to recognition and acceptance of the diversity of L2 varieties and all that entails, such as different notions about speech communities and L1 speakers of English. Essentially, Kachru (ibid) differs in his view of ‘deficit’ from Quirk. Kachru (ibid) prefers the term ‘difference’ and applies it to sociolinguistic concerns, such as issues of identity, culture and communication. Jenkins (2003: 109) notes that ELT worldwide continues to hold the deficit view of linguistics, pointing out that testing bodies still place maximum importance on proximity to L1 English norms and standards. She (ibid) believes one step in overcoming this is to clearly document those features of L2 varieties which are deemed as differences and those deemed as deficiencies¹³¹. Corpora can act as an equaliser and replace intuition for both L1 and L2 users of English by providing patterns of actual language use. Based on the ‘Transfer Claim’, the ‘Difficulty Claim’, contrastive language analysis¹³² and the teachability criteria (see previous section 3.2), it is possible to predict areas of pronunciation difficulty which L2 learners of English are likely to experience when communicating with both L1 and other L2 users.

Jenkins (2005) maintains that L2 users should be able to ‘make an informed choice’ about which accent to use and suggests this can chiefly be done through awareness-raising procedures such as questionnaires dealing with attitudes to L2 varieties of

¹³¹ This process is currently underway in the research of Seidlhofer et al with the Vienna VOICE Corpus, and Anna Mauranen with the corpus of English as a Lingua Franca in Academic Settings – ELFA - who are documenting grammatical and other linguistic patterns of L2 speech, which are deemed by the project members and ELF supporters such as Jenkins, Widdowson and Walker to be legitimate L2 forms of English, rather than errors. Martin Dewey in the UK is also undertaking research through corpus studies of L2 English speech to note differences from L1 varieties. These research projects aim to document differences in L2 speech in an attempt to describe grammatical, syntactic and other linguistic differences between L2 and L1 varieties of English.

¹³² See section 3.6.1 in this chapter for more on the ‘Transfer Claim’, the ‘Difficulty Claim’ and contrastive language analysis.

English and questions about accents. However, Timmis (2002) warns that awareness-raising techniques can sometimes come across as proselytising to students. Jenkins (2005) notes that challenges to L1 English norms with regard to replacing them with L2 user norms have so far proved contentious. She (ibid) goes on to present implications for ELT, the main one being that pronunciation teaching needs to be changed to incorporate the needs of EIC users, who are far more likely to use English in communication with other L2 than L1 users. Prodromou (1997) estimates that approximately 80% of all English communication worldwide occurs solely between L2 users. With more importance being placed on L2 users' speaking ability in international language proficiency tests such as TOEFL iBT (Fulcher, 2005, TOEFL, 1999), pronunciation materials, including software, are required to address these needs. As part of future developments for software materials in this area, the application of the slow-down facility may be applied. The unique ability of the slow down tool to slow speech without tonal distortion, enabling learners and users to access features and peculiarities of authentic, fast L1/proficient L2 speech which are normally quite difficult to note and observe, particularly for L2 learners of English, is thought to be a valuable asset for ELT, pedagogic and material design and research purposes.

3.4. Language Variation Amongst English Language Users

It is obvious from the discussion so far that the main challenge for EIC is that there is variation in its production and use around the world in the areas of grammar, syntax, lexis and pronunciation. While L1 English users seem generally to be able to cope with these variations and can successfully communicate together most of the time, there are many more

difficult challenges for L2 users. Once these difficulties are identified, they can then be tackled in order to find a resolution to ensure intelligible communication for EIC. Below are some of the issues which need to be understood before the challenges can be outlined and thus addressed.

Interlanguage

Traditionally in ELT, many deviations from L1 norms or 'errors' are due to interlanguage, which is defined as 'the simplified linguistic code in which acquirers of second languages speak to one another' (Jenkins, 2000: 19). The theory of interlanguage or ILT (Interlanguage Talk) was first proposed by Larry Selinker (1972) in the early 1970s. ILT has been defined as the developing system of language noted in learners' language production as they strive to produce the TL¹³³ norm. This definition has been much debated since. In this theory, Selinker (ibid) argues that in order to understand and reproduce the TL, learners create a simplified language system which reflects the TL, but also and more importantly, draws on the grammatical, lexical and phonological rules of their L1. Jenkins (2000: 54), in contrast, states that interlanguage is a separate linguistic form from both the L1 variety and the English variety being learned by L2 users. ILT theory proposes that cross-linguistic transfer can inform the language teacher about some of the errors of language learners (however, transfer can be positive also, even in these terms). While L1 influence is not the only source of these errors, it can offer insights into why certain errors systematically occur for some English language learners of the same L1. For Jenkins (2000: 19) ILT refers specifically to communication between NBESs of

¹³³ TL = target language

diverse L1s – expanding circle members whose English has either fossilised or is developing towards bilingualism, mainly through ongoing language education. Most L2 learners’ knowledge of the TL is located somewhere on the interlanguage continuum, between the learners’ L1 and the target L2 (Jenkins, 2006). Jenkins (2000: 54) believes that interlanguages are ‘natural languages’ and as such, are in a constant state of flux. Elements of ILT theory have been criticised (Kachru, B.B., 2005, Kachru, Y., 1993, Norton, 2000, Bhatt, 2002), but the theory continues to be endorsed in SLA and ELT. Jenkins (2006) regards ILT as being ‘entirely irrelevant to ELF’ as the LFC is premised on the existence of legitimate Expanding Circle accents, which ILT brands as fossilisation.

English Phonological Variation

‘EIL is ...at far greater risk of succumbing to mutual (phonological) unintelligibility than has ever been the case for EFL or ESL’ (Jenkins, 2000: 94).

As mentioned in the previous section on interlanguage, according to SLA theory, variations in language production tend to be viewed as errors rather than natural and therefore acceptable adaptations. Phonological variation by both L1 and L2 users is highly common but reactions differ regarding the speaker’s status (as either an L1 or an L2 user) and also as to whether the variations are simply that or whether they are errors. According to Jenkins (ibid), pronunciation is the area that ‘most demands attention’ for EIC, hence the focus of this study. Kachru (1986: 91) also highlights the fact that, ‘the largest number of attitudinal comments - or displays of intolerance - concern pronunciation’. Butler (1997: 106) in some way displays this intolerant

attitude by asserting that pronunciation must have a ‘standard and recognisable pattern (which is) handed down from one generation to another’. While Crystal (2001: 61) describes the spoken varieties of Britain as ‘a mass of hybrid forms’, this highlights the fact that far greater pronunciation variation exists amongst English varieties, simply because a far greater number of people from a wide diversity of backgrounds use English.

It has long been known that L2 users’ pronunciation in English is influenced by their L1, more or less, depending on the speaker in question (Swan and Smith, 2001, Jenkins, 2000). Research question 4 refers to this phenomenon of L1 influence on L2 (English) production:

4. Are there fewer problems for English for International Communication (EIC) users in understanding speakers with the same L1 background?

L1 influence can be effected by matters such as how long the person has been learning English and reasons for learning English¹³⁴ - for example, for communication with L1 English users¹³⁵, for communication with other L2 English users, for international communication¹³⁶, translation, reading English texts and so on. It may also depend on where the person learned English, such as in their own country with an L2ET – Outer or Expanding Circle country - or in an Inner Circle country, where they are more likely to have had a lot of exposure to L1 English users. Perhaps the strongest factor

¹³⁴ Both these issues are addressed in the questionnaires used in Test 5, to determine their level of effect on a speaker’s English pronunciation.

¹³⁵ If English is learned mainly to be used to communicate with other L1 users then the L2 user may wish to achieve a more L1-like accent, for purposes of integration and acceptance by the L1-speaking community.

¹³⁶ For this purpose, rather than seeking to mimic an L1 accent, the L2 user may focus more attention on aspects for improving productive and receptive communication while maintaining (features of) his/her L1 accent, as a means of identifying his L2 user status as well as reflecting his L1 identity when communicating in EIC situations.

affecting pronunciation is that of identity. Research by eminent sociolinguists, such as Labov¹³⁷ and Kramsch¹³⁸, show that speakers of the same L1 identify strongly with their community members through accent. Therefore, it may not be reasonable to require an L2 English user to adopt an L1 accent when speaking English, as s/he is being asked to ‘sound foreign’ and thus must alter his/her identity from being a French speaker of English, for example, to an L1 user of English. Not only does such a demand force the L2 user to abandon his/her L1 identity when speaking English, it also gives a false impression to other speakers of English, L1 users in particular. See section 3.6.3 of this chapter for a more detailed discussion on identity and accent. When an L1 English-speaking accent is encountered by an L1 English user, the L1 user generally assumes that the other person, the speaker, is also an L1 user of English and communicates with him or her as such, without making any allowances for the L2 user, such as using accommodative strategies. This may lead to a breakdown in communication between the L1 and L2 users, with the L2 user feeling inadequate, as s/he is unable to communicate as effectively as an L1 user (Jenkins, 2000). It can be argued that the ability to sound like an L1 user should not be a necessity when speaking English, particularly in an EIC setting. It should be remembered that many L1 English users are not easily understood, by L1 and L2 English users alike. In turn, many L1 English users are not always adept at understanding many of the varieties of English from the Inner, Outer or Expanding Circles. Research question 5 explores this more fully:

¹³⁷ See Labov’s study on speech patterns amongst African American youths in a US inner city context: Labov, W. 1972. *Language in the Inner City: Studies in the Black Vernacular*. Philadelphia: University of Pennsylvania Press

¹³⁸ See Kramsch, C. 1998 ‘The privilege of the intercultural speaker’ in Bryan, M. and M. Fleming (eds.). 1998. *Foreign Language Learning in Intercultural Perspective*. Cambridge: Cambridge University Press.

5. Can experience with L2 accents affect how intelligible L1 and L2 users find such speech?

If one regards this fact as acceptable for L1 users, it can be argued that L2 English users should be given the same allowances. According to Jenkins (2000), the most important factor in EIC communication is *intelligibility* rather than a standard or L1 English accent. This is the stance taken in this study and research questions 2, 3 and 5 reflect this by referring specifically to intelligibility:

2. Is the speech slow-down facility effective in increasing the intelligibility of speakers' pronunciation?
3. Can a pronunciation training programme focused on individual subjects' problematic English phonemes increase their spoken intelligibility?
5. Can experience with L2 accents affect how intelligible L1 and L2 users find such speech?

However, it must be remembered that while it should not be a requirement that an L2 user adopt an L1 accent when speaking English, some L2 English users wish to do so, for professional or other reasons, and should feel free to do so. For example, in some contexts, L2 users may want to show convergence¹³⁹ with what is, rightly or wrongly, regarded as a prestige (L1) variety.

¹³⁹ See section 3.6.3 in this chapter for more on convergence.

3.5. Conclusion

Jenkins (2003: 61) states that there has been a call amongst World English scholars to accept Outer Circle varieties of English, such as Indian English, as being on a par with standard forms of the language from Inner Circle countries and therefore constituting legitimate teaching models. Obviously, learners should have the choice of the most appropriate model for their purposes. Walker (2002) is of the opinion that due to the status of English as a world language, the idea of an L1 accent (prestige or otherwise) as a suitable model for teaching English pronunciation is outmoded, impractical and unsuitable. Vaughan-Rees (2006) believes L2 English users should continue to be exposed to L1 speakers using a variety of accents, as well as ‘educated’ L2 user speech, in ELT pedagogy. Meanwhile, Jenkins (2000: 91) believes the pedagogic focus should be on a core of intelligible pronunciation features which all L2 users, regardless of their L1, can achieve and should include work on developing accommodation skills. Learners should also have the option of being exposed to mainly L1 accents and/or mimicking an L1 accent, if that is their choice – a training programme similar to the one developed in Test 5 could make this possible.

While old theories about pronunciation teaching are being rejected, there is nothing concrete to take their place, and new materials for teaching ELF/EIC are yet to be readily available. At the moment, EFL/ESL teachers have to adapt existing pronunciation materials for local use – dictation and minimal pair activities are recommended for acquiring ‘comfortable production of those core items not already in their (learners’) repertoire’ (Jenkins, 2005: 150). Exposure to a wide variety of L2 accents and improving accommodation skills also enable learners to understand other

L1 and L2 English accents, which is deemed a necessary part of EIC – this premise is tested in research question 5:

5. Can experience with L2 accents affect how intelligible L1 and L2 users find such speech?

For such changes to occur, Jenkins believes teachers must be willing to adopt ELF practices. An alternative model, which offers an achievable goal, is that of a successful L2 user as s/he ‘can do many things that a monolingual cannot’ despite lacking in some skills which L1 users have (ibid). Cook (2003: 282) proposes ELT materials should portray a range of L2 users in a positive light, using English in their daily lives for social and professional purposes - particularly famous L2 users, who have used the language to their advantage - in order to motivate learners. Materials should also show L2 users in successful communication with both L1 and L2 speakers, particularly as L2 users are more likely to use English with other L2 users (Cook, 2003: 283). Jenkins (2005: 147) admits that further research is needed into EIC interactions (between L2 English users from different L1 backgrounds) before the LFC can be seen as ‘definitive’ When an ELF approach has been compiled, according to Jenkins (2000: 147) it must be incorporated into teacher training programmes, addressing in particular sociolinguistic and socio-psychological factors. As previously mentioned in this chapter, some English language testing upholds approximations to L1 norms rather than proficiency as the goal of L2 users, which Jenkins (2003) cites as the view of ‘deficit linguistics’. Therefore, the main goal for EIC is for all users to be intelligible to each other, regardless of whether they are L1 or L2 users of English. In order to establish a pronunciation model for EIC, the relationship between mutual intelligibility and teachability are paramount. Derwing and Munro (2005) postulate

that the most effective means of establishing criteria for EIC pedagogy is through empirical research and that the focus should be on mutual intelligibility (which is a main focus throughout this study) but also include the sociological implications of accent. Outside of this, any L2 user is free to advance his/her pronunciation to a more L1-like target.

Some of the most significant factors affecting pronunciation have been discussed in this chapter, to underline how complicated and difficult it is for a speaker to actually alter his/her pronunciation.

A study by Jenkins (2000: 63) shows that L2 English users endeavour to substitute elements of L1 phonological transfer when communicating in English with an interlocutor of another L1, in comparison with a speaker whose L1 is the same as their own. In EIC settings, it may be surmised that L2 English users tend to accommodate more for L2 English users from different L1 backgrounds, which leads Jenkins (*ibid*: 66) to conclude that 'L2 variation is very often the result of an attempt to produce pronunciation that is intelligible for the particular interlocutor'. Jenkins (*ibid*) continues by stating that this in turn leads 'to more target-like production' (by this she means increased intelligibility when the speaker produces pronunciation forms which more closely resemble those of the interlocutor), depending on the pronunciation features of the other speaker. Such convergence is deemed by Jenkins (*ibid*) to be a positive characteristic of EIC by leading to greater intelligibility and thus more successful communication between interlocutors.

This chapter discussed issues involved in pronunciation teaching and factors which can hinder or adversely affect an L2 user's production of English sounds. As also

noted from this chapter, speech and pronunciation variation is a natural and inevitable feature of language – in the case of EIC there is a wide range of pronunciations possible and pedagogy must try to address this, enabling speakers from a variety of L1 backgrounds to be able to communicate more intelligibly in English. The following chapter, Chapter 4 outlines external factors which can affect an L2 user's English pronunciation and ability to communicate effectively and intelligibly. All these factors concerning English language pronunciation reception and production with particular reference to ELT greatly helped to guide and inform this study, namely in the design and methodology of the tests.

CHAPTER 4: OTHER ISSUES CONCERNING ENGLISH PRONUNCIATION

There are a number of issues concerning pronunciation production and reception. Issues such as motivation, top-down and bottom-up processing, L1 transfer and issues around accent and identity, which are deemed necessary for successful EIC, shall be discussed in more detail in the following sections. Both receptive and productive aspects of communication will be addressed as Nair-Venugopal (2003: 40) notes ‘ [I]t is the equal willingness of both parties in the communicative process to acknowledge and comprehend each other’s language use’. These issues are also addressed in this study’s tests, through test questionnaires mainly the Subjects’ Language Learning Background Questionnaire and the Subjects’ Reflective Language Use Questionnaire (see Chapter 7, section 3 for a fuller account of the questionnaires used in this study). The questionnaires sought to determine whether these aspects of communication have a corresponding effect on the test participants’ reception and production of English and whether they help or hinder them to be more intelligible communicators.

4.1. Motivation

Motivation, whether driven by financial or other goals, is shown to be an important factor in intelligibility (Nair-Venugopal, 2003: 45). Jenkins (2000: 133) states that motivation plays a crucial role in L2 acquisition - when a particular aspect of language is deemed relevant by learners ‘they are highly motivated to learn’ and when an item is not thought to be relevant, they are unlikely to ‘make the supreme effort needed to replace an L1 feature with an L2 feature’. Nair-Venugopal (2003: 46)

concludes by stating that ‘the defining principle governing intelligibility may well be that of making the effort to understand the message as it emerges and evolves within the interaction’.

Brumfit (1982: 4) notes that motivation requires L2 English users to see themselves as part of ‘a more-or-less English using culture, at least for some purposes’. Dörnyei (1990: 46) categorises three main types of motivation: integrative motivation, instrumental motivation and assimilative motivation. He believes that integrative motivation involves a highly driven learner striving to achieve the language forms of an L2 language community which s/he values so that s/he can communicate more effectively with members from that group. It does not necessarily involve the learner having direct contact with members from the TL community. Instrumental motivation is when someone is learning a language for more pragmatic reasons, namely for improving employment choices or conditions (ibid). Instrumental motivation is based on the learner viewing the ability to speak English as being worthwhile because the language functions ‘as a linguistic tool’ (Kachru, 1982: 38). Such an ideology is more in tune with the international English language movement, where the lingua franca has a communicative function, utilised to unite people from diverse cultures (Modiano, 1999a: 12). Gardner and Lambert (1972: 132) define instrumental motivation as being driven by the practical benefits of learning an additional language while integrative motivation is based on ‘a sincere and personal interest in the people and the culture’. Assimilative motivation is when an L2 user is learning the TL in the TL community and wishes to be perceived as a member of that language group (Dörnyei, 1990: 47).

Subjects who participated in Tests 4 and 5 of this study were questioned about motivational issues linked with pronunciation in the Reflective Language Use Questionnaire (see Appendix 4). The aim was that their responses would inform the test results.

4.2. Top-Down and Bottom-Up Processing

Bottom-up processing is defined as ‘perceptual information’ (ibid). Field (2003: 20-1) expands on this by explaining that listening ‘involves assembling larger units from smaller ones’ and therefore, bottom-up processing is ‘data-driven’ - it is dependent on physical data. Jenkins (2000: 20) states that bottom-up processing is concerned with the ‘acoustic signal’. Cauldwell (2002) criticises current ELT pedagogy and teaching materials which predominantly use speech that is carefully produced by actors in recording studios, which does not reflect ‘real speech’. Jenkins (2000: 77) notes that because of this practice, L2 learners of English are being exposed to speech recordings which ‘are much closer to their citation form’. While this is conducive to bottom-up processing, it does not help learners to process the ‘fluent English speech’ that they will have difficulty with outside of the English language classroom. Bottom-up processing is insufficient on its own as L1 and L2 English users alike will search for meaning within a given message through top-down processing, shaping and reinforcing their expectations (Brown, 1990: 11). Jenkins (2000: 81) is aware that without some knowledge of the speaker’s culture, the L2 listener is often more reliant on the acoustic signal and thus bottom-up processing than is the case for proficient English speakers, who can decode the signal more effectively by using top-down processing. Recognising this fact, it is crucial for English language teachers to provide

suitable and purposeful contexts for listening in order to activate any relevant knowledge on the part of the L2 language learner as an aid to interpreting the message (Brown, 1990). Learners of English must learn ‘to listen as a native speaker listens’ (ibid: 148).

Top-down processing refers to ‘information provided by context’ (Field, 1999: 338). Jenkins (2000: 20) notes that top-down processing is a means of increasing one’s comprehension by using ‘contextual cues, both linguistic and extra linguistic’. Pinker (1994: 474) states that this involves guessing, predicting or filling in a ‘perceived event or message’ using one’s ‘knowledge and expectations’. Brown (1990: 147) indicates the importance of purposeful listening in the English language class (as occurs in natural communicative contexts), providing an aim for listening through tasks and indicating the significance of setting up a context for listening, so students may predict the content of what they will hear, which aids top-down processing and thus, intelligibility, because ‘in normal life we have reasons for listening, and interests and purposes which our listening serves’. This is why in Test 1 of this study, comprehension questions were used in the listening test. Brown (ibid) makes the argument that L1 English users are not totally dependent on the acoustic signal alone to infer the meaning of a message. According to her (ibid: 60), L1 English users employ top-down processing skills when listening to spoken English, but for various social and psychological reasons, L2 English users are unable to do this as efficiently or effectively as L1 speakers and are therefore more reliant on bottom-up processing. Tests 1, 2, 3 and 5 were designed to test L2 and L1 English users’ bottom-up processing skills by requiring them to identify individual words (specific speech features) through transcription and verbatim recall rather than global comprehension

of utterances (though comprehension was also tested in Test 1). For this reason, L2 English learners should not only be made aware of the salient features of speech, namely stressed elements, but also the more obscure elements, such as elisions and assimilations, so they can operate without various ‘segmental clues’ and are less reliant on bottom-up processing (ibid: 60).

According to Field (1999), notions of bottom-up and top-down are not as simple as initially thought. Bottom-up processing is not merely constructing information step by step with segments of speech. Because of the speed at which listeners are able to construct meaning, ‘only a quarter of a second behind the speaker’, various processes must occur simultaneously, namely identifying phonetic signals, detecting words and building sentences (ibid). Top-down processing can refer to various forms of ‘context’, such as knowledge of speaker, knowledge of the world, awareness from a previous similar situation or listener expectations (ibid).

There are various ELT commentators who believe people process information either bottom-up, top-down, or employ a mixture of the two. There is no single concrete argument to support any one of these ideas: as Field notes, ‘the evidence from L1 research is contradictory’ (ibid). While the notion that low-level English language learners process bottom-up is pervasive in ELT, Field (ibid: 339) believes such learners also employ top-down processing to fill in the gaps where comprehension is lacking: ‘the more flawed the bottom-up information, the more we draw upon cues from top-down sources’. Field (ibid) merely presents the different ideas and theories for language processing and allows the reader to form his/her own opinion.

4.3. Productive Communication

Productive communication refers to a speaker communicating with an audience of at least one other interlocutor. This study focuses particularly on segmentals in speech – see research question 3 in particular:

3. Can a pronunciation training programme focused on individual subjects' problematic English phonemes increase their spoken intelligibility?

L1 Transfer/Interference

L1 transfer, also referred to as 'interference' or less negatively as 'crosslinguistic influence', is most apparent through phonology (Jenkins, 2000: 176). When two speakers of the same L1 converse in English, their pronunciation converges in a bid to emphasise their shared L1 identities (ibid). Jenkins (ibid) states that the convergence pattern moves from a 'subjective' form to a more 'objective' form as L2 English speakers with the same L1 become more self-conscious and even 'embarrassed' when speaking English with each other, as this act is somewhat 'unnatural' for them. When this occurs, speakers' L1 phonological transfer increases - to increase intelligibility, to express group identity and to minimise any self-consciousness or embarrassment (Jenkins, 2000: 193).

Lado's *Linguistics Across Cultures* (1957) marked the real beginning of modern applied contrastive linguistics. It provides evidence that many difficulties arising from L2:L2 or L2:L1 encounters are traceable to differences in the languages involved.

Lado (ibid: 2) postulates two main reasons for this:

- 1) The Transfer Claim: L2 users transfer forms and meanings and their distribution from the L1 to the L2. They do this productively, when they speak the L2, and receptively, when they try to comprehend the L2 as produced by L1 users. Research question 4 investigates this phenomenon further:
 - Are there fewer problems for English for International Communication (EIC) users in understanding speakers with the same L1 background?

- 2) The Difficulty Claim: aspects of the L2 that are similar to the L1 are easier for the L2 user to adopt while those in the L2 that differ from the L1 will present difficulties.

Brown (1990: 16) draws attention to a crucial point in the teaching of a foreign language – there is a ‘phonetic overlap’ between languages, which means similar or identical phonetic sounds are encoded as different phonemic symbols. For example, in some Asian languages, such as Cantonese and Japanese, the range of /l/ and /r/ pronunciations are tokens of the same phoneme, ‘the ‘same’ sound’ (ibid). This means such speakers cannot phonetically distinguish between /l/ and /r/. When learning English, they must learn two dissimilar phonetic sounds for the /l/ phoneme and two for the /r/ phoneme. This can prove problematic for many such learners. Wardhaugh (1970) claims that while some errors are traceable to L1 transfer, contrastive analysis cannot predict these errors but merely provide an explanation for any errors produced. For this reason, error analysis should go hand-in-hand with contrastive analysis, as applied in the methodology of this study, for the subjects’ pronunciation diagnosis (see Chapter 5, Tests 4 and 5).

Fluency

Fluency is deemed an important factor for communicative competency (Faerch, Haastrup and Phillipson, 1984). Lennon (1990: 389) states that there are two senses of fluency in EFL: ‘broad sense’ and ‘narrow sense’. Fluency in the ‘broad sense’ implies a high level of oral proficiency. In the ‘narrow sense’, it refers to a single aspect of oral expertise – namely one of Faerch, Haastrup and Phillipson’s (1984) three types of fluency:

- 1) semantic fluency or coherent speech, where speaker’s intentions are linked with his/her speech acts
- 2) lexical-syntactic fluency, where syntactic elements and words are linked
- 3) articulatory fluency, where segments of speech are linked

Generally, fluency refers to producing speech similar to L1 users at speed, with few hesitations, pauses or repetition, rather than accurate pronunciation, grammar, syntax or vocabulary (Lennon: 391), which Brumfit (1984) refers to as ‘natural language use’. Fluency therefore refers to ‘performance’ rather than ‘linguistic knowledge’ and is mostly based on a listener’s impression of speech (ibid). However, Lennon (1990) is aware that native-like fluency is far from perfect – it commonly displays hesitations, pauses, false starts and so on, and evidence from spoken corpora supports this. L1 users differ greatly in terms of their speech fluency, which can depend on a number of variables such as speech context, subject matter, interlocutor, and so forth. Möhle (1984) believes it is possible to ascertain a speaker’s fluency based on a number of variables, namely speech rate (in syllables or words per minute), positioning and length of silent pauses, length of fluent speech between silent pauses

and occurrences of filled pauses, repetitions and self-corrections. As pauses, repetitions and so forth also occur in L1 speech, these should be determined in L2 speech by how often and where they occur compared with L1 speech (ibid).

Accent and Identity: Convergence, Divergence and Maintenance

‘Linguistic identity...is a complex phenomenon that cannot be divorced from other phenomena such as language attitudes and ideologies, and linguistic power, while the relationships among them are becoming ever more complex in postmodern societies’

(Jenkins, 2007b: 190).

Literature in the field of language and identity has grown dramatically in recent years in such fields as sociolinguistics, discourse and language variation, which indicates its importance and far-reaching significance in linguistics in general (Jenkins, 2007b: 192). The question of which accent to aspire to (if any) involves many issues, not just phonological but also sociological, psycholinguistic and political (Walker, 2002: 1).

Pronunciation is closely bound up with individual and social identity (Seidlhofer, 2001, Dalton and Seidlhofer, 1994). Language is used not only as a means of communication but also as a means of establishing a sense of community (ibid). Either consciously or unconsciously, speakers establish their identity through their pronunciation (see Labov, 1972). Identity is defined as, ‘a cover term for a range of social personae, including social statuses, roles, positions, relationships, and institutional and other relevant community identities one may attempt to claim or assign in the course of social life’ (Och, 1993: 288). The manner and way in which someone speaks can identify where s/he is from and the community with which s/he

wishes to be associated (Seidlhofer, 2001, Labov, 1972). Och (1993: 290) states that a person's social identity is 'ratified' with the interlocutors s/he is communicating with and that this is done through the speaker's application of the structures and linguistic practices that are consistent with the identity of a particular speech community. A speaker may wish to identify with a particular group by altering his/her accent but may also retain certain features of their L1 to assert their own cultural identity (Avery and Ehrlich, 1992). Wells (1982: 29) observes that people are often able to make 'instant and unconscious judgements about a stranger's class affiliation on the basis of his or her accent' – for example, as already noted, RP is strongly associated with the British upper class and the British public school system. The requirement for a speaker to alter his/her accent is not a simple demand, as such a change can affect personal relationships and how one identifies with one's own community. For example, a Japanese student learning English in highschool in Japan can communicate in English with his/her peers without much anxiety about his/her accent. However, when that Japanese person travels to another country, the situation will have altered dramatically and may cause some confusion for interlocutors of that Japanese L2 English speaker. By adapting his/her accent to the new English-using community, the Japanese L2 English speaker may express solidarity with it. However, it may also provoke resentment from the community and the L2 user may be 'regarded as an intruder who is claiming solidarity without warrant' (Dalton and Seidlhofer, 1994: 3). If the Japanese student deliberately retains his/her accent, s/he can 'retain his (her) self-respect or gain the approval of his (her) peers' (ibid). A speaker's accent is an important aspect of one's identity and must be respected. Crystal (1997: 116) observes how the two opposing forces of maintaining one's identity through one's accent and the need for intelligibility can 'often pull people – and countries – in opposing

directions'. He notes that the necessitation of intelligibility prompts an international language to be learned, such as EIC, but that the retention of one's identity encourages an individual to uphold his/her, 'ethnic language and culture' (ibid). It seems that the desire to achieve a balance between intelligibility and identity involves conflict rather than compromise. Intelligibility requires adherence to a dominant language variety, such as RP or GA, so speakers can maintain mutual intelligibility (Leith and Graddol, 1996: 139). By contrast, maintenance of one's identity stipulates the use of language varieties other than the dominant forms as a means of recognising and distinguishing one's own culture from others (ibid). Crystal (1997: 19) believes it is possible to achieve both simultaneously ('[I]t is perfectly possible to develop a situation in which intelligibility and identity happily co-exist'), noting that this already occurs in some places such as Singapore, where people usually have two varieties of English available to them – an educated, standardised form alongside a distinctive national variety of English, to 'express their national identities', which Crystal notes is 'a way of reducing the conflict between intelligibility and identity' (ibid: 134). Therefore, it is possible for English speakers, both L1 and L2 users, to have at least two varieties of the language at their disposal, a standard/widely intelligible form for international use and a local/national variety for use within their own communities as a means of maintaining their identity.

Turning to political reasons, many L2 users of English do not aspire to a GA or RP accent due to their political views concerning the US or Britain. Walker (2002) states that accent reflects identity and therefore, while students are free to choose which, if any, English accent they wish to achieve, they should not be forced to adopt a particular accent. The issue of accent and identity is crucial in the discussion

regarding L2 English language teachers, as it can be very difficult for them to assert themselves as legitimate teachers when L1 teachers are assigned a privileged position, simply because they are L1 users. Golombek and Jordan (2005: 516) state that the theory concerning speakers' choice to alter features of their accent to more closely resemble that of L1 speakers in order to increase intelligibility and legitimise their status as English speakers is 'overly simplistic' and observations made in this study, Test 5 in particular, support this. Seidlhofer (2001: 58) notes that the issue is more complex, as it can involve 'conflicting tendencies such as power and solidarity, in-group and out-group, prestige and stigmatisation'. Widdowson (1982: 9) observes that communication can be 'a risky business' as it involves intrusion in order to make contact. There is less risk when speakers share background knowledge and experience (ibid), as was discovered in Test 4 of this study when interlocutors who were classmates and friends found each other intelligible and successful communication was achieved with little effort. Also research questions 4 and 5 address this:

4. Are there fewer problems for English for International Communication (EIC) users in understanding speakers with the same L1 background?

5. Can experience with L2 accents affect how intelligible L1 and L2 users find such speech?

Problems can ensue between speakers from different backgrounds and from places which are distant from each other (ibid) – inadvertently, research question 4 investigates this by asking:

4. Are there fewer problems for English for International Communication (EIC) users in understanding speakers with the same L1 background?

A speaker weighs up the risks and benefits of collaborating with an interlocutor and when the risk outweighs the benefits, the speaker will return 'to the safety of his own familiar world' (ibid: 10). Widdowson (ibid) describes co-operation as 'an extrovert and exploratory force' while introversion is a 'territorial imperative' which ensures one's 'personal security'. Language enables speakers to address at least three requirements – to express one's intended meaning, to maintain and protect one's self-worth and to assert one's membership of a particular social group (ibid). Widdowson (ibid: 10-11) states that the 'territorial imperative' is in opposition to the communicative function of language – speakers identify with members of the same social group through the use of certain language items and forms, namely slang. However, the use of slang in general speech contexts involving people who are not part of the same speech community can alienate interlocutors who cannot identify those language items which in turn hinders communication. For this reason, Widdowson (ibid: 11) believes it is 'a dangerous ideal' to imagine that all speakers of English in all communities around the world can use the language 'as a common identifying expression of universal norms of thought and experience'. He (ibid) believes this is wrong and compares it to 'fundamentalist visionaries' who impose their ideologies on others – one thinks of religious conversion here, particularly when Widdowson (ibid) refers to 'the saving of souls'. Speakers adapt language to suit their cultural, social, ideological and other needs, therefore it is always liable to change – language is a natural and intrinsic part of human nature for individual, group and cultural expression as well as communication.

Norton (2001: 127) believes the notion of identity is a ‘site of struggle’ and linked to power relations, but that speakers treated as being lower status can resist this and assert a higher position by creating their own form of discourse through their assertion of the right to speak. Norton (ibid) suggests this can be achieved by requiring such speakers to create ‘imagined communities’ for English and ‘imagined identities’ of themselves as English speakers. She (ibid) believes this can be achieved by utilising narratives to help speakers imagine new identities.

Convergent communicative acts (as observed between participants in Test 4) occur for two main reasons – to get ‘approval’ from one’s interlocutor and to ensure more effective communication (Jenkins, 2000: 170). In an EIC setting, Jenkins (ibid) believes speakers will experience ‘an instinctive desire’ to converge as they assert their membership of the EIC community and ensure that their speech is intelligible to as many L2 English users (from a wide range of L1 language backgrounds). Jenkins (2000: 54) is of the opinion, however, that speakers will have difficulty in achieving convergence in an EIC setting if they have not been formally trained to do so – she refers specifically to SAT and CAT¹⁴⁰. Convergence can be ‘upward’ when a speaker alters his/her speech in the direction of a prestige variety, or ‘downward’ when a speaker moves away from a prestige speech form (ibid).

Non-convergence is due to speakers’ inability or refusal to alter their speech in line with that of their interlocutors (Jenkins, 2000: 56-7), as distinct from L2 users of English who cannot alter their speech because they have a limited language repertoire in the L2 (ibid). While L2 English users may be exposed to other L2 English accents

¹⁴⁰ SAT = Speech Accommodation Theory; CAT = Communication Accommodation Theory - see this chapter, section 2.7.1 ‘Accommodation’ for more on these theories.

and varieties, they may not be able to reproduce them, as these forms are not used as models for production (ibid). Jenkins (ibid) also refers to psychological factors for non-convergence when she states that some L2 users are slow to adopt speech habits of other L2 users in case they adopt errors in their speech, although Jenkins does admit this remains unsubstantiated from research. Maintenance is in fact a divergent act in that speakers maintain aspects of their speech forms and communicative practices as a means of maintaining group identity (Jenkins, 2000: 169). Jenkins (2007b: 191) maintains that due to globalisation, L2 users of English have a choice of identities available to them. Members of the Expanding Circle, particularly those from economically powerful and largely populated nations such as China, could alter the traditional ELT model where L1-norms are imposed on L2 users. According to Jenkins (ibid), such nations could ‘fight for the recognition of ELF’ by refusing to adopt L1-English norms and instead create new identities through their L2 English variety. Jenkins (ibid) believes the motivation of L2 English users to maintain their L1 identity through English could have a stronger influence on their English pronunciation and language variety than other linguistic factors which SLA¹⁴¹ theory up to now has argued to be of more importance – namely interlanguage and Critical Period Hypothesis (CPH).

Critical Period Hypothesis (CPH)

Second Language Acquisition (SLA) has indicated that language learning can be more demanding for adult learners, particularly in the adaptation to a new phonological system (Moyer, 1999). This may be due to factors previously discussed, such as issues

¹⁴¹ SLA = Second Language Acquisition

with identity and L1 influence. It can also be attributed to the Critical Period Hypothesis, which postulates that the vast majority of adult language learners display immense difficulty, even inability, to master an L2 accent in contrast with other features of an L2. Lenneberg (1967) theorises that the acquisition of language is an innate process determined by biological factors limiting the critical period for a learner's acquisition of language from approximately two years of age to puberty. Before lateralisation¹⁴² is complete, both hemispheres of the brain are involved in language processing, with the left hemisphere being the more active. After puberty, the process of lateralisation is completed, which means the brain loses its plasticity and automatic acquisition due to exposure to a second language is greatly reduced or disappears. In adults, the left hemisphere of the brain is dominant in language processing, which means post-adolescent language acquisition is difficult, as the language input requires a general cognitive coding ability (McLaughlin, 1984: 60). For these reasons, Jenkins (2000: 123) believes that it is unreasonable and unrealistic to expect learners to rid themselves of the total sum of their L1 phonological transfer and imitate L1-like accents.

Flege (1987: 167) opines that the CPH simplifies a fundamentally complex phenomenon, which he states is marked by various 'conditions that co-vary with chronological age'. By ignoring or dismissing other linguistic concerns, such as motivation and convergence, as well as other psychological, sociological and environmental factors, along with individual cognitive skill development and ability, it would appear that the assertion an individual's L2 language development is solely based on the maturational constraints of one's neurological system does not offer a

¹⁴² Lateralisation is where the two sides of the brain develop specialised functions.

comprehensive explanation. Questionnaires used in all tests in this study referred to the CPH by asking subjects their age and how long they had been learning English – to ascertain if learning English before the CPH increased L2 users’ speaking ability and whether it played a role in increasing spoken intelligibility.

Accommodation

Jenkins (2000: 193) repeatedly asserts the ‘major role’ of accommodation in EIC interactions. Accommodation refers to the process by which speakers alter their language behaviour to sound more like their interlocutors¹⁴³. In Nair-Venugopal’s (2003: 46) opinion, it is more important for the listener to attempt to accommodate and understand the speaker’s intended message and not allow aspects of speech production, such as pronunciation, accent or intonation patterns, to hinder or impede intelligibility. Jenkins (2000: 168) states that Accommodation Theory accounts for peoples’ shift in communication manner due to four social-psychological theories:

- i) ‘Theory of similarity attraction’: people are drawn to those who hold beliefs and feelings which are similar to their own.
- ii) ‘Social exchange theory’: people think about advantages or rewards against the costs before they communicate and will generally choose that which will grant them the highest rewards at the lowest cost.
- iii) ‘Theory of casual attribution’: people assess others’ behaviour based on what they determine to be the purpose of that behaviour.
- iv) ‘Intergroup distinctiveness’: people try to assert their group identity by demonstrating how they differ from other social groups.

¹⁴³ Jenkins, 2007a: 9.

Jenkins (2000: 169) refers to SAT - Speech Accommodation Theory – where people adjust their speech according to the person they are in communication with. Giles, Coupland, and Coupland (1991b: 6) believe SAT aims ‘to clarify the motivations underlying speech and intermeshed in it, as well as the constraints operating upon it and their social consequences’. This is done in three main ways: convergence, divergence and complementarity. SAT is now referred to as CAT – Communication Accommodation Theory, which incorporates a wider array of features than SAT, such as over- and under-accommodation; non-verbal elements, such as facial expression; linguistic and prosodic facets, such as speech rate, length of utterance and pronunciation; and aspects of social relations (Giles and Coupland, 1991, Jenkins, 2000).

Jenkins (2000: 173) believes that SAT explains why interlocutors accommodate each other and in so doing ‘decrease the differences between themselves’. Jenkins (ibid: 180) asserts that accommodation should not be left ‘to chance’ but rather should be directly dealt with in the language classroom, so students can be taught ways to develop their accommodative skills. She (ibid) believes most learners already possess accommodative skills in their L1 but they may have difficulty in transferring these skills to their L2/additional language. Jenkins (ibid) maintains English Language researchers and teachers can plan ways to develop these skills further in learners.

Jenkins (ibid: 182) goes on to present the optimum conditions to encourage speech reception, which she defines as, ‘the mental adjustments that render a listener more able to cope where such transfer replacement fails’:

- Motivation on the part of the interlocutor (speech ‘receiver’) to understand (as noted between classmates in Test 4)
- The interlocutor’s previous exposure to a speaker’s accent (again, noted in Test 4)

The interlocutor’s previous exposure to a variety of L2 accents resulting in his/her ability to tolerate different accents (this was tested with research question 5: Can experience with L2 accents affect how intelligible L1 and L2 users find such speech?)

- The interlocutor is not afraid of receiving transfer errors from the speaker
- The interlocutor is capable of signalling his/her inability to understand the speaker – both through words and actions.

Jenkins (ibid: 189) opines that the most effective way to ‘promote phonological accommodation’ amongst learners in a multilingual class is through pairs of students undertaking dictation activities.

3.5. Receptive Communication

‘A foreign-language learner who tries to understand every single word that is said to him will be handicapped both by his failure to do so and also, in a way, by his success’

(Richards, 1984: 15).

Richards (ibid) notes the importance of a listener’s ability to extract the central message from a speech situation. He (ibid) insists that this skill is not ‘automatically’ transferred from the L1 to the L2 and that an L2 user ‘needs conscious practice in making the transition’. Brown (1990: 8) criticises the usual listening techniques

applied in English language classrooms, where comprehension questions ‘test’ students’ comprehension. She points out that this practice does not teach students how to process the foreign language and teachers need to be more aware of comprehension features and processes (ibid). Instead of testing students, teachers should point out that not even L1 English users understand 100% of what is being said most of the time and that students should attempt to understand the overall message rather than every word uttered (ibid: 10). For Jenkins (2000: 190), exposure to a variety of accents increases one’s receptive expertise in EIC – this premise is tested in this study through research question 5:

5. Can experience with L2 accents affect how intelligible L1 and L2 users find such speech?

She (ibid) continues by stating that this does not require printed materials – students’ speech can be recorded while undertaking a variety of activities or tasks, such as conversations, interviews, describing pictures, and so forth. The teacher can then use these recordings for class purposes – to draw students’ attention to certain phonological features in order to make them aware of how to improve their oral and aural communication skills. This was done in this study (Test 5 specifically) where the researcher recorded subjects in pairs undertaking speaking tasks and using the recorded conversations to diagnose specific pronunciation problems, with particular reference to segmentals and then creating pronunciation training programmes targeting these problematic sounds, in an attempt to improve their aural skills.

Jenkins (2000: 194) believes that the most effective means of addressing the receptive difficulties L2 English learners are likely to experience when dealing with the various

pronunciation differences of other English users is through pedagogy. This is tested in research question 5:

5. Can experience with L2 accents affect how intelligible L1 and L2 users find such speech?

Jenkins (ibid: 227) states that L1 English users will also have to learn EIC for receptive purposes, '[T]he perhaps unpalatable truth for 'NS' is that if they wish to participate in international communication in the 21st century, they too will have to learn EIL'. Jenkins (ibid) proposes that this can be achieved by introducing EIC into second level education curricula and making it a 'compulsory' part of regular English studies. For those who have already finished second level education, she (ibid) advises L1 users to complete classes in EIC focussing on receptive skills – this can be attained 'by adding to their 'NS'-oriented receptive repertoires a range of L2 regional accents of English'. Jenkins (ibid: 228) stresses that for EIC, it is just as important for L1 English users to develop their receptive skills as it is for L2 users.

Brown (1990: 16) notes that a new 'exotic' sound in a foreign language is easily perceived, but can be difficult to produce. Another problem highlighted by Brown (ibid) in the area of phoneme perception is that speakers of other languages may have a limited amount of phoneme combinations and words which are possible in their L1s. This may hamper their ability to perceive certain phonetic sounds in English as tokens of one phoneme rather than another (ibid: 17). In Tests 4 and 5 of this study, receptive communication was gauged by requiring subjects to assess their interlocutors' receptive ability as well as commenting on their own speech reception capabilities through the Subjects' Reflective Language Use Questionnaire and the Interlocutor

Questionnaire (Appendix 4). While these tests focus specifically on speech production, issues of speech reception are included, as it is a necessary part of the communication process and may offer insights into why some speakers had greater or less success when communicating with a particular speech partner in this study.

CHAPTER 5: THE SLOW-DOWN AND AUTHENTIC SPEECH

This chapter gives an overview of the slow-down tool used in this study along with ideas for how it could be used in ELT, with particular reference to making authentic speech more accessible for English language learners. This chapter also notes the lack of authentic L2 speech for receptive purposes in most ELT materials¹⁴⁴ as well as the lack of alternative pronunciation models beyond the two varieties generally thought of as ‘standard’ models – RP and GA. Conclusions in Chapter 5 are drawn from the findings of Chapter 2 regarding current ELT pedagogical practices versus the needs of English language learners who engage in international communication as well as in their own contexts of use – in their communities or intranationally.

This chapter seeks to give further clarification to problems in relation to current ELT pedagogical practices in the areas of speaking and listening. These include a lack of speech models other than RP or GA, which was explained in more detail in Chapter 2. Another problem is the inability or unwillingness of L2 adult users to alter their accents to sound more ‘native-like’, which is dealt with in Chapter 3. This chapter suggests means of overcoming or diminishing such problems through the creation of pronunciation teaching/training programmes using authentic, non-standard models. This was undertaken in Test 5 of this study and research question 3 refers specifically to the application of a pronunciation training programme which used an authentic, non-standard model:

Can a pronunciation training programme focused on individual subjects’ problematic English phonemes increase their spoken intelligibility?

¹⁴⁴ See also Appendix 24 for a review of four prominent ELT pronunciation texts

5.1. The Slowdown Software: ‘A Window on Speech’¹⁴⁵

‘Another approach ... is to capture units of the rough and tumble of everyday speech ... and to break it down into learnable chunks. The advantage ... is that naturalness does not have to be constructed’

(Cauldwell, 2005).

The slow-down software – the AOLA algorithm¹⁴⁶ - was initially developed by a team of computer scientists and engineers with the aim of slowing down recorded music samples in real time without affecting the tempo (speed) (see Lawlor and Fagan, 1999, for a more detailed explanation of the technical aspects of the algorithm). There were other algorithms available at this time. However, the AOLA was deemed to be superior to these as it could slow down in real time, making it a more efficient algorithm. During the timeframe of this study, the AOLA algorithm was adjusted to improve the quality of the speech signal when slowed to speeds of 40%¹⁴⁷ or slower (prior to this, when extracts were slowed to 40% or slower, artefacts were present in the signal which distorted the sound). The slow-down can be used with short recorded extracts of not more than half a minute long – the software works quite slowly when slowing down longer extracts of speech. Research questions 1 and 2 investigated the effectiveness of the slow-down on speech reception and production:

1. Is the speech slow-down facility effective in improving listeners’ speech reception?

¹⁴⁵ Phrase used by Richard Cauldwell in his article, ‘Bricking up and streaming down: two approaches to naturalness in pronunciation materials’.

¹⁴⁶ AOLA = Adaptive Overlap-Add, which is the technical technique the algorithm uses to achieve the required frequency scaling without affecting the duration (Lawlor and Fagan, 1999).

¹⁴⁷ Slowing a recording down to 40% speed means the recording is 2.5 times slower than at full speed.

2. Is the speech slow-down facility effective in increasing the intelligibility of speakers' pronunciation?

The software uses TSM¹⁴⁸ to slow down speech recordings without tonal distortion, so listeners can hear streamed speech segments, as they naturally occur in authentic speech, with more processing time to focus on how the sounds are actually being produced – including connected speech features, which are usually difficult for L2 English users to notice and process due to the speed of naturally occurring speech. Recordings can be slowed to any desired speed – in the following tests in this study, slowed speeds of 80%, 60%, 50% and 40% were applied. Speeds of 80% and 60% were deemed appropriate but subjects noted that at a speed of 40%, recordings seemed to sound unnatural or distorted (due to technical problems mentioned earlier) and in some cases distracted the listeners from the semantic content. This is why 40% was no longer applied in Test 3, 4 and 5, with Test 4 and 5 not slowing down extracts below 60%.

The slow-down tool can be used by lower-level to higher-level L2 English language learners who wish to work with L1 English speech for both receptive and productive purposes. Research questions 1 and 2 tested this specifically:

1. Is the speech slow-down facility effective in improving listeners' speech reception?
2. Is the speech slow-down facility effective in increasing the intelligibility of speakers' pronunciation?

¹⁴⁸ TSM = Time-Scale Modification (see Lawlor and Fagan, 1999 for a detailed explanation of TSM).

It can be used for both segmental and suprasegmental¹⁴⁹ work, to access the speech signal to make it more intelligible and to ascertain how the sounds are reproduced by L1 English speakers in the stream of connected speech. While Cauldwell (2005) also noted that this can in fact ‘bring[s] with it problems of idiosyncrasy, context-boundness, and the dangers of over-generalising from the single – possibly unique – instance’, these issues were avoided when designing the training materials for this study.

The slow-down can be used by researchers and practitioners in the fields of Applied Linguistics, Phonetics and other areas of Linguistics. However, it still requires a user-interface and more teaching materials before it can be used commercially. Because the slow-down facility is a self-access tool which can be manipulated by the user to any desired slowed speech rate, it is in line with developments in CALL which aim to enable language learners to use the technology and thus be more in control of their learning (Warschauer and Meskill, 2000: 6-7).

5.2. Using Authentic Speech for Speech Reception and Production

Chapters 3 and 3 have given a number of reasons why teaching materials using scripted speech with actors and/or using only RP or GA pronunciation models are not the most suitable for teaching intelligible pronunciation for EIC. Other pronunciation models, both non-standard L1 and L2 varieties, should be included in the English language classroom – depending of course on the needs and speech contexts of the

¹⁴⁹ PhD research has been completed in this area by DIT colleague Marty Meinardi (2006).

learners involved. For receptive and accommodative purposes, Jenkins (2000: 190) states that learners of English should be exposed to a wide variety of accents – both L1 and L2. Research question explores this:

5. Can experience with L2 accents affect how intelligible L1 and L2 users find such speech?

Smith and Bisazza (1982: 269) also believe that familiarity with a number of varieties of English is necessary for comprehension and that learners should be exposed to both L1 and L2 varieties to increase intelligibility and communicative competence. There are a growing number of ELT publications which include authentic English for L2 learners, such as Cauldwell's (2003) *Streaming Speech* (see the review of this in section 3.11 in this chapter) and Thorne's (2006) *Real Lives, Real Listening* book series. This growth in the availability of authentic materials in ELT is matched by an increase in the use of authentic English speech in the English language classroom by teachers. For example, Sifakis and Sougari (2005: 479) found in their study of English language teachers in Greece that 32% of respondents used authentic L1 English conversations 'very often' while 29% used them 'regularly'.

Listening goes hand in hand with speaking in the language classroom. If a learner cannot 'hear' or decipher particular sounds in the L2, then it will be extremely difficult for him/her to produce those targeted sounds accurately. Research question 3 refers to this:

3. Can a pronunciation training programme focused on individual subjects' problematic English phonemes increase their spoken intelligibility?

In Test 5, where question 3 was addressed, participants in the Test and Control Groups received pronunciation training programmes where they were aurally exposed to their individual problematic phonemes 3 times in a number of ways (in individual words, in phrase and in sentences, with the targeted phonemes at the start of words, middle of words and end of words).

Cauldwell (2002a) states that traditional phonology does not include the true form of natural English as spoken by L1 English users - that is, 'messy' speech with features of connected speech, notably elision, assimilation and weak forms. Instead, ESL/EFL classroom listening materials tend to use 'tidy forms of speech' (ibid: 2) which do not accurately reflect what students encounter when they enter the 'real' world of natural spoken English. He outlines one of the most pertinent problems with this - in streamed speech, word forms change and can be extremely difficult for students to distinguish. Cauldwell (ibid) also believes that traditional approaches to listening in the ESL/EFL classroom are ineffective for equipping students to be more competent listeners, and thus more competent and effective communicators in English. Such approaches tend to focus more on other strategies such as discussion, writing and grammar and the written exercises have a tendency to 'distract' students while not dealing adequately with the actual recordings of streamed speech (ibid). In this study, Test 5 in particular, pronunciation training was targeted specifically to individual subjects' problematic phonemes by enabling subjects to hear the phonemes produced a number of times in a number of ways, directly addressing the problematic phenomena by allowing subjects to focus on those aspects and practice them orally in a very precise way (speech production through repetitions). Previous studies carried out by the author and another

colleague (Marty Meinardi, who completed doctoral research¹⁵⁰ in the area) ascertained the effectiveness of the slow-down tool for aiding L2 users when listening to English as spoken by L1 users – streamed, connected, ‘messy’ speech. This led the author to the current methodology applied in this study – to apply a more realistic-sounding pronunciation model using an intelligible, non-prestige L1 speaker who spoke at a natural speaking rate and included elements of naturally-produced L1 speech, such as elisions, assimilations and weak forms, so subjects could hear the way English speech is produced naturally by L1 speakers and attempt to produce speech in the same/a similar way, as a means of increasing their intelligibility and fluency – this was implemented in the pronunciation training material in Test 5.

Brown (1990) notes that of the many listening materials currently available, the most effective and useful for the foreign student are those that include a wide variety of speech from real situations, by different speakers. This helps to prepare students for when they face L1 English speakers in the ‘real’ world. However, she only refers here to L1 English users, whereas listening materials should, and many do, also include the voices of BESs and L2 English users, as these reflect the range of English speakers commonly encountered today. It is obvious here that the term ‘authenticity’ when referring to speech should be comprehensively defined for ELT. According to Prodromou (1998: 266) the word ‘authenticity’ in terms of speech should incorporate L2 English users using their language variety in their culture or speech contexts: ‘What is real for the native speaker may also be real, say, for the learner studying in Britain, but it may be unreal for the EFL learner in Greece and surreal for the ESL learner in Calcutta’. It is important that ELT materials reflect the world of the L2

¹⁵⁰ Meinardi, M. 2007. ‘The use of ‘real’ English in language learning: making authentic NS speech accessible through a novel digital slow-down tool’. Dublin: Dublin Institute of Technology.

English user – in all English speech contexts: EFL, ESL and international contexts.

5.3. Training in Receptive Strategies Using Authentic Speech

The goal of an EFL/ESL listening class should be, ‘to make students familiar and comfortable with the real-time acoustic blur of the stream of speech, and the way in which this stream is shaped by speakers to communicate meanings in all contexts’ (Cauldwell, 2002a: 8). While more natural recordings are being used, particularly at upper levels, teachers are not informing their students about the features of fast spontaneous speech (Cauldwell, 2002b: 3). Cauldwell (ibid) suggests that in order to bridge this gap between what learners hear in the classroom and what they actually experience in the real world, EFL teachers need to be able to give an adequate description of the features of fast spontaneous speech, so that learners are aware of what they have to aspire to, in order to be better listeners of English (ibid). It is his assertion that this should be integrated into EFL teacher-training. He believes that in order to adequately address the needs of learners for listening to natural spoken English, a phonology incorporating the features of streamed speech needs to be developed along with a means for its application: ‘a description of fast everyday spontaneous speech which aids the teaching of listening and comprises a goal, a set of items to teach, a methodology, and a technology for teaching it’ (2002a: 3). One technology for teaching speech features could be the slow-down tool as used in this study.

Cauldwell (2002b: 5) asserts that EFL teachers should provide small groups of learners with access to recorded speech acts, which they control - meaning they can

re-hear it as often as they need, thereby focussing on their own needs – Test and Control Group members in Test 5 had this opportunity through the pronunciation training packages. By getting learners to report back to which parts of the recording they found difficult or easy will inform (and may surprise) the EFL teacher of students' perception and understanding difficulties. EFL teachers, through adequate training, should be able to observe and explain the features of fast speech and thus teach English language learners how to be better listeners by improving students' perception and comprehension in a similar way to L1 English users: 'the skill of understanding without attending to every word is a goal to be reached, not a means of getting there' (ibid: 2). This 'fast speech phonology' should include notable features of fast speech, including elision, assimilation, sentence stress and tone units (ibid: 4-5). Brown (1990: 158) points out the importance of slow speech¹⁵¹ for students in the early stages of learning English. She (ibid) continues by making the point that it is of utmost importance in terms of speech reception that as students progress, they move beyond careful and slow speech to more natural forms, which will enable them to cope with streamed speech as it is naturally spoken by L1 English speakers – Test 5 Control and Test Groups were given the opportunity to hear natural speech (apart from the slowed version for the Test Group) in their pronunciation training programmes. This is one of the proposed applications of the slow-down tool - that students of all levels can control the pace of their listening progress by listening to L1 English speakers using natural, streamed English while allowing them to slow down the speech (without tonal distortion) if they need to 'catch' unstressed forms, such as elisions and other reductions. Brown (1990: 160) notes that of the many listening materials currently available, the most effective and useful for the foreign student are

¹⁵¹ By 'slow speech' Brown (1990: 158) means 'slowly enunciated speech' produced by a speaker.

those that include a wide variety of speech drawn from real situations and different speakers.

According to Field (2003: 329), apart from locating lexical boundaries, another problem for L2 listeners is that words in connected speech are modified so they do not resemble their standard citation forms. Field (ibid: 332) discusses features such as reduced forms, assimilation and elision and suggests methods for EFL learners to overcome them, notably 'to be aware of them, and to be prepared to practise them intensively if there are signs that they are preventing learners from identifying familiar words because of the special conditions of connected speech'.

The post-listening phase should include oral and aural work on sections of notably fast extracts from recordings to improve students' perception skills. Cauldwell (2002b: 6) states this is necessary, as 'perception – particularly the ability to hold sounds in short term memory long enough to inspect them for meaning – is a skill that is a prerequisite for understanding'. For this reason, it is important that students get adequate time with the recordings themselves, so they can hear listening passages as often as needed – Test and Control Group subjects in test 5 had this opportunity with the pronunciation training packages. The focus of the listening task, according to Cauldwell (ibid), should directly relate to the central meaning of the recording while also challenging the listeners in terms of perception.

5.4. Conclusion

To facilitate oral and aural reception, materials and tools which help access and understand ‘the realities of fast speech’ should be available to language learners. The hypothesis is that the slow-down speech software tested in this study can be applied in ELT for this purpose. This chapter and the previous chapter – Chapter 4 – have highlighted the fact that traditional ELT practices for teaching receptive and productive strategies are inadequate to prepare the L2 speaker to use English effectively outside of the classroom. However, new ELT materials are addressing these issues and also utilising authentic speech to prepare L2 users for encountering fast, messy L1 and L2 English speech in a variety of accents. This study tests a unique speech tool which can make authentic, fast, messy speech more accessible by slowing it down without distorting the speech signal. Chapter 2 reviewed current pronunciation pedagogy, highlighted problematic aspects of this and offered some solutions to these problems, namely how to create a more suitable pronunciation model for EIC. Test 5 in Chapter 6 does not offer a specific pronunciation model to subjects – each L2 user subject’s individual English pronunciation difficulties are diagnosed - specifically phoneme production - and a pronunciation training programme is specifically designed to target each subject’s specific problems while applying the slow-down tool to test its effectiveness for increasing L2 English speech production. While L2 English users’ strengths are acknowledged in this study, attempts are made to identify what communicative problems L2 users have when communicating with both L1 and L2 users (EIC) and how these problems can be overcome without subscribing to a standard form of pronunciation as offered in traditional ELT pedagogy. Chapter 4 tests a speech tool which can be incorporated into CALL software for ELT purposes – specifically focussing on speech reception

and production. The tests in this study include both L1 and L2 English users and investigate where spoken intelligibility is hindered and tries to uncover reasons for this, in order to bridge the communicative gap between L1 and L2 English users and to make EIC more accessible and successful.

Chapter 6 presents a detailed explanation of the research design and methodology of the tests: Tests 1-5 undertaken for this PhD study. The tests include testing speech reception amongst both L1 and L2 English users – Tests 1-4 – before focussing on speech production in Test 5. Tests 2, 3 and 5 include application of the novel speech slow-down tool, to test its effectiveness for increasing speech reception and production amongst both L1 and L2 English users, with the focus mainly on L2 users. Chapter 7 presents the data collection and analysis for the five tests. Chapters 6 and 8 discuss the research findings – how these relate to the existing literature referred to in this and the previous two chapters in terms of similarity or difference. Chapter 9 offers a summary of the study, concluding remarks and ideas for further research beyond the scope of this study, along with the results of two evaluation studies carried out for this study.

CHAPTER 6: RESEARCH DESIGN AND METHODOLOGY

6.1. Introduction

‘While pronunciation is admittedly only one of several factors contributing towards intelligible speech, intelligibility and “error gravity” studies attempting to isolate the role of particular linguistic features relative to others in the determination of intelligibility have consistently pointed to the importance of the pronunciation component’

(Rajadurai, 2007: 88)

This chapter discusses the research design and methodology of the five tests conducted for this study and how the design and methodology changed from test to test in an attempt to create more focussed, informed and effective research inquiry.

The focus of this study is two-fold:

1. to test the effectiveness of the speech slow-down facility for improving L2 English users’ speech production and reception by increasing speech intelligibility
2. to test the effectiveness of a slow-down software-based pronunciation training programme to increase L2 users’ spoken intelligibility

The study aims to answer the following research questions:

1. Is the speech slow-down facility effective in improving listeners’ speech reception?
2. Is the speech slow-down facility effective in increasing the intelligibility of speakers’ pronunciation?
3. Can a pronunciation training programme focused on individual subjects’ problematic English phonemes increase their spoken intelligibility?

4. Are there fewer problems for EIC users in understanding speakers with the same L1 background?
5. Can experience with L2 accents affect how intelligible L1 and L2 users find such speech?

The research involves documenting receptive intelligibility problems when L1 and L2 users are exposed to the English speech of L1 and L2 speakers¹⁵². This is achieved by playing recorded extracts of informal L1 and L2 English speech to L1 and L2 users of English, to observe where intelligibility problems occur and to determine the reasons for this, based on effects of the first languages of both speaker and listener, and other criteria, such as number of years learning/using English, previous exposure to spoken English, gender and so on. Conversation speech is used in an attempt to use speech as authentic as possible for all tests carried out in this study. The study also looks at intelligible speech production, as a means of testing the slow-down with a view to using it for ELT purposes. As was noted from the literature (Chapter 2 specifically), pronunciation is not highly prioritised in ELT classrooms or on EL teacher-training courses. This study aimed to fill a gap in the body of knowledge in ELT on pronunciation with particular focus on intelligibility. The study also investigates whether there are fewer problems for L2 users in understanding speakers of the same or similar L1 background. This leads to the second objective of the research, which is to determine empirically whether incorporating the slow-down tool in a pronunciation training package can increase an L2 English speaker's intelligibility by focussing on specific phoneme production.

¹⁵² This differs from Jenkins' research to determine a lingua franca core in that she included L2 speakers only. As L1 users are also deemed to be members of the international English-speaking community, they are included in this study and the title of this study reflects this.

6.2. Overview of Study Tests 1, 2, 3, 4 and 5

The tests involved documenting speech reception (of L1 and L2 users) by L2 and a small number of L1 speakers of English and later, speech production of L2 users only, to determine problematic areas of pronunciation focusing on phonemes in particular. The first test analysed the reception of L2 English speech (by an L1 Spanish speaker) to a variety of L2 users. Later tests (Tests 2-5) involved the application of the slow-down facility - speech software which can slow down speech at any desired speed without tonal distortion. The graph below outlines the 88 subjects' involved and the procedures used to gather data for each of the five tests which were carried out over a three year period.

Test 1	Test 2	Test 3	Test 4	Test 5
L2→L2	L1→L2	L1→L1 & L2	L2↔L2	L2↔L2 L1→L2 L2↔L2 L2→L1
Receptive intelligibility and overall comprehension	Receptive intelligibility testing the slow-down tool	Receptive intelligibility testing the slow-down tool	Productive and receptive intelligibility testing the slow-down tool	Productive intelligibility testing the slow-down tool
45 subjects	11 subjects	14 subjects	4 subjects	14 subjects + 4 judges

Table 2: Overview of Tests 1-5

Background to Test 1

This study was carried out as part of a wider research project to ascertain if guidelines for English for International Communication (EIC) similar to those of Jenkins (2000) could be drawn up. The researcher looked at various European and other languages to determine where there are phonemic gaps when compared with the set of phonemes

for English. This was mainly done through tables of contrastive phoneme sets and background reading on the various languages involved (Swan and Smith, 2001, Kenworthy, 1987). This was to be aware of particular phonological difficulties for speakers of various L1s when speaking English and to establish the minimum core of phonological items which allow the highest level of intelligibility when such speakers communicate, both productively and receptively, with L1 and L2 users in EIC contexts. Further tests were carried to ascertain receptive intelligibility of L1 and L2 users of English (see Tests 2 and 3).

The study required subjects to listen to an extract of a recording in English of an L1 Spanish female who is a proficient L2 English user. The monologue is an extract taken mid-flow and the speaker speaks in an informal, conversational style. The duration of the recorded extract is approximately fifty-eight seconds.

The students listened to a recording of relaxed speech in English by an L1 Spanish speaker of English and were given a worksheet to complete based on the recording. All comprehension questions on the worksheet were reviewed with the class before the exercise, to ensure subjects understood the questions. The class was asked if they understood and if they had any queries concerning the questions. There were two parts to the worksheet:

- 1) 3 transcription attempts of the same snippet
- 2) Write the answers to 8 comprehension questions based on the entire recording

6.2. Test 1 L2:L2 - L2 User¹⁵³ EIC Intelligibility and Comprehension Study

‘To Investigate Dublin Institute of Technology European Students’ Listening Ability (Intelligibility) When Exposed to a Recording of an L2 (Spanish) Speaker of English’.

Aims of Test 1

This study was carried out as a wider piece of research into receptive intelligibility¹⁵⁴ in EIC contexts. The aim of the study was to uncover what intelligibility problems a selection of L2 English-speaking subjects had when listening to another L2 English speaker, in this case, a Spanish L1 speaker. The study also investigated overall comprehension ability, to determine whether the results paralleled those for intelligibility, to uncover whether there is a link between the two. The test was designed to gain information that would feed into wider research in the area of intelligibility in EIC – where intelligibility breaks down and reasons for this, so guidelines on how this can be avoided in EIC can be drawn up. A short recording of an L1 Spanish speaker of English was played to a number of L2 English-speaking subjects within the Dublin Institute of Technology, Kevin Street.

¹⁵³ The L2 English user in this study is an L1 Spanish speaker.

¹⁵⁴ See Chapter 1, Section 3 for a definition of ‘intelligibility’.

Test 1 Research Design

The research design in this study is a mix of quantitative and qualitative. Test 1 utilises a relatively large number of subjects (45 subjects) and is mainly quantitative while Tests 2-5 utilise less subjects (11, 14, 4 and 14 respectively) but investigate at a deeper level, hence these tests are more qualitative in nature.

The first test in this study looked at overall comprehension (tested through comprehension questions based on the entire recording) as well as intelligibility of a selected extract from a recording. However, in this test, the speech was not slowed down. Tests 2-5 focus on speech intelligibility - Tests 2 and 3 tested the effects of speech rate (100%, 80%, 60% and 50%) on intelligibility for speech reception while Test 5 tested the effects of speech rate on intelligibility for speech production. This final test applies the slow-down speech tool to slow pronunciation lessons based on particular phonemes (deemed problematic for the individual L2 users) to speeds of 80% and 60%, allowing the user to hear the phonemes as they are produced by an intelligible L1 Hiberno-English user anticipating that this would increase their spoken intelligibility as judged by four L1 English-using judges. As MacCarthy (1978: 15) notes, adequate speech reception must be achieved before an L2 user is required to produce intelligible phonemes of the new language being learnt, '[I]t is important to remember... that before learners can be asked to produce the sounds of a new language, they need to learn to perceive them, which means "paying attention to them and noticing things about them"'. Jones and Evans (1995: 245) confirm this stance by stating that the perception of the auditory character of a language, 'is usually a learner's first conscious contact with the phonology of a second language: students

are often able to describe or imitate the way a language “sounds” before they are actually able to speak it’.

Methodology for Test 1

A transcription (x3) exercise was designed to gauge subjects’ bottom-up processing, to note if they could phonologically decipher what they heard and then transcribe for the researcher to analyse. The researcher wished to compare the findings of the two test types (transcription and comprehension) to see if there are any links between the two (bottom-up and top-down processing) in terms of subjects’ performance and to offer reasons for results based on these two test types.

Test 1 Subjects

The subjects in this test came from 3 classes within the third level institute where this researcher is based and so were largely a population of convenience, as the researcher being their tutor, had access to them. The 10 subjects in Group 1 are from in the first year of a full-time, four-year degree course with focuses on Business English and related linguistic skills. These students must achieve a minimum grade of 6 in the IELTS exam¹⁵⁵ (with a 6.0 in the written section) or equivalent¹⁵⁶ for entry to this course, which implies all Group 1 subjects will have a reasonable level of English. As this is not required of Erasmus students, there can be greater diversity in their levels with some students at a much lower level than those in Group 1. The 14 subjects in

¹⁵⁵ According to the official IELTS handbook, a score of 6 denotes a ‘competent user’ and is described as, ‘has generally effective command of the language despite some inaccuracies, inappropriacies and misunderstandings. Can use and understand fairly complex language, particularly in familiar situations’.

¹⁵⁶ Minimum grade B in Cambridge Certificate Exam or grade 550 on TOFEL-based exam/213 on the computer-based exam or minimum of grade B2 on Test of Intercultural English (TIE).

Group 2 are Erasmus students from various disciplines and years in college, are attending for either one or two semesters and receive two hours of English language instruction per week. While Group 2 subjects are from the same Lower Intermediate class, there is some disparity in student ability and competence in English. Group 3 makes up almost half of the study's subjects (21 out of 45) and the subjects are from all disciplines and years across the third-level institute and again, there is some difference in English language level within the class.

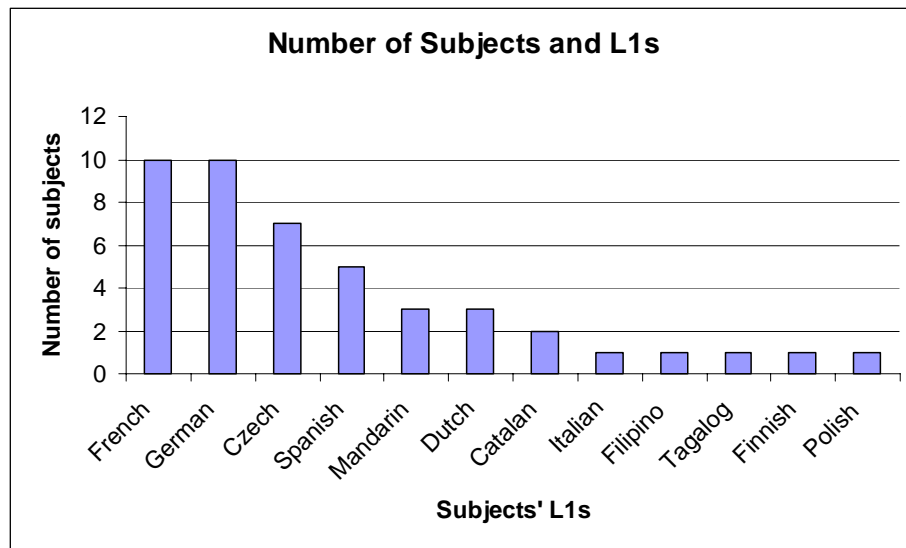


Figure 5: Test 1 Subjects and Their L1s

The overall ratio of males to females in the study is 18:27. The ratio breakdown for the different language families and of males to females is as follows:

German: 4:6; French: 4:6; Czech: 3: 4, Spanish: 5:2; Chinese: 0:3; Italian: 1:0; Dutch: 1:2, Finnish: 0:1, Filipino: 0:1, Tagalog: 0:1 and Polish: 0:1. While German, French, Czech, Spanish and Dutch are represented by members of both sexes, Italian is represented by just one male, Chinese by three females and Dutch, Polish, Finnish, Filipino and Tagalog by one female each.

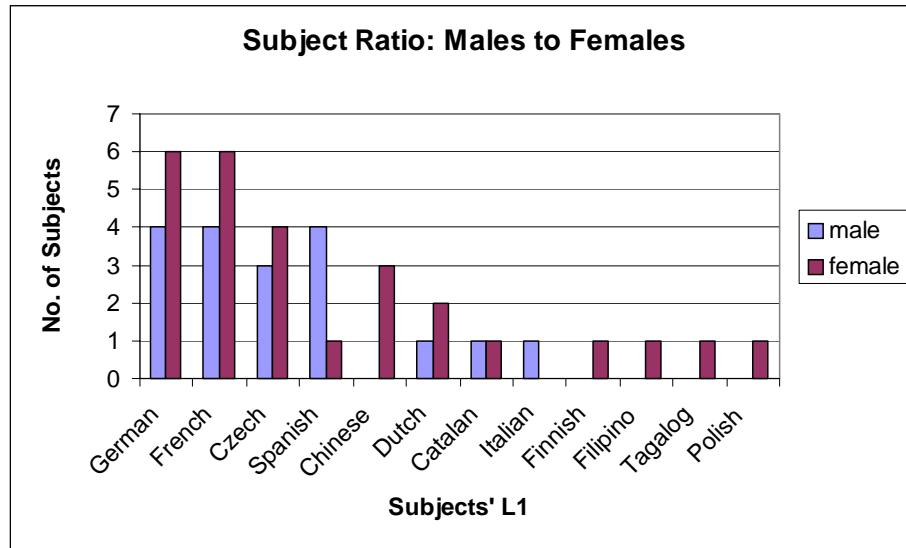


Figure 6: Test 1 Ratio of Male to Female Subjects

More research including members of both sexes from these language backgrounds needs to be undertaken to reflect trends and indications¹⁵⁷ of particular L1 users of English. Fluency in other language(s) was also noted, with three subjects being bilingual speakers – a French male who is fluent in Hebrew, along with his L1, French, two Filipino females who are bilingual in English and their L1s – one of which is Filipino, the other subject’s L1 being Tagalog. The age range of the subjects is from 18-28, with the average age at 22 years.

The subjects are grouped according to which class they are in, eventhough there are mixed language levels within each class, particularly Groups 2 and 3. The language level amongst members of Group 1 is more uniform due to criteria for entry to the class, which requires an overall IELTS score of 6. As this was the researcher’s first research test and groups were not compared according to test or control, the division of subjects was not necessary. The results are discussed in relation to which group individual subjects belonged to, but this was in an attempt to find reasons to support

¹⁵⁷ This is not a statistical survey

the research findings, such as increased speech reception is due to an individual's language level. Rather than drawing inferences from the data in terms of subject groups, the researcher was more interested in similarity or difference of subjects' L1s to English, which was not related to grouping.

Procedure and Rationale for Test 1

The test stages are represented in the table below:

Listening Stages	Procedure
1) Extract A – 1 st exposure ('cold')	1 st Transcription
2) Whole passage	Comprehension Questions
3) Extract A – 2 nd exposure	2 nd Transcription
4) Extract A – 3 rd exposure	3 rd Transcription

Table 3: Test 1 Procedure

- i) Students listened to a seven-second extract from the recording, with no tune-in time and transcribed what they heard. This tested the initial intelligibility level of the Spanish L2 English speaker as judged by the subjects, which were compared with later attempts at transcribing the same extract after some tune-in time for subjects to adapt to the speaker's accent, speed and so forth. This indicated if tune-in time to a speaker's voice/accent could increase intelligibility and also determined the cumulative effects of repeated exposure - how much more of an aural signal a listener could correctly process/recognise on a second and third hearing
- ii) Subjects heard the complete recorded monologue and wrote answers to eight comprehension questions on a worksheet to gauge their overall

understanding of the extract, to determine if context could also aid intelligibility.

- iii) Subjects listened to the extract a second time and transcribed what they heard, underlining any additional words not transcribed on the first attempt
- iv) Extract was played a third and final time. Subjects transcribed what they heard, again underlining any extra words transcribed on this attempt.

Rationale for Choice of Spanish L1 Speaker's Extract

Spanish L1 Speaker's Extract: 'He's a permanent; he has been here for donkeys' years and he, every year he asks me the same thing and I hate when people play thick'.

The extract was mainly chosen because it is the only sentence in the entire extract which the speaker produces as a full, comprehensive sentence which is not reliant on further contextual details for the listener to grasp what is being said. While the researcher is aware that there are colloquial phrases ('donkeys' years' and 'play thick') in the extract, these are included to investigate whether the subjects can accurately transcribe them, regardless of whether they are aware of the colloquialisms or not – this tests intelligibility of specific words (from the 3 transcription attempts) compared with overall comprehension (from the comprehension questions).

The phoneme sets of Spanish and English were compared to note any anticipated pronunciation problems the Spanish speaker could display. This indicated particular

phonemes to observe - to note if the Spanish L1 speaker pronounced them intelligibly or if her pronunciation could cause intelligibility problems for some listeners. The researcher repeatedly listened to the recording to ascertain if the pronunciation of any words/segments could cause receptive intelligibility problems.

Problems noted in the recording of the Spanish speaker include:

- a) Difficulty in pronunciation of /ʒ@/ in words like *here* and *year/years*. The speaker tended to elongate this sound more than an L1 English speaker. This did not however seem to hinder intelligibility on the part of the listener.
- b) Pronunciation of English /h/. Spanish L2 speakers of English can sometimes pronounce /h/ like *ch* in Gaelic, such as Gaelic *loch*, or German, such as *noch*. In the recording, the Spanish speaker was observed pronouncing the /h/ sound in the following words: *he* and *has*. However, while such pronunciation may cause intelligibility problems, the /h/ sound was more often pronounced equivalent to the English sound in words such as *he*, *here* and *hate*. In the researcher's opinion, while /h/ is sometimes pronounced like *ch* in English by Spanish L1 speakers, for this particular speaker it more often sounds like /h/ and therefore did not cause any significant intelligibility problems.
- c) /j/ pronounced as /dʒ/, causing intelligibility problems. It was noted just once in the recording that the Spanish speaker says, 'you' like 'Jew', as in 'you know?' Most L1 users of English, particularly Hiberno-English speakers would pronounce this as /dʒun@U/ in connected speech. Based on the subjects' transcriptions, this sound was not deemed to be an obstacle to intelligibility for the subjects in this study.

Problems When L2 Users Listen to L1 Spanish Speaker of English

1) **L1 influence:** Features of the Spanish language which are transferred to the speaker's English.

Two types of potential L1-influenced errors: i and ii.

i) Particular phonemes present in Spanish but not in English¹⁵⁸ – these unfamiliar sounds may be unintelligible, particularly to a non-Romance L1-using listener.

ii) Difficulty on part of speaker to produce English phonemes not present in Spanish – English words may be pronounced incorrectly / unintelligibly.

2) **Lexicon:** English vocabulary items

Three types of potential lexical errors: i, ii and iii.

i) The speaker's words are incomprehensible to the listener, most probably due to speed of utterance or speaker's accent.

ii) The speaker uses English words unknown to the listener – speaker may have a broader range of lexical items in English than the listener.

iii) The speaker uses words incorrectly – not suitable to the context or a false friend¹⁵⁹, the listener may not comprehend such words as they are not anticipated.

3) **Syntax:** rules governing the order in which words appear in a sentence

Two types of potential syntactic errors: i and ii.

i) The speaker's use is incorrect, confusing the listener.

ii) The speaker's use is more advanced, so the listener has difficulty following what is being said.

4) **Colloquialism:** a word or phrase used in familiar or ordinary conversation – not formal or literary.

¹⁵⁸ Such as / / and /x/

¹⁵⁹ When a pair of words from two different languages are written or pronounced similarly but differ in meaning.

The speaker uses words/phrases familiar in L1 lexicon of particular area/country but which are unknown to listener.

5) **Suprasegmental features:** phonological features of a speaker's pronunciation - stress, rhythm and intonation. In this test, this category also includes features of connected speech.

Two types of potential suprasegmental errors: i and ii.

i) The speaker's use of stress, rhythm, intonation and features of connected speech may be incorrect or misplaced, making intelligibility difficult for the listener.

ii) The speaker's use of stress, rhythm, intonation and features of connected speech may be new or unknown to the listener, who has difficulty recognising what is being said.

6) **Non-Specific:** Problems which cannot be identified as any of the above and could include listener being unable to hear recording due to poor hearing or noise interference, lack of subject attention or interest and so forth.

When there is more than one option for a specific cause, as in the case of L1 influence, suprasegmental features, lexicon and syntax, the difficulty is cited as 'suprasegmental ii', or 'L1 i' (L1 influence), for example, to indicate the exact nature of the difficulty. This is determined by analysing words/sections from the recording which the student omitted or wrote incorrectly. The cause of some errors and omissions is difficult to trace or determine conclusively, particularly when few or no words have been transcribed. In such cases, all possible reasons are offered. In cases where this occurs, 'non-specific' is cited. For all subjects, 'no T-I'¹⁶⁰ was noted as the main cause of perception difficulty during the first extract exposure, as the students

¹⁶⁰ T-I = tune-in time

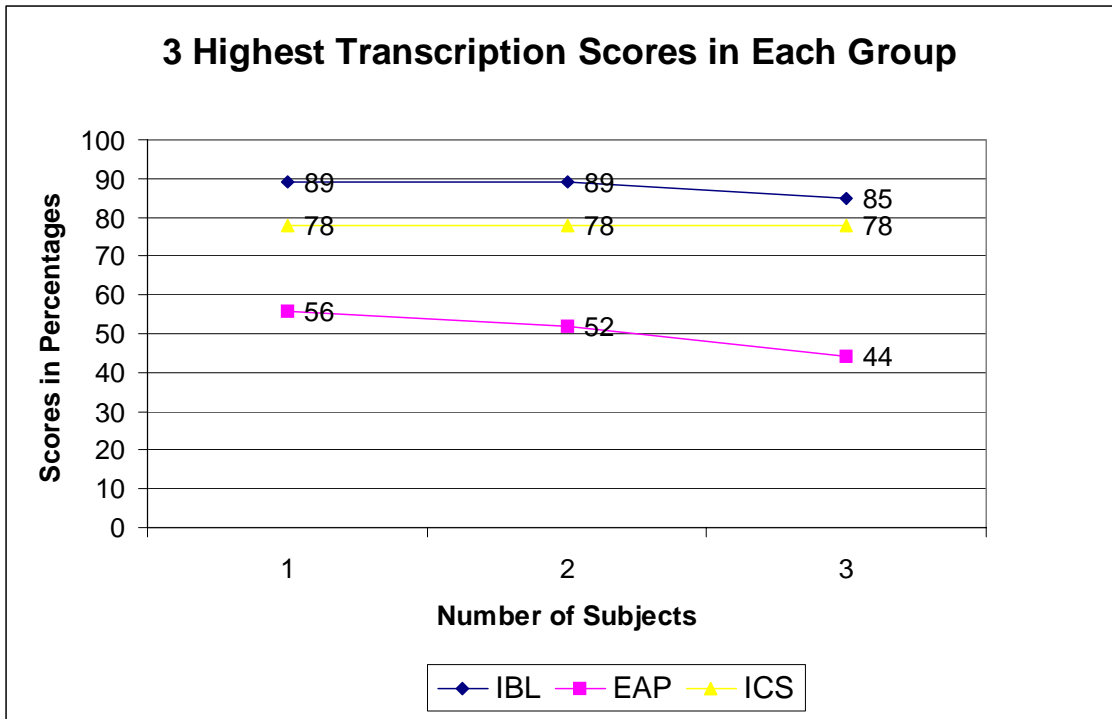


Figure 8: Test 1 Top 3 Transcription Scores; Group 1 = blue, Group 2 = pink, Group 3 = yellow

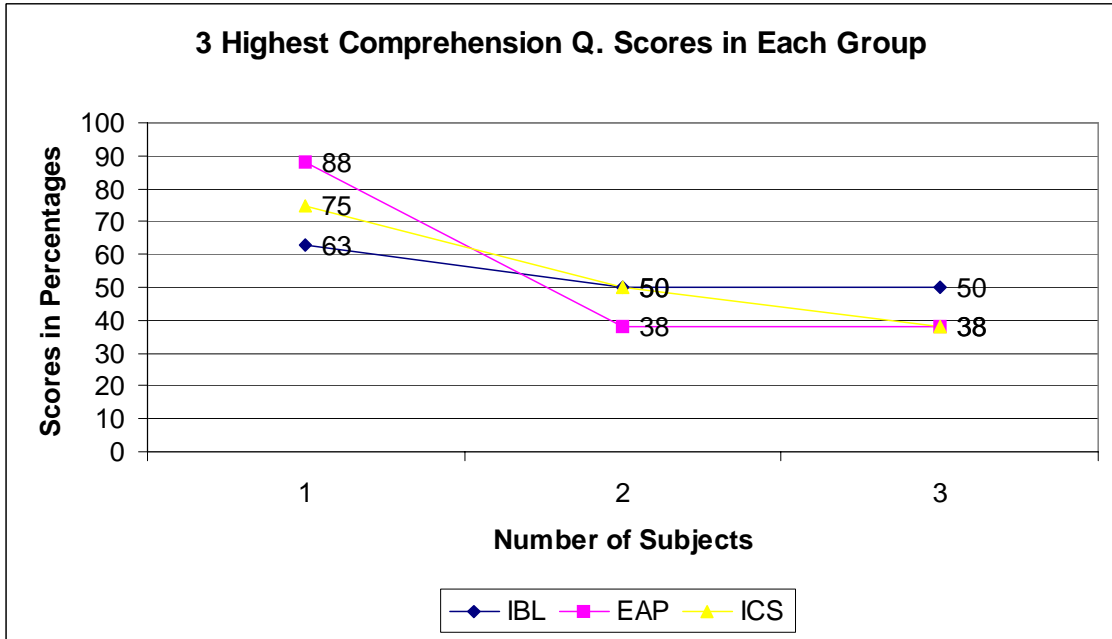


Figure 9: Test 1 Top 3 Comprehension Scores Group 1 = blue, Group 2 = pink, Group 3 = yellow

Number of Subjects in Each Group	Highest Transcription Scores	Lowest Transcription Scores	Highest Comprehension Question Scores	Lowest Comprehension Question Scores
Group 1: 10	89(×2)	15	63	
	85	22	50(×3)	13
	67	26(×2)	38(×2)	25(×3)
Group 2: 14		0(×3)		0(×5)
	56, 52, 44	4(×2)	88	13(×5)
		11(×2)	38(×2)	25
Group 3: 21	78(×3)	0(×2)	75	0(×6)
	56(×2),	7(×4)	50	13(×4)
	41(×2)	11	38(×2)	25(×7)

Table 4: Test 1 Highest & Lowest Comprehension Scores for Each of 3 Groups
(×2) = scored by 2 subjects, (×3) = scored by 3 subjects, and so on

First, the transcription scores are presented, then the scores for the comprehension questions.

Transcription Results

No. Subjects in Each Group	Highest Transcription Scores	Lowest Transcription Scores
Group 1: 10	89(×2)	15
	85	22
	67	26(×2)
Group 2: 14	56	0(×3)
	52	4(×2)
	44	11(×2)
Group 3: 21	78(×3)	0(×2)
	56(×2)	7(×4)
	41(×2)	11

Table 5: Test 1 Highest & Lowest Transcription Scores for Each of 3 Groups

The highest transcription score, 89%, was achieved by two subjects, one Mandarin L1 speaker, the other a Polish L1 speaker. A Dutch L1 speaker gained the second highest score at 85%. All three students are from Group 1 and are female. The third highest score, 78%, was achieved by three female students from Group 3 – one Filipino, one German and one Dutch L1-speaking subject respectively. The highest score for transcription from a member of Group 2 was markedly lower than the other two groups, at 56%. The lowest scores in the transcription tests were among Czech, French, Spanish and Catalan (just one) L1 speakers, all of whom are from Groups 2 or 3. Overall, twenty-four people, 53% of all subjects wrote words (correctly or incorrectly) for *all three* transcriptions – seven people or 29% of the entire subjects are from Group 1 (7 people = 70% of total number of Group 1), five people in the overall test, or 21% of subjects are from Group 2 (5 people = 36% of total number of Group 2) and twelve people or 50% of entire test subjects are from Group 3 (12 people = 57% of total number of Group 3). Five participants (11% of all subjects) failed to transcribe any words for all three transcription attempts - two Spanish males and one French female from Group 2 and two L1 Czech users from Group 3 - one male and one female.

Comprehension Questions Results

No. Subjects in Each Group	Highest Comprehension Question Scores	Lowest Comprehension Question Scores
Group 1: 10	63 50(×3) 38(×2)	13, 25(×3)
Group 2: 14	88 38(×2)	0(×5) 13(×5) 25
Group 3: 21	75 50 38(×2)	0(×6) 13(×4) 25(×7)

Table 6: Test 1 Highest & Lowest Comprehension Scores for Each of the 3 Groups

The highest comprehension score of 88% was by a German male subject from Group 2. The second highest score was 75% from a Dutch female in Group 3. In third place, a score of 63% was attained by a Chinese female from Group 1. The joint fourth highest score was 50% from three subjects in Group 1 and one from Group 3. All of the highest scoring subjects are all female and from different L1 backgrounds – Polish, German, French (Group 1) and French (Group 3).

Overall, Group 2 performed the worst of the three groups in the Comprehension Question test. The lowest score from Group 1 was 13% while a score of 0%¹⁶¹ was recorded for five subjects from Group 2 – 36% of the class and six from Group 3 – 29% of that class.

¹⁶¹ Possible reasons for this offered in the Discussions Section

Test 1 Observations

Literature in the field (Jenkins, 2000) suggests that the closer a language is to English, in terms of the phoneme inventory, the more intelligible English is, and this theory was supported in this study¹⁶² - this study found that English is more intelligible and receptive to L1 Germanic speakers than those from a Romance or other language background: the highest comprehension questions score of 88% was by a German male subject while the second highest score was 75% from a Dutch female. A Dutch L1 speaker gained the second highest transcription score overall at 85% while the third highest transcription score, 78%, achieved by three subjects included one German and one Dutch L1-speaking subject respectively.

Although the recorded speaker's L1 is Spanish, Spanish and other Romance L1 speakers (French and Italian) performed much worse than German and Dutch subjects. It does raise the query why Romance L1 speakers in the study, namely Spanish, French and Italian subjects did not achieve higher scores when listening to the speech of a fellow L1 Romance (Spanish) speaker speaking English. Some reasons for this observation are offered in the Discussion Section of this study. Other findings support Field's (2003) observation that intelligibility breakdown can be caused at a number of levels, such as:

- a) phonemic: unable to distinguish between 'thick' and 'sick', for example
- b) lexical: unable to recognise a spoken word form or a word is unknown to the listener

¹⁶² See following section for results

c) syntactic: unable to recognise semantic implications of /v/ and /ɛʃn/ in *I've been*, which Field identifies as a semantic problem.

The study also supported the observation that the more exposure to spoken English and the higher the level of English a subject has, the less intelligibility problems s/he is likely to experience: the highest transcription scores were achieved by Group 1 members who all have an adequate level of English, one subject (two subjects achieved the same highest transcription score) with the highest overall transcription score is a fluent speaker of English who is married to an L1 English speaker and who uses English predominantly in her daily life in Ireland. The subject with the second highest overall transcription score is a fluent speaker of English who has lived in the US. The two subjects with the third highest transcription scores include one fluent speaker of English who has used English since childhood and another subject who has been using English for over half her life and who regularly uses English with her L1-English speaking friends and who studied many of her college courses in Germany through English. The highest transcription scorer was a German male who is currently completing an Masters degree through English and while he does not have an IELTS or other international English examination, this researcher has noted through teaching him that his level of English is of a very high standard. The second highest scorer in the comprehension test was the Dutch female who is a fluent English speaker (she achieved the second highest score in the transcription test also). The third highest score for the comprehension test (one subject) and the fourth highest score (four subjects) were all achieved by Group 1 members who, as has been previously stated, all have achieved a minimum score of 6 in the IELTS exam.

Detailed observations of results garnered from the study shall be divided into two separate parts – first the transcription results and then the comprehension results.

Transcription

Members of Group 1 gained the highest scores in transcription. This may be due to the fact that a score of 6 in the IELTS exam is required for entry to the degree course, ensuring that all Group 1 subjects have a good intermediate level of English, while this is not a requirement for the Erasmus students, some of whom have a lower level of English.

Highest Transcription Score

As previously noted, the highest score of 89% was gained by both a Polish and a Chinese student – both females and from Group 1. While the Polish student speaks no other languages apart from Polish and some English, the Chinese student is a fluent speaker of English and is married to an L1 user of English in Ireland. While there is no obvious determining factor as to the reason for the Polish student achieving such a high grade, the Chinese subject obviously has a lot of exposure to spoken English as she lives with an L1 English speaker. It is interesting to note that these two subjects both achieved a score of 50% for comprehension test – which was only the fourth highest score for that test. Please refer to Appendix 1 for more detailed analysis of Test 1 transcription scores.

Analysis of Transcription Results

The highest scores in Group 2 were noted amongst two German male subjects. While these scores were the highest, they were still much lower than the top scores amongst

members of Group 1. The third highest score, which was approximately half that of the first and second highest scores, was from a French male who is bilingual (L2 is Hebrew). Due to his multilingual status, this subject is more than likely to be much better at listening to spoken English than non-bilingual subjects in the study (Cenoz and Valencia, 1994, Thomas, 1988). Joint fourth highest scores in Group 2, were also very low overall, at 22%, were achieved by a German female and a French male respectively. As already mentioned, German students in Group 2 tend to have a higher level of English than their fellow Group 2 members from a Romance language background. In Group 2, three students failed to transcribe anything in all three attempts – these subjects included two Spanish males and one French female.

Although the speaker on the tape is Spanish, Spanish L1 speakers had some of the lowest scores overall for the transcriptions. As already noted, Spanish does not have many of the corresponding vowel sounds in English, which causes intelligibility problems for Spanish learners of English, both in production and reception of English.

A theory put forward by Field (2003) is supported in this study – that when a learner of English mishears or misunderstands an item, s/he will search in their lexicon for the nearest verbal match – even if the item is inappropriate to the context, ‘once learners have constructed a set of expectations for a text, they are notoriously reluctant to revise them, even if evidence comes in that contradicts them.’¹⁶³ Many students misheard ‘play thick’ as ‘play/playing sick’, ‘become sick’, ‘making sick’, ‘think it’, ‘play it’, ‘play this’ or ‘play thing’, even though these phrases had little or no bearing on the context. The other phrase which caused difficulty for subjects was, ‘donkey

¹⁶³ *ELT Journal* Vol 57/4: 325, Oct 2003.

years', which many students transcribed as, 'twenty years'. One student from the ICS class, a French male, transcribed this phrase as 'don't key hears'¹⁶⁴. Phonetically, this phrase is very close to the original phrase but it does not make linguistic sense and listeners could have been put off by the Spanish speaker's mistake, though if the colloquial phrase was known by subjects, it would more than likely have been correctly transcribed as 'donkey's years'.

It was also noted from inspection of the answersheets that during the transcription exercise, some subjects built up the entire extract over two or three attempts, rather than writing out the extract fully each time. For additional extract exposures, some subjects only listened out for the sections they had missed on a previous attempt, so they just wrote out those sections which they had been waiting to fill due to previously missing or mishearing them.

French subjects also performed poorly overall, even though French is a Romance language, same as Spanish. Again, French lacks many of the vowel sounds present in English, leading to intelligibility problems on the part of French learners of English. Of the three highest scores overall, two subjects are bi/multilingual (in English and an additional language), which would indicate that their receptive abilities in English are greater than non-bilingual (L2 English) students.

¹⁶⁴ Obviously this phenomenon was noted more so with colloquial items which the subjects may be unaware of in English.

Comprehension Questions

The comprehension questions are included in the study to compare subjects' overall comprehension of the recorded extract with their receptive intelligibility of an extract from the extract (determined through transcription), to see if there is a connection between the two results and to offer possible reasons for this. The comprehension test proved to be far more difficult for the subjects than the transcriptions, based on the analysis of results.

Highest Comprehension Scores

The highest score for the comprehension questions was achieved by a German male in Group 2, at 88%. This subject achieved joint fourth best score for transcription, at 56%. The subjects who performed very well at the transcriptions did not tend to repeat the performance for the comprehension questions. The second highest score, 75%, was from Group 3, from a Dutch female. This subject also performed very well at transcription, with her highest score at 78% (third highest overall score). The third best score, 63%, and the highest score in Group 1, was from a female Chinese student who merely achieved 15% in transcription. The fourth highest score, 50% was gained by four subjects, three from Group 1, including the Polish and Chinese female subjects who achieved high grades in transcription and also included a German female. The fourth subject, a French female, with a score of 50% came from Group 3.

While the highest grade came from a member of Group 3, the next highest score in that group was 38%, which was obtained by two subjects – a German and a Spanish, both male. A grade of 38%, fourth highest overall, was also achieved by two subjects in Group 1, one German and one Dutch, both female. While the German female did not perform well in the

transcription, with her highest score being 26%, the Dutch student had gained the second highest overall score for transcription at 85%. It is interesting to note that while the Dutch subject performed significantly well at transcription, her score plummeted for the comprehension questions. This was also the case for the two subjects who scored the highest overall mark in transcriptions – a Polish female and a Chinese female – both achieved a grade of 50% in the comprehension questions, compared with a score of 89% for transcriptions.

Discussion of Results of Test 1

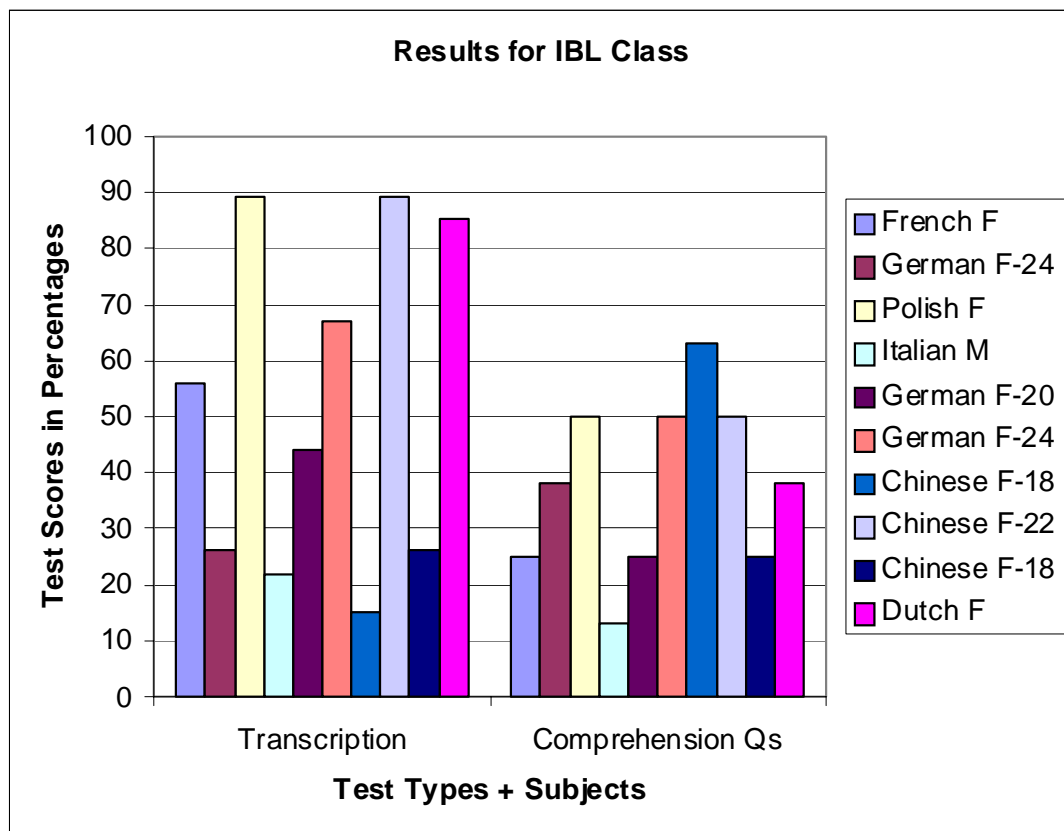


Table 7: Test 1 Transcription & Comprehension Results for Group 3

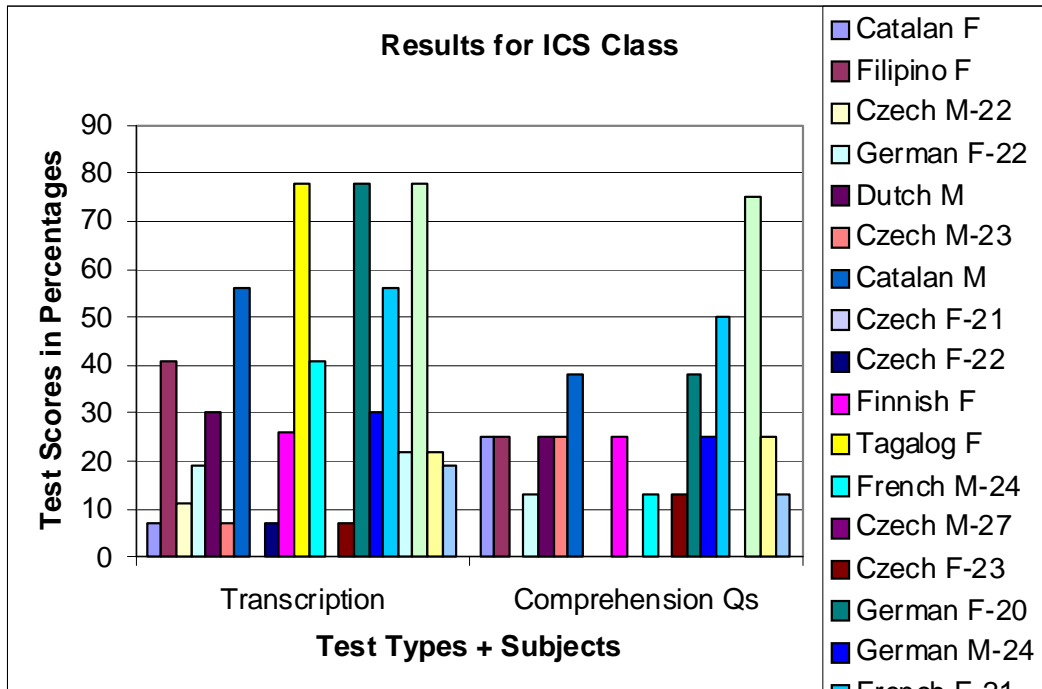


Table 8: Test 1 Transcription & Comprehension Results for Group 3

Although the study is based on a small scale with forty-five subjects, it does highlight some interesting features worthy of note and further investigation. The most obvious result from the study is that subjects who speak a Germanic language as an L1 – German and Dutch, tended to perform significantly better overall than students from a Romance or other L1 background, such as Czech or Chinese, except of course where those subjects’ level of English is higher (predominantly amongst members of Group 1). The most pertinent reason for this is due to the similarity between English and the Germanic languages – they share most of the same phonemes, whereas Romance and other languages share less of the same phonemes with English while also having more phonemes which are not present in English. For this reason, English is more intelligible and receptive to L1 Germanic speakers.

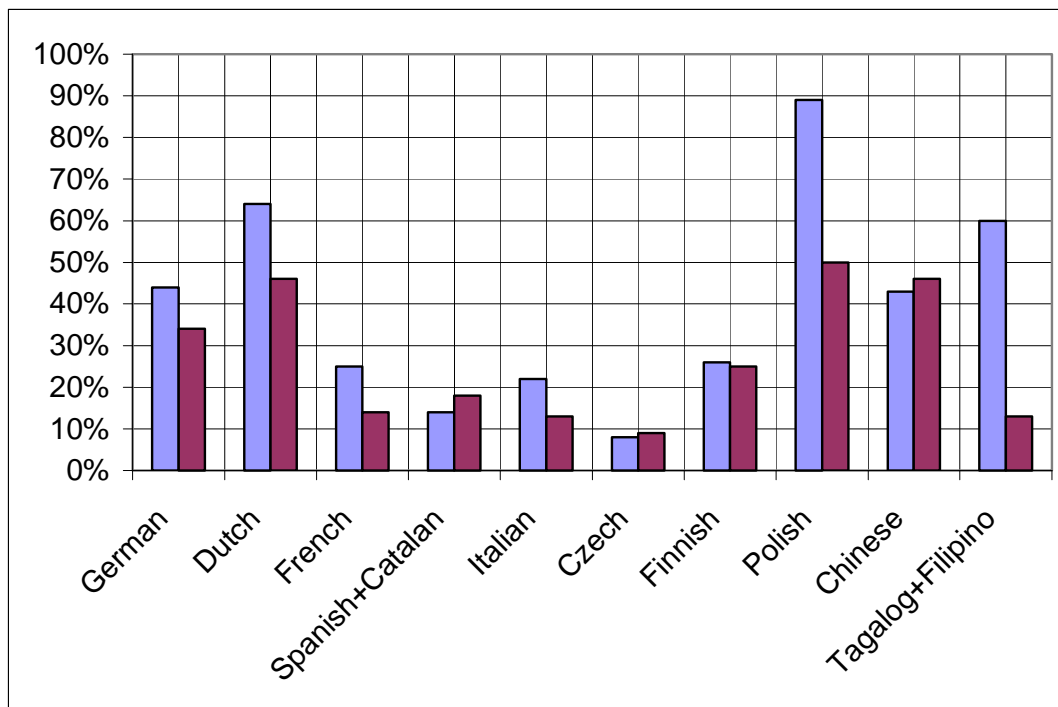


Table 9: Test 1 Subjects' Nationality and Gender Compared With Test Scores

The indication made through this piece of research is that L1 background has less of an effect on intelligibility than the actual language being spoken. In this study, the L1 effect of Spanish has less of an effect on intelligibility than expected and the similarity between English and the subjects' L1 had a greater effect on intelligibility. Of course, much more extensive research would need to be conducted to confirm this, but the results in this study are clear and highlight this interesting detail. Other factors also come into play, such as individual subjects' English learning backgrounds, which have been noted in this study. Individual learning styles and national teaching methods may also be assessed for effect on receptive English intelligibility. As this is a small scale and initial study, these factors were not included but are worthy of future investigation.

The results for transcription bore little resemblance to the comprehension question scores. This highlights the fact that the two activities are different in terms of what they test. While

transcriptions show an ability to hear and process spoken English at speed and write down what has been heard, the comprehension questions involve much more work on the part of the participant – the questions must be read and understood, then the participant must pick out the relevant information in the stream of conversation¹⁶⁵ in order to answer the questions. This study indicates that just because a subject is proficient at listening and transcribing what has been heard, it does not mean that s/he can either:

- a) understand comprehension questions
- b) pick out relevant or specific information from the stream of speech
- c) answer comprehension questions accurately or correctly

It was also noted that Group 1 performed significantly better overall than the other two classes. This is the only group in the study which has a college entry requirement of 6 in the IELTS exam or equivalent. All members of Group 1 have a predetermined level of English, so they are equipped with the language abilities to complete a four-year degree course through English. This gives them a linguistic advantage over the other subjects in the study who are not required to have a certain level of English and who are attending this Irish institute for just one or two semesters, on an Erasmus exchange. However, some subjects from Group 2 and Group 3 also performed very well, without fulfilling the same entry requirement criteria as Group 3.

Bi/multilingual speakers (of languages other than English) performed much better overall than non-bilingual subjects. This result is not surprising, as one would expect such subjects to perform better both receptively and productively than non-bilinguals. However, there are some subjects who are bilingual or fluent in languages other than English – NBESs (non-

¹⁶⁵ Top-down processing skills are also a variable when listening to speech.

bilingual English speakers), as Jenkins (2000) terms them. While there are only four in this study – two Catalan L1 speakers bilingual in Spanish, one French L1 speaker bilingual in Hebrew and one Dutch L1 speaker fluent in Italian, it would be interesting to investigate if NBESs perform better in English language receptive tests than non-bilingual subjects. Li Wei (2000: 24) states that such speakers tend to perform better linguistically than non-bilingual speakers due to greater cognitive capacity, ‘a bilingual has the possibility of more awareness of language and more fluency, flexibility and elaboration in thinking than a monolingual’.

The results, while not conclusive, gave some interesting insights. It is necessary to undertake more research with the same recording and worksheet with more subjects, to see if the results are conclusive or if new/different trends emerge. The current results display the current patterns:

1. Two of the three highest marks for transcription belonged to bilingual English speakers, however, this performance was not repeated for the comprehension questions. This indicates that different processes are at work and that there may not be a correlation between ability to transcribe what is heard and an ability to listen to an extract and correctly answer comprehension questions based on it. More investigation must be done to gain an insight into the possible reasons for this.
2. Despite the fact that the speaker on the tape is Spanish, Spanish and Romance L1 speakers tended to perform worse than students from other language backgrounds – the possible reasons for this need further investigation.

3. As students are mostly French, Spanish and German, it would be interesting to include more subjects from other language backgrounds, to see how this would affect results and broaden the scope of the study.

Test 1 Conclusions

This study indicates that English language learning experience is a strong factor in subjects' receptive abilities, as students from non-Germanic backgrounds, such as Chinese and Polish, performed very well in tests. These students almost always documented a long history of learning and communicating in English, either with L1 users or other L2 users of English. Longer extracts, such as the one in this study (approximately seven seconds) are challenging for subjects, some of whom use the additional exposures to complete transcribing the sections they have previously missed rather than writing out the full extract again. The results of the study also show that there is little correlation between transcription and ability to correctly answer comprehension questions based on a recording. Different cognitive processes are involved and students who perform well in one activity are not guaranteed to repeat the performance in the other.

This study also found that for EIC communication, receptive intelligibility seems to be easier for Germanic L1 speakers than speakers from other language backgrounds. This may be due to the phonemic similarity between English and the Germanic languages, such as German and Dutch. Also, the shared L1 of the English speaker and listener(s) has less effect on receptive intelligibility than similarity of the listener's L1 to English. Although it was expected that subjects with a Romance L1 would display superior receptive skills in English when the speaker was also from a Romance language background, this was not found to be

the case. Similarity of L1 to English was found in this test to be a greater aid to receptive intelligibility than L1 similarity of both speaker and listener. Spanish speakers may also have performed worse in the tests as they may have had less exposure to Spanish speakers of English than to L1 users of English, but this would need more investigation.

This study also supports Field's observation that when a student mishears or does not understand an utterance in context, s/he will then match the misheard item to a known item in their English lexicon store. Typically, in this study, where many students did not know or understand the term 'thick' to mean 'stupid', they invariably transcribed the word 'sick', even though it did not make particular sense in the context in which it was applied.

The results for the transcription test were not in-line with those for the comprehension test, which indicates that different cognitive and linguistic processes are involved and that aptitude in one does not guarantee it in the other. Comprehension involves many issues namely being able to follow what is being said over a longer period of time and understanding the speaker's implied message, rather than simply recognising specific words uttered. The focus on the broader message of the speaker through the comprehension questions was thought to aid subjects to contextualise the speech extract and thus increase/aid intelligibility of the extract but this was not found to be the case. For this reason, further tests will not include comprehension questions as part of the investigation into receptive intelligibility.

Several problems came to light at the end of this test, notably the length of the extract was far too long to test receptive intelligibility, particularly for L2 users of English. Based on personal communication with the psycholinguist, John Field, it was ascertained that the

validity of the transcription part of the test was open to question, as the extract used was far too long and further tests had to be undertaken with this information in mind. Also, it is questionable whether including colloquial phrases which are likely to be unknown to subjects is valid as they may only serve to distract subjects. However, based on bottom-up processing, if subjects accurately hear an extract word for word, then they should be able to transcribe it, even if it does not make comprehensive sense to them. While this study was carried out on a small scale and much more research needs to be conducted for conclusive results, it did highlight some important and noteworthy information. Also, the methodology for future research will be informed and improved based on what was learned from this experiment. The following test, Test 2, took what was learned from Test 1 into consideration and the design was changed to avoid problems or errors that were noted in Test 1, namely the extracts used in Test 2 are much shorter to increase subjects' speech reception and colloquial phrases were avoided. The most noticeable difference between Test 1 and Test 2 is the application of the slow-down speech tool in Test 2 – to test whether its use can increase listeners' speech reception or not.

6.3. Test 2 L1:L2 - L1 Hiberno-English Users¹⁶⁶ EIC Intelligibility Study

'To Investigate Dublin Institute of Technology European Students' Listening Ability (Intelligibility) When Exposed to a Recording of L1 (Irish) Speakers of English'.

¹⁶⁶ This test featured extracts from three Hiberno-English speakers – the Irish variety of English.

Justification for Test 2

The first test in this study investigated overall meaning (comprehension) of an extract from a recorded monologue as well as individual word recognition from an extract within the extract. Due to the ‘wrap-up effect’¹⁶⁷ a listener will get rid of words at the end of a clause or phrase in their STM¹⁶⁸ and simply extract the meaning. The transcription may not accurately reflect what the subjects have heard but a reconstruction of what they think they have heard. The methodology used in Test 1 was found to be in part problematic as transcription exercises were the sole means of determining receptive intelligibility. While Test 1 was undertaken as a valid test, on reflection, it proved to act more as a pilot for Test 2 as it highlighted important aspects of the design which needed to be altered to garner more reliable results. On analysis of Test 1 results it was ascertained that the extract used was too long for the listeners to accurately recall and transcribe. The extract - ‘He’s a permanent; he has been here for donkey years and he, every year he asks me the same thing and I hate when people play thick’ - is not only too long, it is also challenging as it contains idioms¹⁶⁹ which many subjects in Test 1 found almost impossible to recognise semantically, particularly in the stream of connected speech. It would have been more effective and insightful in terms of highlighting receptive intelligibility had the extract been shorter and had not included idiomatic or colloquial phrases. The following test also investigates the application of the slow-down tool¹⁷⁰, which slows down speech without tonal distortion, to ascertain if listeners’ speech reception increases when speech is slowed with a view to enabling more

¹⁶⁷ This term means that listeners normally cannot recall sentences/speech extracts they have heard word-for-word even though they can successfully comprehend the speaker’s implied message – listeners tend to process or wrap-up the individual lexical items and simply extract the meaning - from personal conversation with psycholinguist John Field, 2005

¹⁶⁸ STM = Short Term Memory

¹⁶⁹ Such as ‘play thick’

¹⁷⁰ See Chapter 4, section 2 for a full description of the slow down tool used in this study

effective language processing due to additional processing time – this addresses the speech reception aspect of the first focus of this thesis study:

- To test the effectiveness of the speech slow-down facility for improving L2 English users' speech production and reception by increasing speech intelligibility

Test 2 also investigates specifically the first research question:

- Is the speech slow-down facility effective in improving listeners' speech reception?

Overview of Test 2

The purpose of the second study is to investigate the effectiveness of the slow-down software on Dublin Institute of Technology students' listening ability (intelligibility) when exposed to recordings at varying speeds of L1 users of English.

The subjects were eleven members of an Erasmus module class from the Dublin Institute of Technology, Kevin Street, Dublin, Ireland. The materials used included a cassette with three extracts of monologues of three L1 users of English, language laboratory, worksheets and Personal Information Sheets¹⁷¹ (one per student).

Aim of Test 2

The research in this test (Test 2) involved documenting receptive intelligibility problems when L2 users are exposed to the English speech of L1 users, as Rajadurai (2007) notes that such research is mostly absent from L1:L2 intelligibility investigations. Here, the L2 English-

¹⁷¹ Same as the one used in the previous test, Test 1

speaking subjects acted as judges judging the intelligibility of accented L1 Hiberno-English speech, which differs from most studies in intelligibility which usually posits the L1 speaker as the judge of L2 speech. As intelligibility is as much dependent on the listener as the speaker (Jenkins, 2000, Kenworthy, 1987), it is deemed important to research L2 users' judgements on the intelligibility of L1 speech – which itself is accented and not always produced to a 'standard' form. This was achieved by playing recorded extracts of relaxed (mid-stream informal conversation) L1 English speech to L2 users of English, recording repetition of the extracts by the L2 subjects, noting any differences between the original extracts and the L2 speaker-subjects' repetitions and investigating possible reasons for such differences. A corpus of authentic L1 English is being created¹⁷², including features of L1 connected speech which cause intelligibility problems for L2 users of English but which is currently beyond the scope of this study.

Background to Test 2

It was believed that the slow-down facility could be used with learners of English, to help them grasp the reduced elements which are typical of the natural connected speech of L1 users. In this way, the slow-down software could be used as a receptive learning tool to help learners of English move from an idealised form to the actual form, as it is spoken by L1 English users. An idealised form refers to speech as it is usually presented to learners of English in a classroom situation but is rarely encountered by students outside the classroom. This includes citation form: a written sentence as it would appear in a textbook or on the board or how it would be 'seen' in the mind of the learner. It also includes English as it is

¹⁷² The FLUENT Project, of which this author is employed on.

traditionally¹⁷³ spoken on an English language listening tape (ELT produced materials) or by an English language teacher, in a clear and slow voice with few reductions¹⁷⁴.

Most English language listening lessons usually assess a student's performance based on his/her ability to accurately answer comprehension questions, which is not a suitable or reliable means of gauging a student's ability to process and understand spoken English, particularly rapid connected speech typical of L1 users (Cauldwell, 2002a, 2002b). Two students can achieve the same score in comprehension questions but while one may have understood 90% of the recording, the other student may have only understood 20% but was still able to correctly answer the same number of questions, which could reflect that student's skill in answering comprehension questions correctly rather than an ability to process and understand L1 English¹⁷⁵ (ibid). Due to Cauldwell's (ibid) observations and findings from Test 1 which showed little correlation between comprehension question results and transcription results, it was decided that comprehension questions would no longer be used in this study to gauge levels of speech reception.

Design for Test 2

Test 2 differed from Test 1 – the focus of Test 2 was solely on receptive intelligibility based on analysis of subjects' written transcriptions of aural extracts. Comprehension¹⁷⁶ was not tested as was the case for Test 1. Test 2 is an improvement on Test 1 in that the extracts chosen for this test were much shorter. Test 1 proved that transcribing a long extract is too challenging for most subjects and therefore, shorter

¹⁷³ The author acknowledges that ELT materials are changing in recent times to include more regional and other L1 and L2 varieties and accents of English, such as Cauldwell (2003) and Thorn (2006).

¹⁷⁴ What Brown (1990) terms 'slow colloquial'

¹⁷⁵ See Chapter 3, sections 3.7 and 3.10 for more on listening pedagogy and classroom practices in ELT

¹⁷⁶ Through the use of comprehension questions

extracts are a more reliable means of determining subjects' receptive intelligibility. Also, for this test, L1 English speakers were used for the aural extracts. This was to gauge L2 English-speaking subjects' receptive intelligibility of L1 English speakers. This differs from Test 1 where L2 English-speaking subjects' receptive intelligibility of a fellow L2 English user was tested. As the subjects in this study were all living and studying in Ireland, it was decided that L1 Hiberno-English speakers would be used in the extract as this reflects what many of the subjects are likely to encounter during their time in Ireland.

The extracts for the Test Group were slowed from 100% (full speed) to speeds of 80% and 60% of the original speed of the extract. These slowed speeds were chosen as they displayed auditory evidence (can be heard) of slowed speech (90% displays little evidence of slowed speech) yet these two speeds are not so slow as to allow the introduction of artefacts. The slow-down software introduces artefacts into the speech signal below a particular speed, at around 40% of the speed of the original.

Methodology for Test 2

Test 2 Collection of Data	Rationale
Subjects transcribe 3 aural extracts	To determine intelligibility of extracts to listener participants
Control Group hear 3 extracts at 100% only, Test Group hear extracts @ 100%, 80% and 60%	To determine whether slowing down extracts has a corresponding effect on participants' speech reception capabilities or not, i.e., to test whether the speech slow-down software increases speech reception

Table 10: Test 2 Methodology and Rationale

The study required subjects to listen to three extracts of recordings of one male and two female Hiberno-English L1 users and transcribe what they heard. The researcher endeavours to uncover at which speed (100%, 80%, 60%) subjects have the highest level of intelligibility of L1 speech or if there is any significant improvement at all. The extracts used in the test are chosen because they each contain examples of reduced features typical of L1 English speech, namely elisions, contractions and weak forms, such as [əʃmʌkʃfəʊz] – ‘I’m looking for shoes’ (extract from Extract 1). The three extracts were also chosen because they are all semantically and grammatically complete phrases/sentences, thereby aiding and ensuring listeners’ receptive intelligibility as they were hearing completed phrases which are easier to process and comprehend. The three extracts used in the study are:

- 1) ‘If I am invited to a special occasion and I’m looking for shoes, I dread it’.
- 2) ‘Exactly on the same style as what I have here’.
- 3) ‘I used to always see my friends with all the trendy shoes but I could never get them’.

The subjects are divided into two groups:

- A) Control Group, which hears each extract three times, each time at 100% only.
- B) Test Group, which hears each extract three times – once at 100%, once at 80% and once at 60%.

This is necessary to gauge the effectiveness of the slow-down software at speeds of 80% and 60% against a control group, who are only exposed to the extracts at full speed, to ascertain if the slow-down software has any significant effect on learners’ receptive intelligibility of L1 English speech.

Procedure for Test 2

Stages	Procedure
Control Group and Test Group established	Subjects randomly divided into 2 groups to compare between test and control to assess effectiveness of slow-down
Subjects exposed to 3 aural extracts	Subjects hear each extract once using individual headphones to enhance sound quality and so as not to disturb other subjects in same room
Subjects transcribe 3 (×3) aural extracts	Subjects write each extract immediately after hearing it on a separate answer sheet to provide data for analysis
Analysis of data	Statistically measure accuracy of transcriptions by comparing results to determine whether speech software increases speech reception or not

Table 11: Test 2 Procedure and Rationale

Test 2 Results

The overall results of both groups are presented in a table documenting highest score for each of the three extract transcriptions, the mean score for each subject and for the Test group, the speed (100, 80 or 60%) of the highest scoring extract iteration.

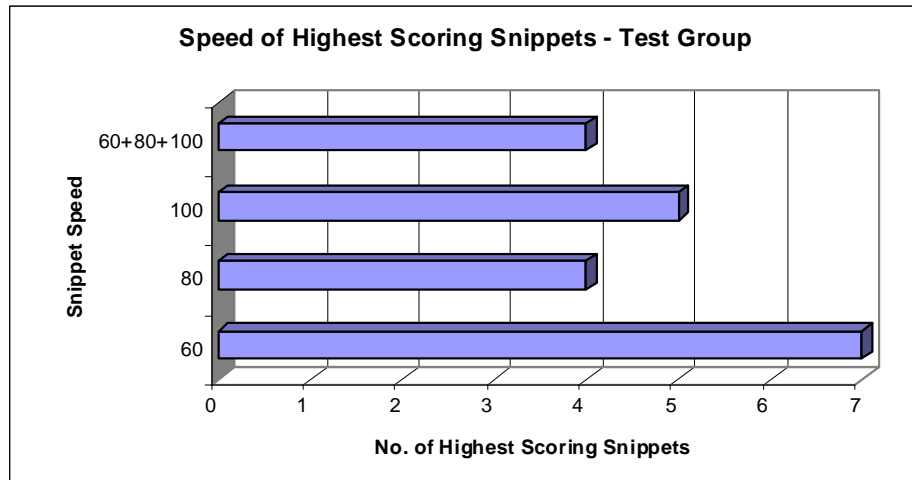


Figure 10: Test 2 - Test Group's Highest Scoring Extracts + Their Speeds

As can be seen from Figure 11, the amount of high scores for receptive intelligibility based on the accuracy of extract transcriptions were amongst those slowed to a speed of 60%.

Subject	Extract 1	Extract 2	Extract 3	Mean All 3 Snips
1C	31%	60%	28%	40
2C	19%	70%	22%	37
3C	13%	70%	61%	48
4C	25%	80%	72%	59
5C	6%	60%	33%	33
Mean Score	19%	57%	43%	43%
1T	44% (100 ¹⁷⁷)	60% (60)	44% (all speeds)	49
2T	6% (60)	30% (100)	33% (100+80)	23
3T	25% (60)	40% (60)	44% (100)	36
4T	63% (60)	60% (80)	61% (100)	61
5T	0% (all 3 speeds)	60% (all 3 speeds)	50% (60)	37

¹⁷⁷The value inside the brackets indicates the speed of the extract for the highest score achieved by each subject – for the Test Group subjects only.

6T	44% (80+60)	70% (all 3 speeds)	72% (80)	62
Mean Score	30%	53%	51%	45%

Table 12: Test 2 Highest Extract Scores out of 3 Transcription Attempts

As can be seen from Table 15 above, the results are mixed but Group B, the Test Group, have performed just slightly better overall than Group A – the Control Group. As with the previous test, Test 1, the highest score of the three transcription attempts is taken as the final score for analysis for the Control Group members. However, for the Test Group, the highest score out of the three transcription attempts is the one used for results analysis, along with the speed at which that score was achieved, as this is important in determining whether the slow-down was effective in increasing receptive intelligibility or not, and if so, to determine which slowed speed is the most effective for increasing speech reception. For ease of comprehension, the results shall be presented extract by extract.

- 1) **Extract 1:** The Test Group performed better than the Control Group even though one subject in the Test Group failed to score any points in all three attempts. For Extract 1, the average score for the Control Group was 19% compared with 30% for the Test Group. There were low scores of 6% and 25% in both groups with the remaining scores of 13%, 19% and 31% in the Control Group compared with 44% (×2) and 63% for the Test Group, which is considerably better than the Control Group.
- 2) **Extract 2:** Extract 2 shows some difference in results between the two groups, with the Control Group scoring 15% higher than the Test Group and the highest mean scores of all three extracts in the test. Some subjects from both groups achieved the same final results – 60% - two subjects from the Control Group and three subjects from the Test Group; and 70% - two from the Control Group and one from the Test Group. The fifth subject in the Control Group got a higher grade than the other two

remaining subjects in the Test Group – 80% compared with 30% and 40% respectively. No change in results – 60% and 70%, for all three transcription attempts for this extract was noted for four subjects – one score of 60% and 70% from one member of each group respectively (see Appendix for results for all 3 transcription results for each extract).

- 3) **Extract 3:** The Test Group scored higher on average than the Control Group – 51% compared with 43%. Both groups achieved the same highest score – 72% - for one subject each. Two subjects from each group achieved the same following results – 61% and 33%. The Control Group achieved the two lowest overall scores of 22% and 28%.
- 4) **Overall:** the Test Group performed just slightly better than the Control Group.

Discussion of Test 2 Results

The highest overall transcription results for both groups were for Extract 2. This was the easiest extract to transcribe as it was the shortest and contained less difficult lexical items than the other two. Extract 3 had the second highest scores with a top score of 72% from one member of each group respectively. Extract 1 had the lowest scores overall, with the highest at 63% from one subject in the Test Group. The lowest score in the test was 0% for Extract 1 achieved by one subject from the Test Group. Correspondingly, Extract 1 was the most challenging as it contained the most words (16) and the phrase, ‘dread it’, which seemed to be unknown to most subjects. Only two subjects in the study, both from the Control Group, correctly transcribed the word ‘dread’. None of the subjects from either group noted ‘it’ at the very end of the sentence as it was pronounced as a weak form after the stressed ‘dread’. Two subjects, one from the Test Group and Control Group respectively, transcribed the past

simple verb ending ‘-ed’ at the end of the second last word, who recorded incorrect words in both cases – ‘dressed’ and ‘draded’. It is quite possible that the slow-down facility enabled the subjects to capture the extra sounds, which unfortunately, were incorrectly transcribed, but were noted by them nonetheless.

Extract 1 is the longest of the extracts and was found to be the most challenging for subjects. It contains three examples of collocations: ‘invited to’, ‘special occasion’ and ‘looking for’. As two of the items are phrasal verbs, they should have been better known to subjects as co-occurring items rather than as individually-constructed items and therefore been more intelligible to the subjects. The first phrasal verb in the extract ‘invited to’ was correctly identified 6 times out of 33, or 18%. This result is not high enough to qualify its co-occurring elements to be anticipated by the subjects and thus be more intelligible to them. The second phrasal verb in the extract: ‘looking for’ which was correctly identified as a two-word unit only 2 times out of 33, or just 6% indicates that this unit was not readily identifiable as a collocation by subjects. A reason for this may be that ‘for’ in the phrase is pronounced with a weak vowel and it barely detectable in the signal, which can make it quite unintelligible to L2 English listeners. The third collocation in this extract ‘special occasion’ was the most intelligible of the three collocations in the extract with subjects identifying it correctly 10 times out of 33, or 30%. A reason why this collocation was more identifiable to the group was because both word items were produced with stress, so were more intelligible to the subjects. In Extract 1, the other two lexical items which all subjects in the study failed to transcribe were ‘and’ (one subject noted ‘a’ in one attempt), and ‘shoes’. The word ‘and’ is pronounced as a weak form here, therefore it is very difficult for the listeners to catch since it is articulated by the L1 speaker in the flow of the speech stream. It is somewhat surprising that subjects failed to note anything for the word ‘shoes’, as it is stressed by the speaker.

This extract is the shortest of the three in this test and contains two collocations: ‘the same style’ and ‘I have here’. This was the most intelligible of the three extracts for both the Test and Control Groups. The first collocation ‘the same style’ was correctly identified 25 out of 33 times, or 76%. Additionally, it was partially identified as ‘same style’ 3 times. The other collocation in this extract ‘I have here’ was correctly identified 12 out of 33 times, or 36%, which also points to some identification of it as a multi-word sequence. This would strongly indicate that collocations are more intelligible to listeners as they are perceived as holistic units and therefore easier to process. The results from Extract 2 could be said to be positively effected by the presence of two collocations, which are both produced by the speaker with stress, making them more intelligible. Also, as it was the shortest extract, it was the easiest for subjects to transcribe. In Extract 2, the only word which subjects failed to correctly transcribe was ‘as’, which was pronounced as a weak form and therefore difficult for the subjects to identify within the stream of L1 English speech. Of the subjects who did attempt to transcribe it, words such as ‘of’ (three times by three subjects), ‘in’ (twice by one subject), and ‘like’ (once by one subject) were transcribed.

There are four collocations in this extract. The first ‘used to’ was not correctly identified as a holistic two-word unit by any of the subjects, which is somewhat surprising. Perhaps because ‘to’ is pronounced as a weak form, it is less audible and thus less intelligible to the L2 listeners in this study. The next collocation ‘my friends’ was correctly identified 18 out of 33 times or 55%. It was also largely identified as ‘my friend’ a further 7 times, which would mean the phrase was correctly or nearly correctly identified 76% of the time, which makes it a highly intelligible unit. The third collocation ‘could never’ was identified 18 times out of 33 or 55%, which again aids subjects’ intelligibility. The fourth collocation ‘get them’ was

identified 23 times out of 33 or 70%. The last two collocations in this extract appear one after the other at the very end of the extract. Not only does their collocation make them more intelligible to listeners, but in the recording, they are stressed by the speaker and so are even more intelligible to the subject listeners. This was the second most intelligible extract, even though it was quite long, containing 18 words. In Extract 3, the longest extract, three words 'used', 'always' and 'trendy' were transcribed incorrectly on each transcription attempt.

Test 2 Observations

The main observation from the test was that the Test Group which had access to the slow-down facility performed slightly better than those in the Control Group. As the difference in average scores between the two groups is not very noticeable, it can not be concluded at this stage whether the higher scores are due to the application of the slow-down or not. Some subjects in the Test Group actually had a decrease in scores as the extracts were slowed. Sometimes these decreases may have been incidental, such as the omission of a letter at the end of a word but other times, verbs and even whole phrases were altered to 'fit' the context. There is the possibility that on some occasions, slowed speech led to distortions, which the subjects were unable to correctly decipher.

It must be remembered that this is a very small-scale study. Also, collocates are more easily identified as units by listeners, indicating that they are more intelligible than non-collocates. This is already noted in Linguistics research and is influencing ELT pedagogy. It is not a quantitative study and is merely indicative of trends. Many more subjects are needed to obtain more reliable and conclusive results

In a number of instances – seven times, some subjects from the Test Group achieved lower final scores (at 60% speed) than in other previous transcription attempts for the same extract. This did not occur amongst members of the Control Group. It seems that below a certain slowed speed, intelligibility actually decreases. At this stage of the slow-down software development, at speeds of 60% and lower, artefacts appear in the sound signal, which may have prevented the subjects from hearing the extract at a quality high enough for them to distinguish exactly the speaker's words in the recording. Also, the subjects had never used to slow-down tool and have never been exposed to slowed speech in such a way so when they encountered such slowed speech, it seemed strange to subjects. After the test, subjects in the Test Group were asked about what they thought of the slowed extracts. Many commented that the third time they heard the extracts – at a speed of 60%, they noted that the speaker sounded slurred and this interfered with their ability to process what was being said and therefore, hampered receptive intelligibility. For Extract 1, one subject from the Test Group went from an initial score of 44% down to 38% for the second and third goes – one less correct word, although in both instances, the subject transcribed one word more than in the first attempt. In the second attempt, the subject wrote 'I'll' instead of 'I' for 'I dread it', so it was marked incorrect, although the 'I' element was still there. The subject in this instance actually wrote, 'I'll dressed'. Field (2003: 327-8) notes that when a learner of English does not recognise a word in the stream of speech, s/he is likely to replace or even invent a word which is phonetically similar, even when it is inappropriate to the context, '[A] learner with limited English or weak listening skills adopts a strategy of scanning continuous speech for matches between sequences of sounds and items of known vocabulary'. On the third attempt, the subject seems to be focussing on elements which were not heard the first and second times, such as 'a'.

There was 'no change' in scores on all three transcription attempts noted three times from each of the two groups. In the Control Group, all three times there were no additional words transcribed, correct or incorrect. One subject in the Test Group with a 'no change' overall result did transcribe additional, albeit incorrect, words in the second attempt for extract one – five words for Subject 10. This subject made a good attempt however, as 'special' was correctly noted but unfortunately in the wrong order and 'occasionally' was transcribed for 'occasion', a very close lexical match. While it indicates some intelligibility, it also displays faulty short-term memory (STM) when scanning for transcription purposes. This subject also wrote 'high' for 'I', which is phonetically similar and in the same vein, 'raid' was written for 'dread'. As previously mentioned, Field (2003) notes this phenomenon sometimes occurs with weak or lower-level learners of English. While this subject did not achieve a higher grade, some words – 'special' and 'occasionally' seemed to have become more accessible and therefore intelligible, albeit not always fully or correctly, with the slow-down facility. Another subject from the Test Group: 11, with a 'no change' result for Extract 2, wrote just one more word in the second and third attempts. Most of the words from the first attempt remained for all three attempts but for the second and third goes, the subject attempted to write 'exactly' (the word used in the extract) but incorrectly wrote 'definitely' on the second try and 'deff' on the third. If the subject did not know the word 'exactly' s/he may, as Field (2003) observed, have simply replaced it with a known word similar in sound. This subject also transcribed 'of' the first and second time for 'on', which initially is a close phonetic match. However, on the third attempt, 'have' replaces this. This seems strange, as 'have' is more dissimilar to 'on' than 'of'. No reason is apparent for this unless the subject sought to place a verb in this position, as this could make sense syntactically, even though here it is incorrect. While there is no change in all three scores, an attempt at writing more words can be seen from this subject's transcriptions. The third subject from the Test Group: 10, with a

‘no change’ score, was also noted in the second extract. This subject wrote the same sentence three times, except in the first transcription, the last part changed from ‘done earlier’ to ‘heard’ for the second and third attempts, which while incorrect, is phonetically closer to the actual word in the extract, ‘here’. It is unknown how the subject wrote ‘done earlier’ in the first go. As noted, while no member of the Control Group decreased in score with each transcription, this phenomenon occurred seven times amongst members of the Test Group. Reasons for this are not always clear but evidence from the transcriptions led the researcher to some conclusions – see the Conclusions section below.

Test 2 Conclusions

The results are mixed and somewhat inconclusive - overall, the Test Group, performed better overall than the Control Group, although only slightly. The most important discovery made in this test is that the quality of the speech signal is reduced at 60% speed. Before further tests can be carried out with the slow-down software, the design of the tool must be improved so speakers do not sound slurred or unnaturally slow, which seems to distract subjects and reduces receptive intelligibility rather than increases it. An improvement in the software is needed to avoid the introduction of artefacts into the sound signal. It is also of utmost importance to try to have a more even distribution of subject ability between the two groups, so results will more accurately reflect whether the use of the slow-down facility improves subject performance and not skew results in favour of any one group.

6.4. Test 3 L1:L1/L2 - L1 Hiberno-English Users¹⁷⁸ EIC Intelligibility Study

‘To Investigate Dublin Institute of Technology Hiberno-English (L1 English users) and European (L2 English users) Students’ Listening Ability (Intelligibility) When Exposed to Recordings of L1 (Hiberno-English) Speakers’.

Justification for Test 3

The purpose of Test 3 is to provide more reliable data to determine levels of receptive intelligibility by testing shorter speech samples and altering how subjects’ responses are recorded for analysis: the first two tests, Test 1 and Test 2, investigated receptive speech intelligibility by assessing subjects’ ability to recognise individual words through transcriptions of extracts they had been exposed to. Due to the ‘wrap-up effect’, a listener will get rid of words at the end of a clause or phrase in their STM¹⁷⁹ and simply extract the meaning. For this reason, transcriptions may not accurately reflect what the subjects have heard but rather a cognitive/semantic reconstruction of what they think they have heard. For this reason, the design is changed for this test – Test 3. Instead of solely relying on subjects’ transcriptions of extracts for data analysis, the subjects are also required to orally repeat (verbatim recall) each extract immediately after hearing it and then to write the extract. The recorded oral repetitions are compared with the subjects’ written transcriptions – to determine whether one form of testing (verbatim recall) is similar to another (transcribing) and to determine if one is a more effective means of gathering data, for future research purposes. By giving the subjects a shorter sound sample, they are made to listen for

¹⁷⁸ This test featured extracts from three Hiberno-English speakers – the Irish variety of English.

¹⁷⁹ STM = Short-Term Memory

individual word recognition rather than overall meaning of the message. Shorter phrases – five words, plus or minus two¹⁸⁰ – are preferred to exclude interference from meaning reconstruction strategies on the part of the listener. For this reason, the extracts in this test do not contain any more than seven words.

Test 3 also tests the effectiveness of improvements to the slow-down tool (refer to Chapter 5, section 1 about improvements to the slow-down over the course of this study) which currently slows an aural signal at a much higher acoustic quality than the previous slow-down used in Test 2. In Test 2 the slow-down speech tool's quality was reduced at slower speeds, from around 60%, where artefacts were being introduced into the signal and the speech of the speakers was becoming somewhat distorted, making the speech signal less intelligible to the subjects.

Overview of Test 3

Test 3 investigates receptive intelligibility through individual word recognition thus addressing the first focus of this study¹⁸¹ and the first research question: is the speech slow-down facility effective in improving listeners' speech reception?

The speech extracts are taken from radio recordings from DIT Media students, as in the previous test – Test 2. John Field, the notable psycholinguist of Birkbeck College, London, who has extensive research experience in English L2 listeners and listening processes in general, offered (in personal communication) valuable advice on methodology, particularly in the area of testing for reception and the most effective

¹⁸⁰ Miller, G. 1956. 'The magical number seven, plus or minus two: some limits on your capacity for processing information', *Psychological Review*, 63: 81-97.

¹⁸¹ This first focus of this study is to test the effectiveness of the speech slow-down facility for improving L2 English users' speech production and reception by increasing speech intelligibility.

means of investigating the cognitive processes involved in the area of L2 listening. He recommended using shorter speech extracts to counter the effects of STM reconstructing the overall meaning of the message top-down. Field also recommended that instead of solely ascertaining what subjects heard in the speech extracts through transcriptions, it would also be valuable and even more reliable to require subjects to verbally recall each extract as soon as they have heard it and to analyse their responses for more reliable evidence of what they heard, to determine how intelligible they found a particular speaker, depending on how well they were able to carry out the verbatim recall task. The two main problems for L2 listeners are:

- 1) **an absence of word boundaries** (Brown, 1990, Field, 2003b): When words occur in the stream of natural speech, word boundaries become largely indecipherable due mainly to the process of assimilation (Brown, 1990). Assimilation is a connected speech feature which involves one sound segment influencing the articulation of another causing the sounds to become more similar, even identical, to each other (Crystal, 2003). Through speech analysis, it has become evident that assimilation is one of the main ways of attaining fluency and rhythm in natural speech (ibid). For L2 English users however, assimilatory processes in English speech, particularly evident in the speech of L1 and proficient L2 English users, can present speech reception difficulties, as generally L2 users, particularly less proficient L2 users process speech bottom-up¹⁸² and thus, have greater difficulty in processing fluid, connected speech due to the absence of word boundaries.

¹⁸² Refer to Chapter 3, section 3.5.2 for a more detailed account of bottom-up processing

2) **not having enough time to process the speech signal they have been exposed to** (Field (1999) and in personal communication): According to Field (in personal communication), the more time L2 English listeners have to hear, the more they gain in terms of speech processing ability. When L2 English users have more time to process speech, they are more likely to make accurate decisions about word boundaries, which in turn enhance speech intelligibility – subjects should have more time to construct speech bottom-up. However, they are rarely given this opportunity when listening to L1 or proficient L2 users, due to the fluency and thus speed of their English speech production (Field, 1999).

The researcher is of the opinion that the slow-down speech tool can aid L2 listeners in these two problematic areas. The slow-down highlights features of streamed speech so that L2 listeners are more aware of them and can recognise them more easily when they encounter them in fast speech and thus become more efficient and effective listeners in English. By slowing the speech signal, L2 listeners are given more time to hear and process it, again improving their listening capabilities in English.

Test 3 Subjects (see Appendix ? for Subject Background Information Table)

The study was conducted in mid June, at the end of the academic year, so only postgraduates were available to participate. The 14 subjects are predominantly male - 13 with just one female (Russian) ranging from 21 to 34 years of age. They are from various disciplines within the college (not including Languages) and from a variety of L1s. In Group A, subjects have a minimum of 6 years English language learning/use

with most having over 10 years. Group A also includes 2 Indian subjects who are bilingual speakers of English and who throughout their lives have frequently used English in parallel with their L1s from a young age. Amongst Group B members, English language learning/use is between 4 and 6 years. The test also included L1 English users, to compare the effectiveness of the slow-down between L1 and L2 users.

Test 3 Speech Extracts

The ten speech extracts used in the study are:

1. *Because of previous experience* (male speaker)
2. *A bush to put in a gap* (male speaker)
3. *What have you got planned?* (female speaker)
4. *What's wrong with them?* (male speaker)
5. *I'm looking for shoes* (female speaker)
6. *What are you up to tonight?* (female speaker)
7. *Exactly on the same style* (female speaker)
8. *What would you like to achieve?* (female speaker)
9. *I was sent out* (male speaker)
10. *I'm invited to a special occasion* (female speaker)

Test 3 Rationale for Choice of Speech Extracts

- 1) The speech extracts were taken from radio recordings. Extracts produced by L1 English speakers were used as such speakers are more likely to produce

fast spontaneous speech containing examples of connected speech features, namely assimilation, elision and weak forms, which can be difficult for L2 listeners to hear, recognise and process intelligibly. Extracts of L1 Hiberno-English speakers were specifically used as all participants in the study currently live and work/study in Ireland and are likely to encounter L1 Hiberno-English speakers on a daily basis.

- 2) The extracts are examples of authentic unscripted speech involving L1 to L1 dialogues.
- 3) The samples are spoken at speeds of between 294 and 600 milliseconds per minute so they are suitably challenging for subjects, L2 users in particular.
- 4) The extracts are all between 4 and 7 units which are within the confines of short term memory (STM) retrieval.
- 5) The samples are of low contextual value which ensures subjects will rely on bottom-up processing (individual word recognition) rather than on top-down processing (using context to access overall meaning).

Methodology for Test 3

Materials used in this test include a laptop with electronic tests A and B in pdf format with ten sound extracts attached, MD player, microphone, test answer sheets and a language learning background questionnaire – same as in Tests 1 and 2 – see Appendix 1.

Collection of Data	Rationale
Subjects each complete a language learning background questionnaire	To provide necessary background information to inform results
Subjects randomly divided into two groups – A and B	Each group is presented with the same extracts but at different speeds – either 100% or 50%, to compare results and determine whether slowing of extracts has effect on speech reception in terms of intelligibility
Subjects orally repeat the extract then transcribe it	The verbatim recall task is to provide evidence of what subjects heard, to assess whether the application of the slow-down makes any difference in users’ receptive abilities or not. The transcriptions act as a back-up to the subjects’ recorded oral repetitions, particularly when a subject’s response is not completely intelligible to the researcher – the transcription can be used to gauge what the subject said in the verbatim recall task.
All subjects from both groups hear extract J at 100% only	To compare intelligibility levels at 100% between the 2 groups – to determine whether there is a wide discrepancy between the 2 groups which would have consequences for the results and should be

	noted in the test's conclusion
Results analysed	To assess effects of speech software on speech reception

Table 15: Test 3 Procedure and Rationale

Procedure for Test 3

Stage	Procedure
Group A and Group B established (note there are no test or control groups)	Subjects randomly divided into 2 groups: Group A and Group B
Subjects exposed to snippets one-by-one	Subjects here each snippet once using a laptop and headphones
Subjects repeat snippets	Subjects are recorded orally repeating each snippet as soon as they have heard it
Subjects transcribe snippets	Subjects transcribe each snippet as soon as they have finished repeating it
Analysis of data	Statistically measure accuracy of oral repetitions and transcriptions and analyse results to determine whether the slow-down increases speech reception or not

Extracts	Group A Speed	Group B Speed
1	100%	50%
2	50%	100%
3	100%	50%
4	50%	100%
5	100%	50%
6	50%	100%
7	100%	50%
8	50%	100%
9	100%	50%
10	50%	100%

Table 16: Test 3 Groups A and B with Extracts and Speeds

The subjects are divided into Groups A and B, both with the same extracts in the same order but alternating between speeds. For example, for Group A, extract 1 is played at 100% speed while for Group B, extract 1 is slowed to 50% of its original speed. For Group A, extract 3 is at 50% but is 100% for Group B – each group hears the same extracts but at alternating speeds of either 100% or 50%. Each subject is tested individually at separate times from others because if two or more subjects are in the testing room at the same time, they will hear each other repeating the extracts and therefore results could be skewed. Subjects are divided into two groups and presented the extracts at different speeds to more accurately test whether slowing the extracts effects subject listeners’ ability to recognise individual words contained in the extracts and thus, to test whether slowing down speech using the slow-down software increases speech intelligibility or not.

Test 3 Results

The results are divided into transcription results and verbatim recall results with each group – Group A and B having separate tables. There are also tables comparing the results of the two groups for each activity.

Transcription Results

Group A Transcription Results

Subj.	Snip1 100% speed	Snip 2 100% speed	Snip 3 50% speed	Snip 4 50% speed	Snip 5 100% speed	Snip 6 50% speed	Snip 7 50% speed	Snip 8 100% speed	Snip 9 50% speed	Snip 10 100% speed
1A	100%	100%	100%	75%	0%	100%	80%	83%	25%	100%
2A	100%	57%	100%	100%	100%	100%	80%	100%	50%	100%
3A	100%	28%	60%	100%	0%	100%	80%	100%	0%	50%
4A	100%	100%	100%	100%	0%	83%	80%	83%	0%	100%
5A	100%	0%	60%	0%	0%	66%	100%	83%	0%	0%
6A	50%	100%	100%	100%	0%	83%	20%	83%	25%	50%
7A	25%	28%	100%	100%	0%	100%	80%	83%	25%	66%
Av.¹⁸³	82%	59%	89%	82%	14%	78%	74%	74%	18%	67%

Table 13: Test 3 Group A Transcription Results

¹⁸³ Av. = Average/Mean score

Group B Transcription Results

Sub	Snip 1	Snip 2	Snip 3	Snip 4	Snip 5	Snip 6	Snip 7	Snip 8	Snip 9	Snip 10
	50%	50%	100%	100%	50%	100%	100%	50%	50%	100%
	speed	speed	speed	speed	speed	speed	speed	speed	speed	speed
1B	100%	0%	100%	100%	0%	100%	100%	40%	0%	100%
2B	50%	0%	40%	100%	0%	83%	60%	0%	0%	33%
3B	0%	0%	40%	100%	0%	83%	0%	0%	83%	50%
4B	100%	0%	100%	100%	0%	100%	80%	100%	0%	100%
5B	50%	14%	100%	100%	0%	100%	80%	33%	50%	49%
6B	0%	14%	40%	100%	0%	66%	20%	33%	0%	16%
7B	50%	42%	80%	100%	0%	100%	60%	100%	50%	66%
Av.	50%	10%	71%	100%	0%	90%	57%	44%	26%	59%

Table 14: Test 3 Group B Transcription Results

Group A	Snip. Speed	Av. Score
	50%	68%
	100%	59%
Group B	Snip. Speed	Av. Score
	50%	26%
	100%	75%

Table 15: Test 3 Average Scores for Groups A and B + Speed

Comparison of Best and Worst Transcription Scores between Groups A and B

	Best Extract Results	Worst Extract Results
Group A	Snip 3 (50% speed) = 89%	Snip 5 (100%) = 14%
	Snip 1 (100% speed) = 82%	Snip 9 (50%) = 18%
	Snip 4 (50% speed) = 82%	
Group B	Snip 4 (100% speed) = 100%	Snip 5 (50%) = 0%
	Snip 6 (100% speed) = 90%	Snip 2 (50%) = 10%

Table 16: Test 3 Comparing A & B's Best & Worst Transcription Scores

It is interesting to note comparative results for best and worst extracts transcribed as there are 2 identical results for both groups – extract 5¹⁸⁴ is the most problematic of all 10 extracts for both groups, despite the different speeds used. This extract includes a contraction (I'm), an elision (lookin') and a weak form (/f@r/) – the most varied connected speech features of all the extracts in the test and spoken with less emphasis (stress) than other extracts, making it difficult for subjects to catch what is being said.

The most recognised extract (ascertained as the extract which achieved the highest scores in the test) amongst both groups is extract 4¹⁸⁵ which includes a contraction (what's) and an elision (wi'). This extract is spoken quite clearly with each word stressed adequately, particularly the words 'wrong' and 'them', which receive primary stress.

¹⁸⁴ I'm looking for shoes (female speaker)

¹⁸⁵ What's wrong with them? (male speaker)

Comparison of Transcription Result Averages between Groups A and B

Snip.	Group A	Group B
1	82% @ 100% speed	50% @ 50% speed
2	59% @ 100% speed	10% @ 50%
3	89% @ 50%	71% @ 100%
4	82% @ 50% speed	96% @ 100% speed
5	14% @ 100% speed	0% @ 50% speed
6	78% @ 50% speed	90% @ 100% speed
7	74% @ 50% speed	57% @ 100% speed
8	74% @ 100% speed	44% @ 50% speed
9	18% @ 50% speed	26% @ 50%
10	67% @ 100% speed	59% @ 100% speed

Table 17: Test 3 Comparison of Group A & B's Transcription Result Averages

When both groups heard extracts 9 and 10 at the same speeds as each other, Group B achieved a higher score at 50% speed – 26% compared with 18% for Group A. However, at a speed of 100%, Group A scored higher for transcription than Group B – 67% compared with 59%. From the above table, there are two occasions out of 8 (25%) when transcription results at 50% speed are higher than at 100% speed. For extract 3, a transcription score of 89% at 50% for Group A was achieved compared

with 71% at 100% speed for Group B. Group A again achieved a higher transcription score at 50% speed for extract 7 with a result of 74% compared with 57% for Group B at 100% speed. 70% of the higher verbatim recall scores (at either of the two speeds) were achieved by Group A. 75% of the time¹⁸⁶ (6 out of 8 extracts) extracts played at 100% speed actually achieved higher transcription scores than when played at 50% speed. There are two possible reasons for this:

- 1) Group A, who achieved most of the higher scores (50% out of the 75%), included more proficient English speakers than members of Group B. Group A consists of 2 L1 English speakers compared with 1 L1 speaker in Group B. Group A also includes 2 bilingual English speakers (both of Indian nationality) while there are no bilingual English speakers in Group B. Group A also includes one German L1 user who has been using English since the age of 11 – for a total of 15 years, which is the longest use of English by an L2 speaker in the study excluding the 2 Indian bilingual English speakers.
- 2) The quality of the audio signal when slowed to 50% is quite poor and is even somewhat distorted, which could be a direct reason for lower results for 50% speeds overall. Test participants reported that the extract speakers sounded ‘drunk’ or ‘sleepy’ when reporting back on the test after its completion. It seems that this distortion may have distracted subjects from adequately hearing and processing the extracts which were slowed to 50% speed.

¹⁸⁶ This calculation omits the last 2 extracts: extracts 9 and 10 as speeds were the same for both groups

Verbatim Recall Results

Group A Verbatim Recall Results

S	Snip 1	Snip 2	Snip 3	Snip 4	Snip 5	Snip 6	Snip 7	Snip 8	Snip 9	Snip 10
	100%	100%	50%	50%	100%	50%	50%	100%	50%	100%
	speed	speed	speed	speed	speed	speed	speed	speed	speed	speed
1A	100%	100%	100%	100%	0%	100%	80%	83%	25%	100%
2A	75%	57%	100%	100%	100%	100%	80%	100%	50%	100%
3A	75%	25%	40%	100%	0%	100%	100%	100%	0%	100%
4A	100%	100%	100%	100%	0%	100%	100%	100%	0%	100%
5A	75%	0%	80%	0%	0%	83%	100%	100%	25%	0%
6A	50%	71%	100%	100%	0%	83%	0%	83%	25%	66%
7A	25%	28%	100%	100%	0%	100%	60%	83%	50%	66%
Av.	71%	54%	89%	86%	14%	95%	74%	93%	25%	76%

Table 18: Test 3 Group A Verbatim Recall Results

Group B Verbatim Recall Results

S	Snip 1	Snip 2	Snip 3	Snip 4	Snip 5	Snip 6	Snip 7	Snip 8	Snip 9	Snip 10
	50%	50%	100%	100%	50%	100%	100%	50%	50%	100%
	speed	speed	speed	speed	speed	speed	speed	speed	speed	speed
1B	100%	0%	100%	100%	0%	100%	80%	40%	0%	100%
2B	25%	0%	100%	100%	0%	83%	100%	40%	0%	33%
3B	0%	0%	80%	100%	0%	83%	0%	66%	0%	83%
4B	100%	0%	100%	100%	0%	100%	60%	83%	0%	83%
5B	50%	14%	100%	100%	0%	100%	80%	16%	50%	49%
6B	0%	14%	80%	100%	0%	66%	40%	83%	0%	33%
7B	50%	42%	80%	100%	0%	100%	60%	100%	50%	66%
Av.	46%	10%	91%	100%	0%	90%	60%	61%	14%	64%

Table 19: Test 3 Group B Verbatim Recall Results

50% Speed	Av. Score
Group A	74%
Group B	26%
100% Speed	Av. Score
Group A	62%
Group B	81%

Table 20: Test 3 Comparison of Average Scores for Groups A and B + Speeds

Comparison of Best and Worst Verbatim Recall Scores between Groups A and B

	Best Extract Results	Worst Extract Results
Group A	Snip 6 (50% speed) = 95% Snip 8 (100% speed) = 93%	Snip 5 (100%) = 14% Snip 9 (50%) = 25%
Group B	Snip 4 (100% speed) = 100% Snip 3 (100% speed) = 91% Snip 6 (100% speed) = 90%	Snip 5 (50%) = 0% Snip 2 (50%) = 10% Snip 9 (50%) = 14%

Table 21: Test 3 Comparing Group A & B's Best & Worst Verbatim Recall Marks

The verbatim recall results are similar to the transcription results in that particular extracts prove problematic for both groups while another extract was particularly intelligible to both groups. Extract 6¹⁸⁷ is amongst the most intelligible of all the extracts for both groups in the verbatim recall task. It was also one of the two most intelligible extracts in the transcription task for Group B. This extract includes three weak forms (*r*, *y* and *t*) while the remaining words in the extract are adequately

¹⁸⁷ *What are you up to tonight?* (female speaker)

stressed resulting in the extract being easily intelligible to both groups. The worst extracts for the two groups are extract 2¹⁸⁸ and extract 9¹⁸⁹, which are spoken by the same elderly male speaker from the West of Ireland. This speaker's accent is certainly the least intelligible of all the speakers in the extracts as his rural Gaelic-influenced accent is the one that most participants have little or no exposure to while living in Dublin, the capital of Ireland. The Gaelic influence affects the production of phonemes so that they are not easily recognisable to listener subjects, for example, the word 'gap' in extract 2 is pronounced /gʲt̪p̪/ while 'sent' in extract 9 is pronounced /s̪t̪nt̪/. Also, the pronunciation of word final /t̪/ in 'put' (extract 2) and 'out' (extract 9) are produced in a way which is typical of a rural Irish and in particular, West of Ireland accent where the /t̪/ sounds like /t̪̪/, again making these extracts quite challenging and less intelligible for subjects. Extract 9 also received the second lowest score for transcription for Group B.

Comparison of Verbatim Recall Result Averages between Groups A and B

Snip.	Group A	Group B
1	71% @ 100% speed	46% @ 50% speed
2	54% @ 100% speed	10% @ 50% speed
3	89% @	91% @

¹⁸⁸ *A bush to put in a gap* (male speaker)

¹⁸⁹ *I was sent out* (male speaker)

	50% speed	100% speed
4	86% @ 50% speed	100% @ 100% speed
5	14% @ 100% speed	0% @ 50% speed
6	95% @ 50% speed	90% @ 100% speed
7	74% @ 50% speed	60% @ 100% speed
8	93% @ 100% speed	61% @ 50% speed
9	25% @ 50% speed	14% @ 50% speed
10	76% @ 100% speed	64% @ 100% speed

Table 22: Test 3 Comparing Group A & Group B's Verbatim Recall Averages

Extract 9 was played at 50% speed for both groups with Group A achieving a verbatim recall score of 25% compared with 14% for group B. Group A also achieved a higher verbatim recall score than Group B for extract 10 which was played at 100% speed for both groups – 76% compared with 64%.

Overall, Group A scored higher in the verbatim recall test than Group B despite the different speeds applied. Similar to the transcription results, Group A achieved higher scores in the test 75% (6 out of 8) of the time than Group B. Four of the six times Group A achieved higher scores were with extracts played at 100% speed and two times Group A achieved a higher verbatim recall score when extracts were played at 50% speed. The two times in the verbatim recall test when Group B achieved higher scores than Group A, were when the extracts were played for Group B at 100% speed.

Overall, verbatim recall results were much better at 100% speed than at 50% speed, which is similar to the results for the transcription test.

When comparing the verbatim recall results with the transcription results, one can see that only 6 scores out of 20 (30%) are the same for transcription as for verbatim recall although in most cases, there is not a great difference between the two test scores for each extract amongst both groups. However, some subjects actually transcribed the extracts differently from how they verbally recalled them. This observation could be used at a later stage for insights into the differences between the two processes – verbatim recall and transcription.

Discussion of Test 3 Results

The results show two interesting facts:

- 1) Group A average scores are 12% better¹⁹⁰ at 50% speed than at 100%.
- 2) Group B averages are much better at 100% speed (96%, 90%, 71%, 59% and 57%) than at 50% speed (50%, 44%, 26%, 10% and 0%).
- 3) Overall for both transcription and verbatim recall tests, scores at 100% speed are greater (75% or 6 out of 8) than those at 50% speed. It seems that slowing down the extracts actually hindered their receptive intelligibility.
- 4) Group A's scores are higher at 50% speed even though it included speakers whose level of English is higher overall than that of Group B. Group A consists of 2 L1 (Hiberno-English) speakers compared to 1 L1 user in Group B. Group A also consists of 3 bilingual English users – two of Indian

¹⁹⁰ 12% higher scores were noted for both overall average scores at 50% and average scores minus the lowest score.

nationality who have used English alongside their respective L1s¹⁹¹ for most of their lives¹⁹² and 1 Mandarin L1 user¹⁹³, while there are no bilingual speakers of English in Group B. Of the two German L1 speakers in Group A, both consider themselves to be proficient English users¹⁹⁴. This compares with 1 proficient English speaker from the 3 Germans in Group B¹⁹⁵, one fluent English speaker while the third German in the group did not note anything for his level of English on the questionnaire.

One would expect Group B, whose level of English overall is lower than Group A, to achieve higher scores at 50% speed as one would believe that the slower speed would increase speech reception. However, this was not borne out in the results.

Test 3 Observations

The researcher became aware of a major flaw in the test design when analysing the results. Because the extracts were played at different speeds to the two groups (for example, when Group A heard an extract at 50%, Group B heard the same extract at 100%, the results are not actually comparable. The researcher is now aware of the importance in empirical research of using the same phenomena for comparison, in order to achieve reliable and valid results. Some extracts were played at the same

¹⁹¹ Telugu and Malayalam

¹⁹² The Malayalam L1 speaker has been using English since the age of seven and the Telugu L1 speaker has been using English since he was five years old.

¹⁹³ The Mandarin speaker has studied and used English for 8 years, has been living in Ireland for 3 years and has achieved a combined IELTS score of 6.5.

¹⁹⁴ One achieved a score of 62 in the CAE exam and has been studying and using English for 8 years while the other has been using English for 15 years.

¹⁹⁵ The 3 Germans in Group B have been learning and using English for 9 years, 8 years and 6 years respectively and none of them have undertaken an internationally recognised English language exam such as IELTS or the Cambridge certificate exams – FCE, CAE or CPE.

speed to both groups but most were not, which would largely invalidate the results. The reason why the researcher compared the same snippets at different speeds between the groups was to determine which speed resulted in a particular snippet being more intelligible to subjects. Speed is only one of a number of variables which could affect level of intelligibility – other variables include English language level, hearing ability and previous exposure to the accent of the speaker in the extract. In future, the researcher will be sure to compare levels of receptive intelligibility with the slow-down using snippets at the same speed, for true comparison, thus ensuring validity and reliability of results.

The slow-down seemed to be more effective in terms of speech reception for Group A which is considered to be the group with a higher level of English. No explanation for this is obvious from the test figures or indeed from the subjects' language learning background questionnaires. It seems that the slow-down tool actually hinders L2 English users' speech reception capabilities, especially when their level of English is not at a very high level. Further investigation is necessary to determine whether this pattern is repeated and if so, reasons for this phenomenon need to be determined.

It is obvious from the test that certain extracts proved more problematic in terms of speech reception amongst both groups – namely extract 5 and extract 9.

Extract 5: *I'm looking for shoes* (female L1 Hiberno-English speaker)

Extract 9: *I was sent out* (male L1 Hiberno-English speaker)

For extract 5, Group A averaged a score of 14%¹⁹⁶ for both transcription and verbatim recall and Group B had an average score of 0%¹⁹⁷ for both tests also. The other lowest results were noted for extract 9. Group A's average transcription score for this extract

¹⁹⁶ Group A at 100% speed

¹⁹⁷ Group B at 50% speed

was 18%¹⁹⁸ compared with 26%¹⁹⁹ for Group B while Group A scored an average of 25% for this extract in the verbal recall test and Group B scored 14%. It is not immediately obvious why Extract 5 proved problematic for participants. The extract is spoken at speed by a female Hiberno-English L1 speaker and is part of a longer sentence. Extract 9 is spoken by a male Hiberno-English L1 user who demonstrates a strong regional accent from the West of Ireland which is not familiar and therefore not accessible to most participants in the study. As with Extract 5, Extract 9 is taken as an extract from a longer sentence. These extracts were included to determine whether less accessible extracts could become more accessible to listeners when slowed with the slow-down tool. However, as Extract 9 was only played to participants at 50% speed only, it is difficult to establish whether or not they would have achieved higher or lower scores for Extract 9 at 100% speed.

Test 3 Conclusions

The results of Test 3 were such that it was felt that more data should be collected and that the following variables had to be taken into consideration in a further test:

- a) the same test material must be used for comparison between the two groups to ensure reliability and validity of test results
- b) the quality of recording should be of a higher standard – the recording has to be free from background noise and/or feedback
- c) the quality of the slowed audio signal (recorded speech extracts) when using the slow-down software needs to be improved - particularly at lower speeds as it was found that the software introduces artefacts which

¹⁹⁸ Group A at 50% speed

¹⁹⁹ Group B also at 50% speed

result in speakers sounding sleepy or slurred, which can distract listeners and hinder intelligibility of speech extracts

- d) the level of participants' linguistic ability needs to be more adequately ascertained and groups should be divided more conscientiously and evenly to ensure more adequate comparative results between groups as word recognition is influenced by linguistic knowledge

Authentic speech involves a wide variety of accents delivered in a variety of ways and L2 English users need ways of processing such speech effectively so that it is intelligible to them. The results for the effectiveness of the slow-down tool in this test are negative but warrant further investigation.

6.5. Test 4 L2:L2 - L2 English Users EIC Intelligibility Study

'To Investigate L2 English Students' Spoken Intelligibility When Communicating With a Fellow L2 Classmate'

Justification for Test 4

This test differs from previous tests in this study in that it focuses on speech production as well as speech reception, focussing specifically on L2:L2 communication. The focus of Test 4 changed to speech reception instead of speech production. The aim of the study was to uncover which productive speech problems L2 English-speaker subjects had and to investigate whether the slow-down speech tool could be utilised in a pronunciation training programme to increase L2 users'

spoken intelligibility (speech production). It became clear early on in the test implementation and analysis of results that particular factors, which will be discussed in the observations and results sections, had a significant influence on the test results. There are two main reasons for changing the focus of the research from speech reception to speech production:

- 1) To look at the much less-researched and more complex area of speech production as this has very significant consequences for L2 English speakers in terms of how they perceive themselves as English speakers and how they are perceived, indeed judged, by others, whether it be by an English language examiner, English language teacher, L1 English speaker or by other more or less proficient English speakers than themselves. Speech production in turn is a much more complicated phenomenon to research than speech reception in terms of determining what is intelligible speech and why – it cannot be solely one person’s opinion whereas speech reception is much more subjective. Also, speech production is affected by far more factors than speech reception, including complex psychological, sociological and other factors.
- 2) To explore a different and more distinct research area – speech production – as speech reception was already being investigated by a colleague.

Test 4 addresses the first focus of this study: to test the effectiveness of the speech slow-down facility for improving L2 English users’ speech production and reception by increasing speech intelligibility. This test also seeks to answer the second research question: can experience with L2 accents affect how intelligible L1 and L2 users find such speech?

The author decided to focus on speech production with particular reference to phoneme discrimination. Celce-Murcia (1991) notes that bottom-up speech processing, which most L2 English users rely on (except for advanced users), depends heavily on accurate phoneme discrimination, for both speaking (clear phoneme articulation) and listening (accurate identification of phonemes). Boku (1998) notes that if L2 English speakers are unable to adequately discriminate phonemes in English, their ability to both understand others and to be understood themselves is greatly hindered. In turn, accurate phoneme production and discrimination leads to greater confidence on behalf of the L2 English user's communicative confidence (Avery and Ehrlich, 1992, Boku, 1998).

Overview of Test 4

The data was collected in November 2005. Four members from the DIT's Degree in International Business and Languages (Major Language English) first year course from various L1 backgrounds and English proficiency levels (from intermediate to proficient) participated in the study. The materials used in this test include Cambridge Speaking Tests, two MD recorders and microphones (one per pair), three questionnaires per participant: 1) Language Learning Background Questionnaire, 2) Reflective Language Use Questionnaire, 3) Interlocutor Intelligibility Questionnaire.

Background to Test 4

This study was carried out as part of a wider research project to determine a lingua franca for EIC. It is hoped that information gained from this study will feed into wider research in the area of intelligibility in EIC – where intelligibility breaks down and reasons for this, so guidelines on how this can be avoided in EIC communication can be drawn up. The researcher recorded and analysed conversations between two L2 users of English, along with detailed questionnaires completed by the participants, to uncover segments which were deemed unintelligible.

Test 4 Subjects (see Appendix 1 for Subject Background Information Table)

While this test was carried out on a very small scale with four L2 English-using students from one class within the third level institute where this researcher was based, there were four different languages (L1s) represented: Hungarian, Chinese (Mandarin), German and Russian. The ratio breakdown of the four language families and males to females was: 1 Russian male:1 Hungarian female and 1 Chinese male:1 German female. Fluency in other language(s) was also noted, with one subject being a proficient speaker of German along with English and her L1, Hungarian. The age range of the subjects was from 24-26, with the average age at 25 years. The students received a total of twenty-four hours instruction per week – twelve for Business, six for the major language (English) and six in the minor language (either: Spanish, German or French). There was some disparity in student ability and competence in English because some students had either learned English for longer or had used or been exposed to it for longer – one subject had been learning English for eleven years

and had lived with an Irish family as a nanny while another subject had been studying English for eight years but had only been living in Ireland for two and a half months. These students were required to achieve a minimum grade of 6 in the IELTS exam¹ (with a 6.0 in the written section) or equivalent² for entry to this course, which implied all IBL students would have a reasonable level of English. However, two of the four participants in this study did not undertake an IELTS exam before entering this course – one is a German female who is an Erasmus student. She was attending college in Ireland for just one semester and was therefore not required to produce IELTS results as part of her entry requirements – she was undertaking similar business studies in her home institution in Germany. The other participant who did not complete an IELTS exam is a Ukrainian male. He was a late entry to the course and was assessed by means of a formal oral interview by the Head of International Studies along with two lecturers from IBL for acceptance on the course. For these reasons, there were also some discrepancies in terms of language level amongst the four participants.

Methodology for Test 4

Test 4 Collection of Data	Rationale
Subjects complete Language Learning Background Questionnaire	To obtain information regarding subjects' L1, proficiency levels in English and any additional languages they know – to inform results
Subjects complete	To acquire information about participants' opinions and

¹ According to the official IELTS handbook, a score of 6 denotes a 'competent user' and is described as, 'has generally effective command of the language despite some inaccuracies, inappropriacies and misunderstandings. Can use and understand fairly complex language, particularly in familiar situations'.

² Minimum grade B in Cambridge Certificate Exam or grade 550 on TOFEL-based exam/213 on the computer-based exam or minimum of grade B2 on Test of Intercultural English (TIE).

Reflective Language Use Questionnaire	experiences regarding their use of English to inform results
Subjects undertake Cambridge FCE Speaking Task (in pairs)	To generate discussion based on topics which subjects can relate to and talk about – these recorded discussions are main source of data
Subjects complete Interlocutor Intelligibility Questionnaire	To indicate aspects of subject's speech/pronunciation considered unintelligible by interlocutor and reasons for this, to enhance research into area of speech intelligibility and inform results

Table 23: Test 4 Collection of Data and Rationale

Procedure for Test 4

Stages	Procedure
1) Subject questionnaires (x2)	Participants complete one Language Learning Background and one Reflective Language Use Questionnaire each
2) Speaking Task	Subjects complete in pairs – conversations recorded on MD player
3) Subject questionnaire	Participants complete Interlocutor Intelligibility Questionnaire
4) All data analysed and compared	Data from recordings (researcher's observations) and questionnaires analysed and compared to procure results
5) Results, observations and conclusions	Tabulation of results with information from questionnaires used to inform Results, Observations and Conclusions sections

Table 24: Test 4 Procedural Stages

The study required participants to pair off and complete a speaking task taken from a Cambridge First Certificate English exam.

Test 4 Observations

While the piloting process involved just a small number of subjects, it was valuable in informing the study's methodology that subjects must *not* have previous knowledge of each other and if possible, not have (much) prior knowledge of speakers from the same region or country as their partner, as this may alter results as previous exposure to a particular accent can increase intelligibility.

The Hungarian subject was deemed both by herself, her interlocutor and the researcher to be the most intelligible of all the participants in the study. This can be due to a number of reasons, namely that she has studied English for longer than the other subjects – eleven years compared with eight, five and four years. Also, she is the only participant who has lived with L1 English speakers for a considerable length of time – one and a half years. No other subject has lived with L1 English speakers for such a length of time. She is also bilingual in German - a language similar to English - which shows her aptitude for languages. She is also the only participant to have completed the Cambridge Proficiency of English test, which again is proof of her high level of English.

The Chinese speaker was deemed the second most intelligible speaker in the study, again based on his responses, those of his interlocutor and from observations of his

speech made by the researcher. He has lived in Ireland for a fairly significant length of time – three and a half years. He gains a lot of exposure to L1 English through work and friends.

The German speaker was judged to be the third most intelligible. Although she has only been living in Ireland for two and a half months, significantly shorter than the rest of the subjects in the study, she has been studying English for eight years – the second longest time after the Hungarian participant. Also, German is more similar to English than the other language in the test; therefore, it should be easier for her to pronounce English sounds than her fellow study participants. She rated her pronunciation lowest in the group – at 3, but this perhaps reflects her lack of self-confidence as she has only been living here for a short time and felt she is behind the rest of her classmates in terms of her ability to speak English.

The Ukrainian speaker came last in terms of intelligibility level. This is for a number of reasons but mainly because this participant has a speech impediment which makes it more difficult for his speech to be understood. He has quite a pronounced stammer which interrupts the flow of conversation and makes him unintelligible at times. His partner in the study however would have had previous exposure to his speech and therefore could accommodate him more easily than someone speaking to him for the first time. It is interesting to note that this speaker has lived in Ireland the longest – four years. He also gains a lot of exposure to L1 English speech, through his work and social life.

Test 4 Results

This test's findings suggest that the more acquainted a speaker is with his/her interlocutor, the more intelligible s/he is. This is for a number of reasons, namely, the listener will have had previous exposure to the speaker's speech and therefore be able to process it more efficiently. This may have to do with what Field (2003) calls 'multiple trace' theory, where the mind stores samples of new audio cues, and each time there is a match to this sound added to the memory, the listener will find it increasingly easy to process this sound. The more 'traces', the more familiar the sound and the easier it is to process and hence understand. Another reason for higher intelligibility rates amongst people who know each other is that they are more likely to accommodate each other, particularly if they are on friendly terms (Davies, 1991²⁰⁰, Holmes, 1992²⁰¹). The main reason for this, based on the recordings themselves and reading material, is that the subjects know each other, as they are classmates, and therefore are far more likely to accommodate each other. Intelligibility is also higher between this group of subjects because they have previous exposure to one another's speech/accents, which also aids intelligibility. It was uncovered in this test that previous knowledge between subjects hampers results in two ways:

- 1) Subjects have had exposure to their interlocutor's speech/accents, therefore it is more intelligible to them
- 2) Subjects are more likely to accommodate each other when they know each other and are on friendly terms with one another.

²⁰⁰ '...it does seem to be the case that intelligibility is as much a matter of attitude as it is of linguistic nearness' (Davies, 1991: 54).

²⁰¹ 'People will find an accent easier to understand if they admire the person speaking it and also people will be more motivated to learn another language if they feel positive towards the people using it' (Holmes, 1992: 345).

The two subjects whose L1 (German) and L2 (Hungarian) are more similar to English rated third and first respectively in terms of intelligibility. This is a very good score for the German participant who had only been living in Ireland for two and a half months. This may be due to the fact that of all the L1s of the participants in the study, German is most similar to English, particularly in terms of phonology. This would help these subjects when producing English phonemes/sounds. The two highest scorers in this test have been learning English for the longest period of time: eleven years (Hungarian) and eight years (German) respectively. The test also supports the fact that the higher the level of English a subject has, the less intelligibility problems s/he is likely to experience (Aitchison, 1994). While this study was carried out on a small scale and much more research needs to be conducted for conclusive results, it did highlight some important and noteworthy information. Also, the methodology for future research will be informed and improved based on what has been learned from this experiment.

Test 4 Conclusions

This study shows that for EIC, receptive intelligibility is easier for German L1 and L2 speakers than speakers from the other L1s in this test. This is due to the phonemic similarity between English and the Germanic languages. Also, the length of time studying English seems to have far greater relevance on one's intelligibility than on how long one has lived in an English-speaking country. Because the study is very small-scale and includes a participant with a speech impediment, which is deemed to

affect his intelligibility in English, more tests need to be carried out for more conclusive results.

6.6. Test 5 L2:L2 and L2:L1 - L2 English Users EIC Intelligibility Study

‘To Investigate the Effectiveness of the Slow-Down Speech Tool On Dublin Institute of Technology L2 English-Speaking Students’ Spoken Intelligibility after a Four Week Pronunciation Training Programme’

Justification for Test 5

On reflection and analysis, it was found that Test 4’s methodology could be improved. The main issue was that acquaintance between participants affected results, as more accommodation occurred due to previous exposure to the voice and accent of the interlocutor and due to apparent friendliness between subjects, who were classmates. For these reasons, it was decided that subjects should not be acquainted with their partners in the study, to discount these phenomena. The results of Test 4 also led to a redrafting of some of the questions in the questionnaires - to ensure greater clarity, avoid researcher bias and gain a more comprehensive insight into subjects’ experiences of the speaking tasks. Test 5 addressed the two aims of this study:

1. to test the effectiveness of the speech slow-down facility for improving L2 English users’ speech production and reception by increasing speech intelligibility
2. to test the effectiveness of a slow-down-based pronunciation training programme to increase L2 users’ spoken intelligibility

Test 5 also specifically focussed on the fourth and fifth research questions:

- Is the speech slow-down facility effective in increasing the intelligibility of speakers' pronunciation?
- Can a pronunciation training programme focused on individual subjects' problematic English phonemes increase their spoken intelligibility?

Background to Test 5

This study was carried out as part of wider research to determine a lingua franca for EIC. A group of 14 L2 English users were chosen from the student population of Dublin Institute of Technology in Kevin Street, Dublin. The participants did not know each other due to the effects of acquaintance between speakers, as noted above. Subjects were put in pairs and recorded participating in a discussion. L2 English users were paired with other L2 users of different L1s, so there was a higher chance that they would experience communication difficulties. The recordings were analysed for examples of loss of intelligibility due to a speaker's difficulty or inability to accurately produce certain phonemes. Approximately four segmental features (phonemes) were chosen for each participant. The participants were trained in accordance with Jenkins' recommendations for a LFC with the aid of the speech slow-down software. Recorded pronunciation training programmes were specifically designed based on individual pronunciation diagnosis for each participant, slowed down using the slow-down speech technology (Test Group only) and used to train subjects to produce problematic English sounds (phonemes) more precisely. The slow-down was applied to the pronunciation training material so that the participant

could hear more accurately segments of speech that were produced naturally (fast and at speed with connected speech features) by an L1 English user producing these segments intelligibly. The training stage also tested the effectiveness of the slow-down software as a useful and effective tool for training L2 users in English language pronunciation, both productive and receptive.

Based on this test's results, recommendations are made for English language pedagogy and teacher training, as pronunciation seems to be a somewhat contentious issue which is mishandled or even omitted from many English language classes and teacher training courses. A number of limitations had to be included in the methodology as it was not in the scope of this research to include and investigate every possible element involved in the communicative process. Aspects of intelligibility which were not looked at in detail, though their occurrence is noted in analysis, were repair and clarification strategies.

'There is no convincing empirical evidence which could help us sort out the various positions on the merits of pronunciation training' (Stern, 1992: 112).

This assertion was also tested in this study, to determine whether direct pronunciation training has any effect on the intelligibility of recipients' speech production in English. It was proposed that the subjects would comment on their interlocutors' intelligibility via questionnaires, along with comparative observations of pre- and post-training extracts by four non-language specialist judges, to avoid bias which would negatively affect results. The researcher, being an English language teacher, was aware that English teachers are possibly the worst judges of L2 users' English pronunciation, as they have had a lot of exposure to non-standard, L2 accents in their

work and are much better at decoding difficult or unintelligible speech than the average L1 or L2 user of English (Kenworthy, 1997).

This test outlines the application of software which slows down speech for the teaching of English pronunciation to L2 users of English. The software has been implemented in a self-access learning tool (pronunciation training CD and booklet) which L2 English users can use outside of the English language classroom to practise segmentals as a support to their language learning/part of a wider pronunciation learning and practice programme. While there are many CALL programmes for teaching English pronunciation, this study tests the effectiveness of a unique tool which slows down speech without tonal distortion. The tool is referred to as the (speech) slow-down, the slow-down (speech) tool/facility/algorithm/software and provides more processing time for users to hear the targeted phonemes as they are produced in the stream of connected speech – flowing, natural speech and providing a model for them to practise, to help them produce English phonemes more accurately and thus more intelligibly. The study involved third-level students who use English every day as part of their studies and in their wider social and professional circles. The study was limited in that it was based on a small number of L2 students studying in Dublin, Ireland. It did not attempt to make broad generalisations for all L2 users in different contexts or countries. The study used a qualitative analysis of pre- and post pronunciation training tests and a number of questionnaires to assess subjects' progress in developing intelligible English phoneme production across three groups: the Test Group, who used the slow-down tool, the Control Group, who undertook the same form of pronunciation practice and assessment procedures but without the application of the slow-down tool and the Non-Intervention Group, who did not

receive any formal pronunciation training but whose pronunciation was merely analysed at the start and at the end of the month-long test period.

The study also ascertained and evaluated the effects of other variables on the learning process, namely experience of L1 judges with L2 speakers in general and if this related to their judgements of L2 speech extracts in this study in two respects:

- a) the intelligibility of words in the utterances ascertained through verbatim recall tests
- b) the judges' intelligibility ratings of the speakers as Rajadurai (2007: 90) notes that intelligibility scores can be affected by attitudes of the judges to L2 speech and particular accents.

Indeed, Morley (1991: 499) notes that, 'intelligibility may be as much in the mind of the listener as in the mouth of the speaker'. With this in mind, the study also included evaluations of subjects' speech by their interlocutors (other L2 speakers) to investigate whether this differed from evaluations by L1 speakers and if this could be related to attitude and experience with L2 speech. The study also used a questionnaire – the Interlocutor Intelligibility Questionnaire - to gauge the interlocutor's role in the communicative process, since intelligibility in interactions is negotiated by both speaker and listener (Smith and Nelson, 1985: 333). Rajadurai (ibid) also notes that previous studies have largely ignored the importance of accommodative strategies – both receptive and productive and this study aimed to investigate these further.

The research questions addressed in this study are:

1. Can a pronunciation training programme focussing specifically on problematic phoneme production make a significant contribution to improving L2 users' intelligibility when speaking English?
2. Can the slow-down increase speech reception to in turn improve speech production as part of a pronunciation training programme?

Theoretical Framework for Test 5

'Intelligible pronunciation is seen as an essential component of communicative competence'

(Morley, 1991: 513)

Accurate, intelligible pronunciation is highly valued as it can determine the success of the speaker to accurately transmit messages to his/her audience (Fraser, 1999; Nunan, 1988) and may affect how one is judged professionally and socially (Lippi-Green, 1997). Focussed and effective teaching to improve pronunciation, namely to increase intelligibility, is sought by many learners, teachers and academics in EFL (Widdowson, 2003, Jenkins, 2000, 1999, 1998, Walker, 2001, Morley, 1991, Celce-Murcia, 1987). Many EFL/ESL teachers currently feel they lack the necessary skills for adequately teaching pronunciation²⁰² (Breitkreutz, Derwing and Rossiter, 2002) and L2 English teachers can feel inadequate about their ability to teach pronunciation when they are not L1 English users²⁰³. With more importance being placed on L2 users' speaking ability in international language proficiency tests such as TOEFL iBT

²⁰² See Chapter 2, section 2.1 for more on this

²⁰³ See Chapter 1, section 1.6.1 for more on this

(Fulcher, 2005, TOEFL, 1999), pronunciation materials, including software, are required to address these needs.

The main aim of the study was to test whether a pronunciation training programme could have a noticeable effect on the speech production (specifically phoneme production) of L2 users so that they were more intelligible in EIC contexts. The study also investigated the effectiveness of the slow-down speech tool for teaching the pronunciation of phonemes to L2 users of English through a self-access pronunciation training programme. The pedagogical approach was informed by the results of a number of tests the researcher carried out over the last three years. While the author recognises the importance of both segmentals and suprasegmentals for intelligible pronunciation, only segmental production was assessed here as there is much less research in this area (Lambacher, 1999). Although the study does not seek to prioritise the teaching of segmentals as a means of increasing a speaker's intelligibility, it does seek to investigate whether the teaching of segmentals can lead to greater intelligibility and whether the software is effective for this purpose. As pronunciation tends to be sidelined in the ELT class in favour of other skills or activities, such as speaking activities in the form of role plays or listening comprehension tasks, and so forth (Cauldwell, 2002b, Field, 2003b), the slow-down technology is also seen as a useful and effective means of enabling learners to practise the pronunciation of English phonemes in a focussed manner by themselves outside of the classroom.

Design of Test 5

This section discusses the various aspects included in the experimental design of this study such as the people involved: the test subjects and the four independent judges, and the tasks involved – to gather data and answer the research questions based on the analysis of the data.

Test 5 Subjects (see Appendix 5 for Subject Background Information Table)

The fourteen subjects in this study came from a range of L2 language backgrounds, mostly from Expanding Circle countries²⁰⁴ – where English is used as a foreign language. Most subjects were postgraduate students at the Dublin Institute of Technology, chosen because of their willingness to participate, their suitability for pronunciation training (at least two potential subjects were found not to be suitable for this test due to their highly intelligible English pronunciation), their availability during the testing period, and their motivation to work on elements of their pronunciation, namely segmentals. The age range was from twenty-one to thirty-six years with most subjects in their late twenties. While subjects generally had quite a proficient level of English, they all wished to improve their pronunciation, as they were required to give presentations and orally communicate with their supervisors and other researchers and colleagues during the course of their work. All subjects received the same written brief on the nature of the study before participation. The brief did not

²⁰⁴ From Kachru's Three Concentric Model of the World's English Speakers: Inner Circle – predominantly native-English speaking countries, namely the UK, US, Canada, Australia, Ireland and New Zealand; Outer Circle – English is spoken as a second language and consists of ex-British colonies, such as India, Kenya and Singapore; Expanding Circle - English is a foreign language and little used in the countries themselves but learnt mainly for communication and trade with other countries, including China, Saudi Arabia, Russia and Zimbabwe (Kachru, 1992, Jenkins, 2000)

state the specific nature of the study, only that it sought to improve speakers' phoneme production through a targeted pronunciation training programme, so as not to lead subjects into supplying particular answers or effect their attitudes or reactions to the study in any way.

Subjects were divided into three groups:

- Group A – the Test Group
- Group B – the Control Group
- Group C – the Non-Intervention Group

There were five subjects in Groups A and B and four subjects in Group C.

Test 5 Independent Judges

Four non-language specialists were consulted to provide L1 English speakers' observations on aspects of the subjects' pre- and post-practice recordings. The judges were all L1 Hiberno-English speakers – two male and two female ranging in age from 29 years to 50 years. None of them were bilingual or proficient in another language and none had spent considerable time in an L2 English-speaking country in recent years or with L2 users of English. L1 English users who were non-language specialists were chosen in an attempt as well as their level of knowledge of English and experience with L2 English speech. There were three main reasons for using L1 English users who are not language specialists as judges:

- 1) to maintain some sort of uniformity between judges in terms of how they process the speech of the L2 English-using subjects, as L1 users process speech differently from L2 users²⁰⁵

²⁰⁵ This was recommended to the author in correspondence with the psycholinguist John Field.

- 2) their level of English would be similar, as opposed to L2 users who would more likely have different levels of English
- 3) as non-language specialists, the four judges all had some exposure to L2 English speech but not so much as to have had an effect on ratings, ie, a person with a lot of experience of L2 English speech would more likely find such speech more intelligible than someone with little exposure to L2 speech. In the same vein, some L2 users may be more sympathetic to other L2 users; some L2 users may be even more judgemental of the L2 English-speaking subjects.

The judges undertook two tasks to provide additional insight into the results of the study:

1. **A Verbatim Recall Task:** judges listened to twenty pairs of matching extracts – one taken from pre-practice recordings, when subjects used their pronunciation practice CDs for the first time and one from the post-practice stage, at the end of the subjects' four-week pronunciation training period. The independent judges heard sentences, not individual words as words are rarely uttered alone without a context, which would cause further intelligibility problems for the judges and which would not reflect the usual, natural use of English. One targeted phoneme was included more than once in each extract. Two targeted phonemes for each subject were tested, so judges heard four extracts for each subject: phoneme A 1st iteration – 1A (pre-practice), phoneme A 2nd iteration – 2A (post-practice), phoneme B 1st iteration – 1B and phoneme B 2nd iteration – 2B. The verbatim recall task was to objectively

and empirically gauge how accurately the judges heard what the subjects said in the extracts. It was anticipated that this would provide further insight into the intelligibility of the subjects' speech²⁰⁶ as accurate verbatim is only possible when a listener has clearly and correctly heard the speaker's words, which is dependent on many factors but mainly on the speaker's production. This verbatim recall test was also deemed more reliable than judges transcribing what they heard, as it reflects their ability to hear and process what they have heard rather than test their working memory²⁰⁷. Writing is slower, different psycholinguistic processes are involved and other problems could be introduced, such as illegibility of a person's handwriting²⁰⁸. While it is accepted that many factors in speech contribute to a speaker's intelligibility, such as prosodic features, the judges' verbatim recall recordings were analysed for areas of difficulty which could be traced to problematic phoneme production in the original extracts (from the subjects' pre- and post practice recordings). Other variables which could affect judges' verbatim recall accuracy were acknowledged, such as lack of 'tune-in' time for judges. Extracts were taken out of context, providing only a very short time in which judges could pay attention to the syntactic units, which could have hindered intelligibility as listening for overall meaning (within a context – top-down) is a more natural and normal means of listening.

2. **Intelligibility Rating of Extracts Task:** after the verbatim recall of each extract, judges were required to rate the extract speaker's intelligibility on a

²⁰⁶ In communication with the psycholinguist John Field.

²⁰⁷ See footnote 6

²⁰⁸ This was discovered through previous tests carried out by the author and from personal communication with John Field.

Likert scale from 1 to 5 with 1 = *very difficult to understand*, 3 = *reasonably able to understand*, and 5 = *extremely easy to understand*. This was to provide unbiased (non-language specialists) L1 speakers' observations of the subjects' spoken intelligibility to enhance the study's results and include other EIC community members' ratings on the speakers' performance, to make the test more objective and relevant for EIC. The word 'intelligible' was avoided in the scale as it could distract judges, who were not language specialists. Instead, judges were asked 'how would you rate this speaker's pronunciation?'

Materials for Test 5

A number of materials were used in Test 5. These were: the slow-down speech tool, a speaking task, four different questionnaires, pronunciation practice booklet and CD, a ratings sheet (for the judges), a practice log/English communication log (NIG only) and an MD recorder. These materials are discussed in more detail in the following sections.

The Slow-Down Speech Tool

The slow-down facility, the software which slows down speech without tonal distortion, developed within the Dublin Institute of Technology and explained in more detail in Chapter 5, section 5.1, was used with Group A, the Test Group, to determine whether slowing down speech as part of a pronunciation training programme could increase a person's spoken intelligibility. The training programme involved identifying 3-5 problematic phonemes per subject, producing a training programme

based on diagnoses of subjects' pronunciation and using the software to slow down each phoneme lesson to speeds of 80% and 60%, along with the original speed (100%). The pronunciation CD included numerous instances of a targeted phoneme being produced in a variety of word positions – in words in isolation²⁰⁹, in phrases/sayings, and in longer sentences, as part of a dialogue. Members of the Test Group heard each lesson three times: first at 100%, then at 80% and then at 60%. This was to enable subjects to hear the original version first, then to slow the lessons to two slower speeds, to firstly enable subjects to hear how the targeted phonemes are produced naturally in words and sentences within connected speech (as produced by proficient speakers) and secondly to help them produce the sounds themselves more intelligibly, by mimicking the model speaker on the training CD. Previous tests in this study investigated the effectiveness of the slow-down tool for increasing speech reception. This test changed direction and applied the slow-down tool for the purposes of speech production, specifically phoneme production with the aim of increasing spoken intelligibility.

The Speaking Task

The speaking task is taken from the Cambridge Speaking Tests and involved subjects in pairs choosing their top three items from pictures of twelve well-known goods and services (cooker, watch, fridge, TV, hair grooming set, newspaper, camera, car, airplane, computer, personal music system and fast food). The subjects were to then explain reasons for their answers to their partner. After a few minutes of discussion,

²⁰⁹ Words in isolation were not slowed as these are produced similar to citation form without connected speech features so the slow-down was not needed as it is ineffectual in such cases.

the subjects were given a list with six additional questions about the items in the picture. These were as follows:

- What other things would you hate to be without?
- How popular are 'fast foods' in your country?
- How important is it to be punctual?
- What is the most important piece of equipment or furniture in your home?
- More and more people are travelling by car these days. How wise do you think this is?
- What do you think life would be like without television, radio and newspapers?

The test was not concerned with the subjects' actual responses to these questions, merely that they generated discussion easily. The subjects had about twelve minutes to complete the task – about six minutes for the first question and six or so minutes for the second question. After three minutes, the subjects were informed so that the speakers could change if necessary, to allow each speaker in a pair an equal amount of time to speak. The short time was influential in forcing the subjects to concentrate and complete the task effectively and efficiently. Each pair's conversation was recorded on an MD player, so it could be analysed at a later stage.

Pronunciation Practice Booklet and CD²¹⁰

For each subject, a pronunciation booklet and CD were created for each subject to work with over the course of one month. The booklet contained the tape scripts for

²¹⁰ For Groups A and B only

each phoneme-targeted lesson²¹¹, as no user interface had been designed for the slow-down software at that time. The booklet also contained diagrams of how to produce the targeted phonemes in the oral cavity. The contents of the lessons were adapted from a number of TEFL pronunciation materials aimed at particular segmentals, including lists of single words, short phrases or sayings, longer sentences as part of a dialogue and minimal pairs, to provide adequate pronunciation practice for each targeted phoneme. Minimal pair work allowed for more concentrated and challenging practice and highlighted the importance of producing phonemes more accurately, particularly similar but different sounds, such as long and short vowels, a distinction which is deemed necessary to increase intelligibility according to Jenkins' LFC.

Examples taken from the lesson for /u:/ include:

Single Words:

fool, shoot, school, tooth, two, who, through, loose, June, fruit, huge, amuse,
few, student, youth, argue, beauty, genuine

Phrases/Sayings:

Beauty is truth, truth beauty
The proof of the pudding is in the eating
An eye for an eye and a tooth for a tooth

Dialogue Sentences:

Lucy: Hugh? Hugh! Where are you?

Hugh: I'm in the loo. Where are *you*?

²¹¹ Determined through pronunciation diagnosis from initial speaking tasks undertaken by subjects in pairs.

Lucy: Removing my boots. I've got news for you.

Hugh: News? Amusing news?

Lucy: Well, I saw June. You know how moody and rude she is as a rule?

Most words in the phrases and dialogue sections which contained targeted phonemes usually appeared in the single words lists first to provide an example of the words in isolation before being embedded in connected speech, so subjects could practice the words before they appeared in a longer speech context and to help subjects appreciate the fact that words can be altered in connected speech. Meanings of words and phrases were given to subjects when required. The CD contained the aural lessons with the voice of the researcher – an L1 Hiberno-English speaker and TEFL teacher with an intelligible accent. Overall, the lessons were designed to provide adequate yet focused, meaningful, natural practice of the targeted phonemes.

Methodology for Test 5

Test 5 Collection of Data	Rationale
Subjects complete Lang. Learning Background Questionnaire	To obtain vital information about subjects L2 + other language learning and use – to inform test results
Subjects complete Reflective Language Use Questionnaire	To obtain information regarding subjects' <i>current</i> daily use of English – to inform this test's results
Record paired subjects discussing pictures from speaking task	To encourage natural conversations-to diagnose individual subjects' problematic phoneme production
Participants complete Interlocutor Intelligibility Questionnaire	To obtain L2 speakers' judgements– to inform test results and include L2 users' views - EIC members
Recordings analysed	To diagnose subjects' pronunciation - to design individual pronunciation training programmes
Subjects individually recorded practising with pron. training CDs	To compare 1 month later with final training session - to note changes in production of targeted phonemes
One month after initial recordings paired subjects recorded doing speaking task then Interlocutor Intelligibility Questionnaire	1) To compare with original recordings to uncover changes in production of targeted phonemes 2) To compare with initial comments–to determine if any changes in opinion due to pronunciation training
Subjects again recorded practising with their pronunciation materials	To compare phoneme production now with pre-practice - determine if changes due to pron. training
Four independent judges are chosen	To obtain unbiased rating of subjects' pron. and include comments from L1 users-also EIC members
One month later, judges do rating test to compare pairs of sentences – pre- and post-training – same listen, repeat and rate format as in previous ratings test	To determine if pron. training is effective by noting differences between pre- and post-training and to determine whether slow-down is effective (TG only). 1 month period between tests necessary to eliminate judges' memory of subjects' pron. – more objective
All data is analysed and compared	To answer this test's research questions

Table 25: Test 5 Collection of Data and Rationale

Procedure for Test 5

Stages	Procedure
1) Subject questionnaires (x2)	All subjects complete a Language Learning Background and a Reflective Language Use Questionnaire each
2) Speaking task	Subjects complete in pairs – conversations recorded
3) Subject questionnaire	Subjects fill in Interlocutor Intelligibility Questionnaire
4) Conversation Analysis	Researcher listens in detail to subjects' recordings and notes problematic phonemes for each subject
5) Design Pronunciation Training Programmes	Based on diagnoses, researcher creates individual pronunciation programmes for TG and CG subjects
6) Record 1 st Use of Pronunciation Programme	Subjects individually recorded as they listen and repeat to pronunciation lessons on CD and booklet
7) 1 Month Pronunciation Training/Communication Observation ²¹²	Groups A and B practise with CD and booklet as often as possible over 1 month period - keep practice log; NIG subjects keep a log of daily English communication
8) Record Final Use of Pronunciation Training	Subjects individually recorded as they listen and repeat pronunciation lessons on CD at end of 1 month period
9) Judges' questionnaire	4 judges complete Judges' Lang. Learning Questionnaire
10) Judges' Extracts: Test A Mixed Order (CG&TGonly)	Researcher mixes up pre- and post-practice recorded extracts for judges to verbally recall and rate
11) Judges' Extracts: Test B-Ordered (CG & TG only)	4 weeks later same-extract pairs from pre- and post-training arranged for judges to verbally recall and rate
12) Judges' Tests A & B Analysis & Comparison	Judges' verbatim recall tests and extract ratings analysed and compared – Tests A and B results are compared
13) Judges' Extracts: Test C (NIG only)	Judges verbally recall and rate 40 different extracts – 20 from pre- and 20 from post-observation 1 month period
14) All Data Analysed and Compared	Data from all judges' tests: A, B and C analysed and compared along with information from all questionnaires
15) Results, observations & conclusions	Results are tabulated, questionnaire information used to make informed observations, conclusions formulated

Table 26: Test 5 Procedural Stages

²¹² Non-Intervention Group only

Pronunciation Diagnosis

The subjects' segmental pronunciation difficulties were diagnosed from the initial recording of pairs of subjects partaking in dialogues initiated by an FCE speaking task. The subjects were paired, ensuring they were from different L1 language families, as intelligibility is more likely to be higher when speakers are from the same or similar language families²¹³. Between 2 and 5 of the most problematic phonemes were chosen for each participant for targeted pronunciation practice. While the researcher's and four independent non-language specialist judges'²¹⁴ evaluations of a subject's pronunciation were paramount in this study, the reactions of the L2 interlocutors were also important, as members of the EIC community and their input is crucial in the assessment of and debate about intelligibility for EIC. For this reason, the first Interlocutor Intelligibility Questionnaire was also referred to at this time. Swan and Smith's (2001) outline of typical phonemic difficulties for the L1s of the subjects was also referred to, to establish if observations were inline with their guidelines for the different L1s. Jenkins' Lingua Franca Core was referred to as a guide for which phonemes to include or omit in the pronunciation practice package, based on what the LFC deems necessary to maintain intelligibility in EIC communication.

Although Jenkins' LFC does not deem /*ʒ*/ or /*ʃ*/ as necessary for a speaker to be intelligible, in this test, both phonemes were chosen for practice for two reasons:

²¹³ See Jenkins (2000)

²¹⁴ Four non-language specialists were required to judge forty extracts (twenty extracts containing one targeted phoneme, two phonemes for each subject, judged twice – at the pre- and post practice stages) from subjects' recordings by two means: i) to rate speakers' intelligibility on a Likert scale, ii) to undertake a verbatim recall test – both for pre- and post practice stages, to provide objective analysis of the results – see Results section

- a) to ascertain whether pronunciation practice could improve subjects' production of these sounds
- b) to test assertions made by Jenkins for the LFC – to determine whether pronunciation practice in these phonemes increases speakers' intelligibility or not

All recordings were made on a Sony MZ-N710 digital Mini Disc recorder with an external microphone, which were then transferred to a computer using Sonic Foundry Sound Forge software. Speech samples were saved in audio files with a 16 bit (CD quality) resolution.

Subjects' L1s & Proposed Phonemes for Pronunciation Practice²¹⁵

1T: Spanish L1 Speaker (4)	/t̃ʒ/, /d/, /t/, /dʒ/
2T: Polish L1 Speaker (3)	/u:/, /ʒ̃/, /e/
3T: Mandarin L1 Speaker (3)	/w/, /è/, /ʒ/
4T: Romanian L1 Speaker (2)	/h/, /dʒ/
5T: Bahasa L1 Speaker (4)	/t/, /d/, /v/, /@ʊ/
1C: Malayalam L1 Speaker (4)	/@ʊ/, /v/, /p/, /ʃ/
2C: Korean L1 Speaker (5)	/j/, /r/, /l/, /ä/, /dʒ/
3C: Italian L1 Speaker (4)	/h/, /è/, /ʒ̃/, /ʒ/
4C: Spanish L1 Speaker (5)	/@ʊ/, /v/, /i:/, /ʒ/, /ð/
5C: French L1 Speaker (4)	/h/, /è/, /ʒ/, /ð/

Table 27: Test 5 Subjects' L1s and Individually Diagnosed Problematic Phonemes

²¹⁵ The pronunciation training was given to Test Group (1T-5T) and Control Group (1C-5C) members only.

For the Test Group, Group A, the CD contained a lesson for each phoneme at three different speeds – first at 100%, then 80% and then 60%, to test the effectiveness of the slow-down facility. Full speed was compared with 80%, which is a noticeable but subtle slow-down and 60% is a more obvious slowed rate but not so slow that it is deemed to be unnatural or demotivating. The Control Group, Group B, only heard lessons at 100% to compare results against those from Group A – to establish if the slow-down is effective for improving phoneme production or not.

Subjects in Groups A and B were recorded as they listened to and repeated the lessons on their CDs for the first time - to note if there were any changes when the slow-down was applied and to compare this to a recording of the same exercises at the end of the four-week practice period, to determine any changes in phoneme production between the two groups.

For the practice programme, subjects were required to listen and repeat while referring to the booklet - the tape script of the lesson. Subjects were advised to pause during longer speech sections (full sentences) as they were not required to:

- a) rely on memory for repetition²¹⁶
- b) simply read the tape script

This was particularly the case in the dialogue section of the practice programme, where subjects could pause the CD during a sentence, listening to just a few words at a time and repeating, before continuing to the next part of the recording.

Subjects in the Test Group heard the lesson with the first phoneme at 100%, then 80% and 60% before moving on to the next targeted phoneme in the lesson in the same

²¹⁶ See Field's comments on Verbatim Recall (2004: 41-47) and Singer on Working Memory (1990)

manner. This provided the opportunity to practise the targeted phoneme three times in a row, giving the Test Group sufficient cumulative practice to notice how the phoneme was produced in a variety of word positions and within phrases and sentences and provided sufficient pronunciation practice. Individual words were not slowed to 80% or 60% as it is not deemed to be of any great receptive, pedagogical or empirical value to slow down individual words, as they are rarely uttered in isolation and, when they are, they tend to be produced in a way which closely reflects citation form.

Subjects from Groups A²¹⁷ and B²¹⁸ were not instructed as to how many times they must train with the CD and booklet over the course of four weeks. Explicit instructions could have had a demotivating effect and subjects could have falsified reported practice times if they had not followed the test's recommendations. They were however asked to note how often they used their CDs and booklets and for how long each time as this could have an effect on the end results – using the pronunciation practice log. Subjects were required to follow the contents of the CD and booklet in sequential order, so if they completed phoneme 1 on day 1, they had to continue their practice starting with phoneme 2, and so forth, to ensure each phoneme was covered the same number of times, more or less.

Observed Problematic Phonemes for NIG

As the Non-Intervention Group did not receive any formal pronunciation training, their pronunciation diagnosis was carried on the same way as with the other two

²¹⁷ Group A = Test Group

²¹⁸ Group B = Control Group

groups – through an FCE²¹⁹ speaking task in pairs. The NIG – Group C were not told the results of the pronunciation diagnosis until the end of the test period. During the one month test period, the NIG were given a sheet of paper to document their daily English communication and to note two aspects of this communication in particular:

- 1) the approximate amount of time they engaged in English communication – it was not necessary for them to state explicitly how much was productive or receptive communication on their part as this would be too demanding on their part for a one month period. All communication in English – whether productive or receptive is useful for their English language development.
- 2) Record the amount of English communication:
 - a) with L1 English users
 - b) with L2 English users

This categorisation seemed more useful here because of the L1-English setting to determine whether subjects who communicated more with L2 English speakers were more or less intelligible to other L2 English users (interlocutors in this test) and whether L2 users who communicated mostly with L1 users were more or less intelligible to other L1 English users (L1 judges).

1NIG: German L1 (4)	/ɔ̃/, /i:/ - long/short vowel distinction, /ɛ/, /è/
2NIG: Bulgarian L1 (5)	/ʉ/, /ɔ̃/, /ɔ̃/, /ɔ̃/, /ɔ̃/
3NIG: French L1 (5)	/ɔ̃/, /dɔ̃/, /t/, /ɔ̃/, /ɔ̃/ ²²⁰
4NIG: Italian L1 (5)	Should omit /ə/ paragoge ²²¹ ; need to work on: /ɔ̃/, /t/, /ɔ̃/ (long vs. short vowel distinction), /t/, /d/, /ɔ̃d/ -ed endings

Table 28: Test 5 NIG's L1s & Individually Diagnosed Problematic Phonemes

²¹⁹ FCE = First Certificate in English – a Cambridge English language examination

²²⁰ Use at start of words when necessary and omit when intrusive

²²¹ Jenkins (2000: 101) states that there is a ‘universal preference for the CV (consonant-vowel) structure’. Schwa /ə/ paragoge is ‘the addition of schwa to word-final obstruents (plosives, fricatives and affricatives)’ (ibid) and is the result of an L2 English user preferring to adopt a CV syllable structure. As a result, some English words which end with consonant sounds have a schwa added to the end, similar to the speaker’s L1 syllable structure, such as is the case with Italian speakers of English, for example, ‘green-eh’ for *green*.

The NIG was not given its pronunciation diagnosis until the end of the test and was not given any pronunciation training programme.

Test 5 Results

The results are based on two assessments of level of intelligibility of subjects' pronunciation:

1. the four L1 English-speaking judges' 2 tasks:
 - a) verbatim recall accuracy test
 - b) ratings on the speakers' intelligibility
2. the L2 English-speaking subjects' ratings of their partner's speech²²² based on the pre- and post-practice/observation speaking tasks

Test A Judges' VR Mean Results: Pre- and Post-Training Comparison

Subject+Snip.	Pre-Practice	Post-Practice	Disparity
1T A	97%	86%	-11%
1T B	94%	100%	6%
2T A	92%	96%	4%
2T B	94%	97%	3%
3T A	100%	100%	0%
3T B	79%	64%	-15%
4T A	63%	79%	16%
4T B	94%	81%	-13%
5T A	95%	95%	0%
5T B	100%	97%	-3%
			-42%; +29%

²²² Taken from the Interlocutor Intelligibility Questionnaire

1C A	100%	81%	-19%
1C B	83%	100%	17%
2C A	98%	98%	0%
2C B	83%	88%	5%
3C A	100%	90%	-10%
3C B	85%	91%	6%
4C A	100%	100%	0%
4C B	98%	100%	2%
5C A	42%	22%	-20%
5C B	92%	92%	0%
			-49%; +30%

Table 29: Test 5A Judges' Pre- & Post Verbatim Recall Averages

Test A Post-Practice Extract VR vs. Pre-Practice VR

Level of Intelligibility	Test Group	Control Group
Increased	4 extracts	4 extracts
Same	2 extracts	3 extracts
Decreased	4 extracts	3 extracts

Table 30: Test 5A Comparing Judges' Pre- & Post Verbatim Recall Averages

100% accurate verbatim recall was achieved for the following:

25% total test = 10 extracts: 5 extracts = pre-practice; 5 extracts = post-practice

Test Group = 4 extracts: 2 = pre-practice, 2 = post-practice

Control Group = 6 extracts: 3 = pre-practice, 3 = post-practice

As can be seen, the Control Group achieved two more 100% mean scores than the Test Group. Both the Control Group and the Test Group maintained the same number of 100% scores in their individual groups at the pre- and post-practice stages, which indicates that the pronunciation training has little effect on speakers' intelligibility as determined by the verbatim recall task. In Test A, the Test Group's results are similar

to those of the Control Group which indicates that in this test, the application of the slow-down did not increase speakers' intelligibility.

The next highest mean scores in Test A are the following:

- 98% achieved by 3 extracts, all by members of the Control Group: 2 at the pre-practice stage and 1 at the post-practice stage
- 97% achieved by 3 extracts, all by members of the Test Group: 1 at the pre-practice stage and the other 2 for post-practice
- 96% for 1 extract by 1 Test Group member in post-practice
- 95% for 2 extracts by Test Group members: 1 at the pre- and 1 at the post-practice stages respectively

Viewing these results in light of pronunciation training practice times (see Appendix 20), subject 2 from the Test Group achieved the highest overall score in that group for Test A: 7% compared with 3%, -3%, -5% and -15%. This subject had the third highest training time – almost 7 hours. However, as the subject with the most training time in the Test Group – subject 5 with almost 8 hours – achieved an overall score of -3%, the third lowest in Test A, the relative relationship between amount of pronunciation training time and post-training result is not conclusive. However, it is interesting to note that the subject with the least amount of pronunciation practice in the Test Group – subject 1 with 1.25 hours – achieved the second lowest score of -5% amongst the Test Group members in Test A. However, results for the Control Group as well as results from Test B need to be considered before the effects of pronunciation training on spoken intelligibility can be more fully ascertained.

When viewing results for the Control Group, the relative effects of pronunciation training time on increased spoken intelligibility is more conclusive than for the Test Group. The highest result in Test A amongst members of the Control Group: 5% for subject 2 who also recorded the highest amount of pronunciation training of 6.75 hours compared with 2 hours, 2.5 hours, 2.75 hours and 4.25 hours amongst the other Test Group members respectively. The lowest score in Test A amongst Control Group members was by subject 5, who had the second lowest pronunciation training time at 2.5 hours. The second highest score in this group: 2% was achieved by subject 4, who had the second highest pronunciation practice time of 4.25 hours. As with the Test Group, these results need to be reviewed in light of Test B results to determine conclusively the relative effects of pronunciation training time and the effectiveness of the slow-down on increased spoken intelligibility.

These scores show that overall, in Test A, Test Group members achieved just 6% more in overall mean score improvement than the Control Group. The Test Group also achieved a lower deficit from pre- to post-training. This could indicate some improvement in a speaker's intelligibility with the application of the slow-down as part of a pronunciation training course. However, the Test Group's score is only marginally higher than that of the Control Group in Test A, therefore it is inconclusive at this stage whether the application of the slow-down is effective or not. From these scores it seems that direct pronunciation training has little effect on increasing speakers' intelligibility. In fact, the training seems to have had a somewhat negative effect on speakers' pronunciation. However, Test A results need to be reviewed in light of Test B results, where identical pairs of pre- and post-training extracts are compared, before results for the Verbatim Recall tasks can be finalised.

Test B Judges' VR Mean Results: Pre- and Post-Training Comparison

Subject+Snip.	Pre-Practice	Post-Practice	Disparity
1T A	95%	100%	5%
1T B	100%	100%	0%
2T A	96%	98%	2%
2T B	97%	94%	-3%
3T A	100%	100%	0%
3T B	75%	79%	4%
4T A	71%	96%	25%
4T B	94%	98%	4%
5T A	100%	100%	0%
5T B	100%	100%	0%
			-3%; +40%
1C A	100%	100%	0%
1C B	100%	100%	0%
2C A	100%	100%	0%
2C B	100%	100%	0%
3C A	100%	100%	0%
3C B	97%	97%	0%
4C A	100%	100%	0%
4C B	95%	100%	5%
5C A	44%	78%	34%
5C B	83%	100%	17%
			+56%

Table 31: Test 5B Judges' VR Mean Results: Pre- and Post-Training Comparison

Test B Post-Practice Extract VR vs. Pre-Practice VR

Level of Intelligibility	Test Group	Control Group
Increased	5 extracts	3 extracts
Same	4 extracts	7 extracts
Decreased	1 extract	0 extract

Table 32: Test 5B Post-Practice Extract VR vs. Pre-Practice VR

100% accurate verbatim recall was achieved for the following:

58% total test = 23 extracts: 10 extracts = pre-practice; 13 extracts = post-practice

Test Group = 9 extracts: 4 = pre-practice; 5 = post-practice

Control Group = 14 extracts: 6 = pre-practice; 8 = post-practice

As can be seen, the Control Group achieved five more 100% scores than the Test Group – the Control Group also achieved more 100% scores in Test A, which would indicate that language level, particularly speaking ability is higher amongst Test Group members, which could effect the overall test results. Both the Control Group and the Test Group increased the number of 100% scores in their individual groups from the pre- to post-practice stages, which indicates that the pronunciation training has some effect on speakers' intelligibility as determined by the Verbatim Recall task, although this is slight. It also indicates that the slow-down's effectiveness for pronunciation training is so slight as to be negligible, at least with this population of subjects.

The next highest mean scores in Test B are the following:

- 98% achieved by 2 extracts, both by the Test Group in the post-training stage
- 97% achieved by 3 extracts, 2 by the Control Group: 1 in the pre- and 1 in the post-training stage; 1 by the Test Group in the pre-training phase

- 96% achieved by 2 extracts, both by the Test Group: 1 at the pre-training and 1 at the post-training stage

The scores show that in Test B, Control Group members achieved 19% more in overall mean score improvement than the Test Group. On looking at the scores for each group from the pre- to post-training stages, it is interesting to note that while overall the Control Group scored higher than the Test Group, this is due to just one subject: subject 5. All the other 4 subjects in the Control Group had 0% change in scores from pre- to post-training, except for a single incident – a 5% increase for 1 extract by subject 4 in the Control Group. Subject 4 in the Test Group had the second highest amount of pronunciation training practice in the group: 4.25 hours. While subject 5 in the Control Group achieved a great increase from pre- to post-training – 51% overall – because this is just one subject, it is not possible to draw conclusions from this, as this subject seems to display an unusual increase in spoken intelligibility at the end of the month-long pronunciation training period. It would be interesting to see how such a subject's pronunciation would differ had s/he been in the Test Group using the slow-down. It is noteworthy that this subject had the second lowest amount of pronunciation training practice amongst Control Group members: 2.5 hours, which provides conflicting evidence about the correlation between the amount of pronunciation training practice on spoken intelligibility. The pronunciation training had no effect on most members of the Control Group yet it had some improvement for 3 members of the Test Group. The highest overall score achieved by a member of the Test Group: 29% was by subject 4 who had the second highest amount of pronunciation training practice in the group at 7.5 hours. The second highest score in the Test Group: 5% was achieved by subject 1 who had the least amount of

pronunciation training at 1.25 hours. This proves that amount of pronunciation training practice is not solely responsible for increasing a subject's spoken intelligibility and that other factors must be taken into account, such as motivation, similarity of English phoneme inventory to a speaker's L1, and so forth.

Compared with the results from Test A, it is obvious that in Test B, the independent judges performed much better in the Verbatim Recall task when they heard the same extract twice in a row (pre-training extract compared with post-training extract), which obviously helped them to process, recall and compare the extracts more accurately, which had a more positive effect on overall results. As the differences in results are mainly due to one subject in each group: of the -13% overall deficit of the Test Group in Test A, -15% was achieved by subject 3 for just one extract while of the 56% improvement for the Control Group in Test B, 51% is due to subject 5 in the group. This proves that the disparity in scores is not evenly distributed and may be due to individual performances. The scores between Test A and Test B are conflicting with a deficit noted in Test A amongst both groups and an improvement in Test B for both groups. While the Control Group performed better in Test B than the Test Group, it performed worse in Test A, which makes it extremely difficult to reach conclusive results about the effectiveness of pronunciation training and the effectiveness of the slow-down speech tool. To provide more insight into the effectiveness of these two variables on a speaker's intelligibility, the four judges also rated the extracts as they were presented in Tests A and B. These results shall now be viewed to determine the effectiveness, if any, of the two mechanisms tested in this study – focussed pronunciation training and the slow-down.

Test C Judges' VR Mean Results: Pre- and Post-Observation Comparison

Subject+Snip.	Pre-Practice	Post-Practice	Disparity
1T A	95%	100%	5%
1T B	100%	100%	0%
2T A	96%	98%	2%
2T B	97%	94%	-3%
3T A	100%	100%	0%
3T B	75%	79%	4%
4T A	71%	96%	25%
4T B	94%	98%	4%
5T A	100%	100%	0%
5T B	100%	100%	0%
			-3%; +40%

Table 33: Test 5C Judges' VR Mean Results: Pre & Post-Observation Comparison

NIG Subj	Pre- Ob.1	Pre- Ob.2	Pre- Ob.3	Pre- Ob.4	Pre- Ob.5	Post- Ob.1	Post- Ob.2	Post- Ob.3	Post- Ob.4	Post- Ob.5
1	70%	97%	100%	50%	100%	100%	95%	100%	97%	91%
2	63%	100%	89%	85%	66%	75%	75%	42%	100%	94%
3	80%	86%	100%	100%	85%	100%	100%	95%	79%	96%
4	92%	85%	97%	78%	85%	92%	90%	95%	47%	84%

Table 34: Test 5 NIG's Pre & Post Observation Results

Test C: 25% total test = 10 extracts: Pre-Observation = 5 extracts, Post-Obs. = 5

For each subject, the mean score of the five extracts from the pre-observation test was compared with the mean score of the five extracts from the post-observation test. The results are presented in the table below:

NIG Subject	Pre-Obs.	Post-Obs.	Disparity
German L1	83%	97%	+14%
Bulgarian L1	81%	77%	-4%
Italian L1	90%	94%	+4%
French L1	87%	82%	-5%

Table 35: Test 5 NIG's Pre & Post Observation Comparison

Generally, there is an overall improvement of 9% in intelligible phoneme production between the pre- and the post-observation periods, which is not a large enough increase to be significant. Two of the four NIG subjects decreased in perceived level of spoken intelligibility from the pre- to the post-observation period: the Bulgarian L1 user and the French L1 user. No reasons for this slight decline in scores is apparent although a number of reasons can be proposed, such as speaker's performance on the given test day which can be influenced by general health or well-being, tiredness or alertness, interest in the speaking task and so forth. The Bulgarian L1 user's score dropped by 4% in the post-observation test. This subject recorded the second lowest time for overall communication in English (with both L1 and L2 English users) over the month-long observation period at 20.5 hours. The lowest score amongst the NIG was by the French L1 user whose post-observation score dropped by 5%. This subject had the second-highest level of English communication per week in the NIG: almost 36 hours. However, as 28 hours of this was communication with L1 English users and which the subject documented as being mostly obtained through attending lectures with L1 English-using lecturers, speech reception alone does not seem to greatly increase an L2 English user's spoken intelligibility, which is a productive rather than a receptive process. Two-way communication with immediate interlocutor feedback is

a far more effective means for a speaker to gauge his/her linguistic performance when communicating with another speaker and which could help the speaker to alter his/her pronunciation (as well as other linguistic aspects such as grammar and lexis) to be more intelligible.

Two NIG subjects' intelligibility scores increased in the post-observation stage: the German L1 user's score increased by 14%, the highest increase in the NIG. One likely reason for this subject's notable increase in spoken intelligibility at the post-observation stage is the large amount of time he spent communicating in English during the one month observation period – a total of 92.5 hours, which is far more than the other subjects in the NIG group. While the first (a) category refers to use of English with L1 English users, as this could include far more English speech reception only in the form of attending lectures in English, the second category (b) is far more likely to include more dual (receptive and productive) communication between the subject and another English user. The German L1 user's communication with other L2 English users (category b) far exceeds the other NIG members: 78.5 hours compared with just over 14 hours for the Bulgarian L1 user and approximately 7.5 hours for the other two subjects in this group – the French and the Italian L1 users respectively. Also, because German is more similar to English in terms of the phoneme inventory, it is likely that the German L1 user found it easier to adopt more L1-like English pronunciation than the other L2 English users in this group.

The other increased score, of 4%, was obtained by the Italian L1 user. Ironically, he had the lowest weekly amount of English communication amongst the NIG members – 17 hours. However, he had the same amount of English communication with L1

English users as the French L1 NIG member, who had the second lowest score in the group. The Italian L1 user had the same amount of communication with L2 English users as the Bulgarian L1 speaker, who had the lowest post-observation score in the group. Despite this, there is no apparent reason for this subject's increased spoken intelligibility after the one month observation period. This does show that amount of communication in English is a factor but may not be as significant for intelligible speech production as other factors, such as motivation, identity and others discussed in Chapter 3 of this study.

Judges' Intelligibility Ratings of Extracts

The ratings of the post-practice extracts were compared to those of the pre-practice extracts, to determine whether the pronunciation practice programme had any noticeable effect on speakers' speech production and to further determine any significant differences between the two groups' results, which may, at least in part, be due to the application of the slow-down. The ratings were:

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Post-Practice vs. Pre-Practice Judges' Extract Ratings

	Test A		Test B	
	Test Group	Control ²²³ Group	Test Group	Control Group
Increased Rating	4	4	6	5
Same Rating	2	1	0	0
Decreased Rating	4	5	4	5

Table 36: Test 5 Tests A & B Post-Practice vs. Pre-Practice Judges' Extract Ratings

In Test A, the Test Group achieved the same number of increased extract ratings from pre- to post-pronunciation training as decreased ratings which means the slow-down speech tool did not increase speakers' intelligibility in this instance. The evidence for this is supported by comparison with the Control Group results, which are similar to the Test Group's. Results of Test B are also similar to Test A results, which indicates two points:

1. the slow-down does not increase a speaker's ability to produce phonemes more intelligibility and thus does not increase a subject's spoken intelligibility when used as part of a pronunciation training programme
2. the pronunciation training programme designed and applied in this study – which was individually designed around focussed pronunciation practice of problematic phonemes for each subject – seemed to have little effect on subjects' perceived spoken intelligibility as judged by four L1 English-speaking judges and which is also supported with verbatim recall test results and interlocutors' judgements of their speaking partners from pre- and post-training periods.

The judges' extract ratings of the two groups – the Control Group and the Test Group – show no major difference between them. There is actually quite a similarity between

²²³ One subject from the Control Group did not undertake a speaking task at the post-practice stage, therefore, no results are available for this person.

the two tests – Tests A and B. While the Test Group’s ratings are slightly better than the Control Group, they are not significant enough to highlight any improvements which could be due to the application of the slow-down algorithm in the training programme.

Judges’ Most Intelligible Extracts from Pre- & Post Pairs (Test B)

Test Group: 60% post-practice extracts rated most intelligible; 20% pre-practice extracts most intelligible; 20% both pre- and post-practice pairs same

Control Group: 80% post-practice extracts rated most intelligible; 20% pre-practice extracts most intelligible.

These results are interesting in that while both the Test and Control Groups score higher for the post-practice extracts, the Control Group’s post-practice extracts received a 20% higher score, even though they were not trained with slow-down speech tool. However, while the number of increased and decreased ratings between pre- and post-training are similar for both groups, it is interesting to note that the actual rating scores between the two groups do differ, with the Test Group achieving higher ratings scores than the Control Group in both Tests A and B. In Test A, the Test Group achieved a score of 69.5 compared with 47.5 for the Control Group. This is a mean difference of 22, which is significant and indicates the judges’ rated the Test Group members’ pronunciation as being more intelligible than those in the Control Group. However, these scores include both pre- and post-observation ratings so while it does indicate that the Test Group’s pronunciation is judged to be more intelligible than the Control Group, it does not compare pre- and post-training ratings and

therefore does not necessarily point to the effectiveness of the slow-down in the pronunciation training programme.

In Test B, the Test Group again scored a higher overall mean rating than the Control Group – 69.75 compared with 65.5. However, this difference is not as significant as for Test A. It is interesting to note that while the Test Group achieved almost the same overall mean result for both Tests A and B: 69.5 and 69.75, there is a significant difference in the overall mean scores for Test A and Test B by the Control Group: 47.5 and 65.5 respectively. No concrete explanation for this obvious increased rating for the Control Group from Test A to Test B is available as any increase in spoken intelligibility should have been perceived for both groups in Test B if presenting pairs of extracts would have led to an increase in spoken intelligibility and thus judges' ratings.

The judges rated 3 out of 4 or 75% of the Non-Intervention Group's pre-observation extracts better than those from the post-observation. This indicates that one month of simply living in an L1 English-speaking country and communicating daily in English with both L1 and L2 speakers did not have any effect on the Non-Intervention Group members' spoken intelligibility and that it is not a long enough time period to alter one's spoken intelligibility. The author does acknowledge that this study is limited in terms of subjects, period of observation and measurement of intelligibility, which is largely impressionistic rather than being solely calculated mathematically. Another limitation of the study is that for the NIG, no two pairs of extracts (pre- and post-observation) were available for comparison, as in the previous two tests involving the Test and Control groups and which, if available, may have yielded more concrete

results. However, the results are valid within this limited study and indicate that the effects of living in an ENL country and amount of communication in English over a specified period of time on a speaker's spoken intelligibility does deserve further investigation, which is beyond this study period.

Of the NIG members, only the German L1 speaker's intelligibility was deemed to have improved after the one month observation period. His communication in English over the one-month long period was much higher – 92 hours 35 minutes in total than the other three subjects in the Non-Intervention group (see table below for all subjects' communication/training times). While his time for communication in English far exceeds all other NIG subjects, it is interesting to note that most of this communication was with other L2 users of English rather than L1 users. As this observation was made for just one subject in the study, no comparisons can be made between communicating in English with L1 and L2 users and effect on spoken English intelligibility. In this limited sample however, results indicate that the more time a speaker spends communicating in English, the more likely his/her spoken intelligibility is likely to increase over a specified period of time, regardless of whether that communication is with L1 or L2 users of English.

The NIG speaking times have already been discussed in the section above. The training times do not always give a clear indication of the effect of pronunciation training time on a speaker's intelligibility. In Test A - the Judges' extract ratings – subject 2 in the Test Group scored the highest rating mark. This subject has the third highest amount of pronunciation training practice – 6 hours 54 minutes - just 30 to 55 minutes behind the two subjects with the greatest amount of pronunciation training in

the group. However, the Test subject with the lowest amount of training – subject 1 - does not score the lowest mean ratings score. The lowest score is achieved by the subject with the second lowest training time – subject 3.

In Test B, the Test subject with the highest mean extract rating score is subject 1, who has the lowest level of pronunciation training time within the Test Group. However, this subject also achieved high ratings for his pronunciation at the pre-training stage which indicates that his pronunciation at the start of this study was already quite intelligible. This is backed up by his interlocutor's questionnaire responses, which indicates that this subject already had a high level of speech intelligibility prior to this study.

Interlocutor Intelligibility Questionnaire Results

The Interlocutor Intelligibility questionnaire which was completed by each subject in this study at two intervals:

- 1) the pre-practice/pre-observation period – just before Test and Control Group subjects began their month-long pronunciation training and at the start of the Non-Intervention Group's month-long observation period
- 2) the post-practice/post-observation period – at the end of the Test and Control Groups' month-long pronunciation training and at the end of the NIG's month-long observation period

This section shows the comparison between the Interlocutor Intelligibility Questionnaire results from these two intervals and notes any changes in interlocutor

responses and then uses these results to further inform results from the judges' Verbatim Recall Tests and the Judges' Ratings Tests.

The numbers for the scales used in questions 1, 2 and 10 are given here:

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

1. How would you rate your partner's pronunciation?
2. How do you think your partner would rate your pronunciation?
10. How would you rate ease of communication (intelligibility) between you and your partner?

Instead of discussing each question individually for each subject in the three groups, the two questionnaires for each subject shall be compared and results shall be presented in terms of increase or decrease in points (scale questions 1 and 10 only), as these are the two questions which are more relevant to an interlocutor's judgement of a speaker and are more conducive to analysis due to the scales. While the other questions in this questionnaire shall not be discussed individually, outstanding differences in any subject's noted speech/pronunciation shall be discussed in more detail when necessary.

Test Group Interlocutor Intelligibility Ratings

	Q. 1	Q. 10
Spanish L1 user	no change	no change
Polish L1 user	1 point increase	no change
Mandarin L1 user	1 point decrease	2 point decrease

Bahasa²²⁴ L1 user	no change	no change
Romanian L1 user	1 point decrease	no change

Table 37: Test 5 Test Group Interlocutor Intelligibility Ratings

Control Group Interlocutor Intelligibility Ratings

	Q. 1	Q. 10
Spanish L1 user	no change	no change
French L1 user	no change	no change
Korean L1 user	no change	no change
Italian L1 user	no change	1 point increase
Malayalam²²⁵ L1 user	1 point increase	no change

Table 38: Test 5 Control Group Interlocutor Intelligibility Ratings

Non-Intervention Group Interlocutor Intelligibility Ratings

	Q. 1	Q. 10
German L1 user	no change	1 point increase
Bulgarian L1 user	0.5 point increase	no change
Italian L1 user	no change	1 point increase
French L1 user	no change	no change

Table 39: test 5 NIG's Interlocutor Intelligibility Ratings

The ratings predominantly show little or no change in interlocutors' perceptions of the speech intelligibility of their speaking partners between the pre- and post-

²²⁴ Bahasa is a native language of Indonesia

²²⁵ Malayalam is the state language of Kerala, south-western India

training/observation periods. While these results are mainly subjective and impressionistic, they do reflect the two main findings of this study:

- 1) The pronunciation training programme had little effect on increasing subjects spoken intelligibility
- 2) The slow-down had no apparent effect on increasing subjects' spoken intelligibility

Discussion of Test 5 Results

The results show no significant improvements in phoneme production with the application of the slow-down facility. The researcher's detailed observations show an improvement in pronunciation production after the training period but there was little detectable difference between the two groups. However, the judges displayed a greater increase in verbatim recall accuracy for the Test Group extracts at the post-practice stage than for the Control Group – almost twice as much. The judges' and interlocutors' ratings of the intelligibility of the two groups differed little from each other, with the Control Group achieving a slightly higher score in the judges' ratings. While the judges' results are mixed, the Verbatim Recall Test results are deemed more insightful as they are empirically based, while the ratings are somewhat subjectively based.

While the study proves that sustained, targeted pronunciation practice can improve speakers' pronunciation, it does not prove the effectiveness of the slow-down tool as a learning aid for phoneme production. It also indicates that phoneme practice alone may not be effective in improving the intelligibility of a speaker. The study's results

also imply that Jenkins' recommendations regarding voiced and voiceless 'th' (/ð/ and /θ/) in her *Lingua Franca Core* (2000) hold true – in this study, while pronunciation practice did improve speakers' production of these sounds, it did not lead to greater speaker intelligibility overall, according to the judges' and interlocutors' intelligibility ratings.

Many variables can affect pronunciation, such as amount of exposure to spoken English, amount of practice speaking English, which may also be dependent on interlocutors, such as whether they are well-known to the speaker, of the same or similar L1, interlocutor's level of English, and so forth. Individual learners can differ greatly from each other - cognitively, in their learning and speaking experiences and in their motivation to improve their spoken English. One variable, which was considered but rejected, was that some users of English may dislike using technology, as they may feel inexperienced and/or they simply dislike using it. This was not deemed to be the case in this study as all subjects are third-level students, mostly postgraduates, who use technology every day as part of their work and many of whom in fact embrace technology and are very happy to use it on their own for learning purposes.

As will be discussed in more detail in Chapter 5, the NIG tests (Verbatim Recall and Ratings tests) are deemed to be problematic as unlike the Test and Control Groups, identical pairs of sentences were not used or compared at pre- and post- stages. Unscripted sentences from the speaking tasks at the pre- and post- stages were chosen as no targeted phoneme pronunciation material was available, as NIG members did not receive and pronunciation training packages. It is difficult to adequately determine

changes in intelligible phoneme production between the two stages when one is required to assess different extracts for the two stages. Proposed changes to the methodology for the NIG are offered in Chapter 7.

Discussion of Overall Study Results: Test 1-5

The study aimed to answer the following research questions:

1. Are there fewer problems for EIC users in understanding speakers with the same L1 background?
2. Can experience with L2 accents affect how intelligible L1 and L2 users find such speech?
3. Is the speech slow-down facility effective in improving listeners' speech reception?
4. Is the speech slow-down facility effective in increasing the intelligibility of speakers' pronunciation?
5. Can a pronunciation training programme focused on individual subjects' problematic English phonemes increase their spoken intelligibility?

Research question 1: 'Are there fewer problems for EIC users in understanding speakers with the same L1 background?' In Tests 1 and 4, it was found that English is more intelligible receptively and productively to L1 Germanic speakers than those from a Romance or other language background. Conversely, in Test 1, this was not found to be the case as subjects from a Romance L1 background did not find the Spanish L1 speaker of English in the recording to be more intelligible. This is because the recording was made as a monologue without the speaker's knowledge of who

would be listening, therefore no accommodation or convergence was made on behalf of the speaker. If face-to-face communication occurred between the Spanish speaker from the recording and a listener from Romance language background occurred, it is quite possible that the listener would have found the speaker more intelligible.

Research question 2: ‘Can experience with L2 accents affect how intelligible L1 and L2 users find such speech?’ The study found that this is indeed the case. In Test 4, intelligibility between the subjects was high, even though they were from different L1 backgrounds. The reason for this was due to the fact that as classmates, they had had a lot of previous exposure to each others’ speech and therefore intelligibility was increased.

Research question 3: ‘Is the speech slow-down facility effective in improving listeners’ speech reception?’ This question was partially supported by findings in Test 2. The Test Group performed slightly better than the Control Group, which indicates that the slow-down can be somewhat effective. Further testing is needed to fully qualify this assertion.

Research question 4: ‘Is the speech slow-down facility effective in increasing the intelligibility of speakers’ pronunciation?’ This was not supported by findings in Test 5, where the slow-down had no apparent effect on increasing subjects’ spoken intelligibility. The difference between the Test and Control Groups was generally slight, which does not provide strong persuasive confirmation of the effectiveness of the slow-down for speech production but it does indicate that it merits further testing.

Research question 5: ‘Can a pronunciation training programme focused on individual subjects’ problematic English phonemes increase their spoken intelligibility?’ was supported by the findings in Test 5, which proved that sustained, targeted pronunciation practice can improve speakers’ pronunciation. However, the results also indicate that phoneme practice alone may not be effective in improving the intelligibility of a speaker.

CHAPTER 7: GATHERING AND ANALYSING THE DATA

8.1. Introduction

This chapter is concerned with the approaches taken for gathering and analyzing data for the five tests undertaken in this study. The chapter will also outline how test subjects were selected and divided into groups, mainly test group and control group. The main data from the tests was gained through answersheets and recorded responses. Additionally, questionnaires enabled the researcher to gather a lot of necessary personal and background information regarding the test participants, which informed the analysis of results. The construction of the questionnaires as well as a comprehensive rationale for their use in tests is provided in this chapter.

Selecting Data-Producing Subjects and Other Test Participants

There were two types of participants in this study:

- 1) Data-producing subjects (all tests)
- 2) Judges (Test 5 only)

As the data-producing subjects make up the majority of the participants in this study's tests, they shall be discussed first. The subjects in all five tests came from the student (undergraduate and postgraduate) population within the third level institute where this researcher was based for the duration of this study. This was because it provided a large number of speakers who were learning/using English as a second or additional language, which is a central aspect of this study's enquiry. It also ensured other commonalities between subjects, such as having similar educational backgrounds,

being tertiary-level students. Also, the Erasmus students were mostly living in Ireland and in an ENL country for the first time, so they were being exposed to a wide variety of ENL and ESL accents, Hiberno-English in particular. This is particularly relevant where Hiberno-English speaking models are implemented in the test material, in Tests 2, 3 and 5. Due to their shared practices and experiences as third level students within the same campus in Ireland, other affective variables were reduced. It was important to reflect the international status of English by choosing ESL subjects from a wide variety of L1s and cultures. It was also necessary to include ENL speakers in the study, to reflect a more inclusive definition of EIC. This was possible by accessing Erasmus and international students as well as Irish students from the student population of the third level institute where the researcher was based.

Additionally, it ensured that the researcher had access to the participants on more than one occasion, particularly in Test 5. It also allowed the researcher to ask subjects for any additional information or clarification of test or questionnaire responses, if and when the need arose. The subjects' presence within the same working environment as the researcher not only proved convenient but more so, guaranteed the successful implementation of the tests, which became more involving (for the participants) as the tests progressed, particularly the month-long training period in Test 5 where subjects had to partake in three separate activities/tests. For Test 5, it was necessary to access ESL/EFL subjects whose English speech reflected non-standard/international aspects, such as L1-influenced pronunciations. Some people who were initially recorded for pronunciation diagnosis prior to the pronunciation training were not deemed suitable as their speech did not include enough identifiable non-standard/international pronunciations.

Division of Subjects into Test, Control and Non-Intervention (Test 5 only) Groups

Subjects were divided into test and control groups in Tests 2-5 with Test 5 having an additional group - Non-Intervention. The test and control groups were comparable as the same test material was used for both groups. It was not implicit on the researcher so early in this study that the division of subjects into test and control groups can have a direct effect on test results. This became more apparent from the results of Tests 2 and 3. The subjects tended to be either allocated to groups based on the class they were in, when the researcher had access to classes within the college – this occurred in Tests 1 and 2. In Tests 3 and 5, the researcher relied on volunteered participation from the student population of the third level institute where this author was based during this study. Test 3 included L1 English speakers, as they too are members of the EIC community, and thus warrant inclusion in this study. The L1 subjects' results were compared with the L2 subjects' results, to compare the effectiveness of the slow-down between L1 and L2 users, which could inform its future application and use. In Tests 3 and 5, most of the L2 subjects were completing postgraduate study through English and all had been learning/using English for a minimum of 6 years, with most using English for over 10 years. Since access to willing participants was somewhat limited as it was based on a volunteer basis with no remuneration (particularly for Test 5 where subjects had to commit to a month-long training/observation period and had to attend 3 separate recording sessions during this time) and due to the fact that all the L2 users in the test had a guaranteed high level of English, the researcher randomly allocated subjects to Test, Control or Non-Intervention Group as they presented themselves. Also, as subjects displayed variations in terms of length of time

using English and length of time living in Ireland, it would have been difficult to divide the group fairly in terms of English language ability based on this information. For future testing, the researcher is very aware of the effect language level has on intelligibility test results and endeavours to require participants to undertake an English language assessment (perhaps using one of the internationally-recognised tests, such as those used by IELTS) prior to participation, so that subjects can be allocated to groups in a more equal and fair manner, to ensure reliability of results. However, personal information regarding each subject's English language learning history and use was gleaned from questionnaires used in all test and this information informed the analysis of results. While there may have been some difference in English language level amongst the test and control groups in Tests 2, 3 and 5, the groups were comparable in terms of all studying at tertiary level at the same educational institute in Dublin, Ireland. The subjects were also comparable in terms of age (average age was early twenties) and were tested under the same conditions, by the same means and by the same person/(s). In Test 4, the test and control groups are more comparable as they all came from the same undergraduate course and their ability in English as a group is more uniform. In Test 5, in the initial speaking task, subjects' suitability was gauged on their pronunciation, all of whom displayed non-standard/L1-influenced pronunciations. While there may have been some difference in their individual English language levels, Test 5 was not so concerned with this but with their ability to produce English language phonemes more intelligibly, which does not strictly correspond to language level but can be determined by other factors such as length of time spent training with the pronunciation package and similarity of L1 to English.

In Test 1, subjects were not divided into test and control groups but grouped according to their classes within the institute where they were studying. This grouping, being non-deliberate, the group's results were not wholly comparative. The proficiency of subjects' English language level was at times difficult to contend with. For Group 1 (undergraduate degree class – International Business and Languages - IBL), similar proficiency levels were ensured due to particular course entry requirements. However, in the case of Erasmus students (the 2 other groups in Test 1, Group 2 an English for Academic Purposes - EAP class and Group 3 – an Irish Cultural Studies – ICS class), where there was no specific English language level entry requirement and where students were of mixed ability, the language level of each subject was gauged through questionnaires and through the researcher's knowledge of the students as they were members of classes taught by the researcher. This knowledge and additional information about the subjects informed the results analysis.

For ethical purposes, subjects in all tests were asked to sign a form before participation. This permission form allows the researcher to use the subjects' data for analysis and to report the results in the researcher's thesis and any academic papers or publications based on the results.

Rationale for Questionnaires

The questionnaires were used to allow subjects to evaluate their own and their partners' pronunciation in terms of intelligibility, as they (the partners) were directly involved in the communicative process. It is believed that ELT practitioners,

including the researcher, are unsuitable judges of L2 English users' pronunciation, as due to their exposure to and experience with L2 English accents and speech, their ability to decode such speakers' intended messages is probably far superior than that of the average L1 or L2 English user (Brown, 1990). For this reason, the study's subjects were required to comment on their own pronunciation and that of their fellow interlocutors; as participants in the communicative process, their intuition, opinions and observations were all-important. The researcher's observations were taken into account, particularly in the Analysis Section, but the comments by the subjects were the main source to pin-point aspects of unintelligibility in participants' speech. The questionnaires were also important as they provided valuable background information about the participants, mainly their language learning background with particular reference to learning English.

In all the questionnaires and throughout the study there was an attempt to avoid the use of negative linguistic terms, such as 'native speaker' and 'non-native speaker'. However, such terms are well-known in the outside world. The researcher used terms such as, 'native speaker of English' and 'non-native speaker of English' rather than 'native English speaker', for example, which could imply a British person or some other weighted or negative reference. Also, easy-to-use Likert scales were designed so as not to confuse participants, by allowing a choice of just five options, each of which came with a coherent description for ease of use yet providing a comprehensive selection. The questionnaires were designed to move from general questions, such as, 'how much of your day-to-day communication is in English?' and 'how would you rate your partner's pronunciation?' to more detailed questions, such as, 'which elements of your pronunciation do you think your partner has difficulty with?' This

allowed subjects time to get a feel for the topic while encouraging them to go deeper into their thought processes as they completed the task. Difficult or specialised terms were generally avoided and when used, were explained.

There were two questions which directly dealt with the importance of these aspects for each learner in the Language Learning Background Questionnaire. The information from the questionnaires led to a greater insight into each subject's English language learning history and informed results as to whether it parallels with increased intelligibility in EIC communication.

Factors Influential in Wording and Sequencing of Questionnaires

The questionnaires were designed conscientiously to obtain relevant and necessary information to inform results and to highlight particular items or aspects worthy of further investigation in the future. The questionnaires were designed to move from general questions, such, 'how much of your day-to-day communication is in English?' and 'how would you rate your partner's pronunciation?' to more detailed questions, such as, 'which elements of your pronunciation do you think your partner has difficulty with?' The sequencing of questions in this way was to enable subjects to easily move deeper into particular aspects of the communicative process and thus, to provide more accurate information by guiding the subject respondents in a linear fashion while not being too demanding on them too quickly, which could have led to subjects providing inaccurate information due to pressure to respond to detailed questions being required when they were not ready or fully prepared to do so.

The most important factor when creating questionnaires was to avoid ‘leading questions’ - questions which prompted particular responses from participants, such as, ‘is it easier to communicate with native speakers of English?’ Instead of wording such as this, a more neutral and balanced question structure was used, e.g., who do you find it easier to communicate with:

- native speakers of English?
- non-native speakers of English?
- no difference between native and non-native speakers of English?

Another important factor was to allow for a third option between two choices, if the respondent could not decide between L1 or L2 speakers of English - if this was the case, the option ‘no difference between L1 and L2 users of English’ was available. Many questions included, ‘please explain giving reasons for your answer’ - this was to get a better insight into participants’ personal and individual experiences, opinions and beliefs and to inform the Observations section, to get a better picture of reasons for certain phenomena. Each participant would have different experiences, responses and reasons for their responses so asking for clarification of answers provided a better understanding of the participants and of the variety of possibilities that were possible within a test such as this. The participants’ responses are meant to provide a greater insight into EIC and will hopefully lead to some discussion on how it can be approached pedagogically.

In all the questionnaires and throughout the study, there was an attempt to avoid use of negative linguistic terms, such as ‘native speaker’ and ‘non-native speaker’. However, such terms are well-known and acceptable for general use. The researcher

has used terms such as, 'native speaker of English' and 'non-native speaker of English' rather than 'native English speaker', which could imply a British person or some other weighted or negative reference. Also, easy-to-use scales were designed so as not to confuse participants by allowing a choice of just five options, each of which came with a coherent description for ease of use yet provided a comprehensive selection. Both productive and receptive processes were addressed and participants had to rate both themselves and their interlocutors, in this study and in their general experience with using English. Difficult or specialised terms were avoided and when used, were explained.

How the Questionnaires Relate to the Focus of the Study

The focus of this study is two-fold:

1. to test the effectiveness of a pronunciation training programme focussing on intelligible phoneme production
2. to test the effectiveness of the slow-down for increasing L2 users' spoken intelligibility as part of a pronunciation training programme

The first study focus was investigated by comparing subject interlocutors' and independent judges' responses from their respective questionnaires at the pre- and post-training stages for all three groups to determine whether those who received direct pronunciation training - the Test and Control Groups - had observable changes in the intelligibility of their pronunciation at the post-training stage and additionally, by comparing their post-training verbatim recall results and ratings with those of the

NIG, who did not receive any formal pronunciation training. Through the researcher's analysis of the identical snippet pairs, one could also determine whether speakers' production of targeted phonemes had altered at the post-training stage and whether this could be attributed to the month-long pronunciation training programme the Test and Control Group members had just undertaken.

The second study focus was ascertained by comparing verbatim recall results and ratings of the intelligibility of speakers' pronunciation in the Test Group with that of the Control Group. This research question was investigated mainly through the Judges' Speaker Intelligibility Questionnaire and also through the Interlocutor Intelligibility Questionnaire by comparing responses¹¹ to the pre-training snippets with those of the post-training snippets, to ascertain whether there were any changes in perceptions/judgements of speakers' intelligibility. The comparisons between the Test Group and Control Group were of utmost importance here in determining whether the application of the slow-down tool resulted in a noticeable change in speakers' intelligibility and if so, determining how effective it was as a tool for improving speech production as part of a pronunciation training programme. This was also investigated through the Interlocutor Intelligibility Questionnaire (for Test and Control Group members only) when interlocutors judged their partner's pronunciation at the pre- and post-training stages and the comments and ratings between the Test Group and the Control Group were compared, again to determine whether the slow-down tool was responsible for any notable changes in subjects' spoken intelligibility, compared with members from the Control Group.

Subjects' Language Learning Background Questionnaire

The Language Learning Background Questionnaire was designed to obtain information regarding subjects' L1 as similarity or indeed dissimilarity between the L1 and English, particularly phonologically, may well have a corresponding effect on their ability to produce English phonemes intelligibly (Kenworthy, 1987: 13-14). For example, German and Dutch are similar to English, being from the same Indo-European family of languages. Mandarin (Chinese) is very dissimilar to English as it is a tonal language from East Asia with a totally different grammar, phonology and written script. For these reasons, one expects subjects' whose L1 is similar to English to perform better at the tests than those whose L1 is very different from English. However, L1 similarity is only one issue involved in determining how well an L2 subject can perform in English. According to Celce-Murcia et al (1996), there are a number of important learner variables which affect the learner's ability to adopt (aspects of) English pronunciation, namely, age, previous exposure to English, the total prior English instruction and a learner's attitude and motivation. Learning context - whether an EFL or an ESL setting - also has a significant affect on pronunciation, mainly in the area of target norms and intelligibility (Seidlhofer, 2001). Age is more important in respect to this study as from it, one can determine at what age a subject began to learn English which in turn can have a corresponding effect on one's proficiency in the language. Enquiries regarding L2 and any additional language learning were also made (namely, language level achieved - whether they are bilingual, proficient or fluent, which could affect their ability to learn additional languages), as it has been shown that bilingual speakers have a greater aptitude for learning additional languages (Jessner, 1999, Klein, 1995). This questionnaire also

gauged experience with learning and using English, namely length of time studying/using it which again has a corresponding effect on level of proficiency. The questionnaire then focused on the amount of exposure the subject has had to L1 English speech, as this can affect one's ability to process (speech reception) and produce intelligible English speech. The questionnaire also outlined how the subject gained this exposure to L1 English speech as this may be influential in the subject's ability to process and produce intelligible English - depending on whether the subject communicated with friends, colleagues or other people which offered immediate feedback (in terms of whether intelligibility was achieved in terms of both speech reception and production) or whether the subject merely acquired most experience or practice in English through reading - a receptive process and one which does not aid in speech production or reception. Also, if the subject was/is a member of an English-speaking community, this should have an effect on his/her view of him/herself as an English speaker and also have an effect on his/her pronunciation. The questionnaire concluded by asking how long the subject has been living in Ireland and how long s/he has lived in any other L1-English speaking country as this also could have a corresponding effect on one's English language level, one's ability to communicate in English and also on one's view of him/herself as an English speaker, which in turn effects his/her ability and/or willingness to communicate intelligibly in English.

Subjects' Reflective Language Use Questionnaire

This questionnaire complemented the previous one - the Subjects' Language Learning Background Questionnaire - by picking up where it left off. The Reflective Language Use Questionnaire queried subjects' current daily use of English - which they marked

on a scale from 1 = almost none, to 5 = all/almost all. It also queried how much of their communication was with native (L1) and non-native (L2) speakers of English, to uncover which was easier or more difficult and if this had a corresponding effect on their pronunciation. This refers specifically to research question 1 (Are there fewer problems for EIC users in understanding speakers with the same L1 background?) and research question 2 (Can experience with L2 accents affect how intelligible L1 and L2 users find such speech?) in this study. This was to gauge possible factors which influence the participant's intelligibility when speaking as well as her/his willingness and ability to accommodate L1 and L2 English users. This information was necessary for the Observations section, to inform results of subjects' performances in the pronunciation tests and in particular, the NIG group, as they received no formal pronunciation training so it was necessary to uncover as much about their current use of English as possible in order to uncover reasons for their level of pronunciation development over the month-long test period. This questionnaire also allowed participants to rate their own perceived ability to communicate in English - in order to compare with their interlocutors' and the judges' ratings of their pronunciation/ability to communicate in English - to determine whether these tally and if not, to offer possible reasons for this which could be investigated in another study concerning L2 English users' views of themselves as English speakers (similar to the study by Timmis, 2002). The questionnaire also allowed them to rate other speakers of English while providing an insight into their experiences with and attitudes to communicating in English - which also informed results.

Subjects were asked how important both intelligibility and having a standard accent were to them - Various studies referred to in this research (Jenkins, 2007, 2000, Och,

1993, Labov, 1972) show that attitudes to accents have an influential effect on a user's preferred choice of accent and questions 8 and 9 in this questionnaire referred specifically to this, to ascertain if participants in this study reflected similar attitudinal patterns. These are important factors in deciding which accent, if any, an L2 user strives for when speaking English, which is directly related to the outcomes of the pronunciation training programme. However, subjects were not asked to choose between intelligibility or having a standard accent in case it would *lead* them to respond in a particular way or that it may affect subjects' views on these issues and thereby affect the study's results. For a 'standard accent' both RP and GA were given as options as subjects may have been educated or exposed to one form or the other and/or may have a preference. By providing a choice, the question was designed so as not to restrict or indeed lead subjects to provide a particular answer or influence their participation during the remainder of the test. The final question, question 9, was similar to question 3 in that subjects were required to rate themselves in terms of their intelligibility in English - again to compare their views of themselves as English speakers with those of their interlocutors and the judges, which again could inform results and lead to future research based on psycholinguistic aspects of L2 English pronunciation and communication.

The reliability of self-report data garnered from the Reflective Language Use Questionnaire used in Tests 4 and 5 of this study is not taken to be wholly reliable due to its being subjective in nature. Some of the questions relate to subjects' opinions of themselves as L2 speakers of English – they are not observable, so are merely used to indicate attitude, which on observation, could give a further insight into results. It is seen as useful to include subjects' views on themselves as L2 users of English and to

allow them the opportunity to reflect on their English and other language learning experiences thus far - to make them more aware of their linguistic abilities and inabilities in English which may motivate them to fully participate and dedicate themselves to the pronunciation training during this study. The notion of reflective language learning has long been acknowledged and promoted and has culminated in the Council of Europe's European Language Portfolio

(http://www.coe.int/T/DG4/Portfolio/?L=E&M=/main_pages/introduction.html)

While the self-report data from the Reflective Language Use Questionnaire in Tests 4 and 5 is not taken as the sole means of data, it can be referred to for background information and also to compare with actual results - to determine whether L2 users are able to objectively and accurately determine their ability in the L2, which could have consequences for further research in the future.

Interlocutor Intelligibility Questionnaire

The Interlocutor Intelligibility Questionnaire was designed to obtain information regarding interlocutors' views of their speaking partners, to add another perspective to how subject speakers were viewed and assessed during the course of this test. The interlocutor was a key participant in the communicative process and negotiated conversation with his/her partner - therefore his/her views on and experiences of communicating with his/her partner in this test were necessary, informative and enlightening for this and future research. The interlocutors' ratings and judgements were necessary also as the interlocutors, being L2 English speakers, are members of the EIC community and are the only L2 speaker judges in this study, so their views were necessary for a more balanced approach to obtaining and analysing results.

Likert scales were again used to offer five options to respondents for 3 of the questions - to make analysis of responses easier to tabulate for the researcher and to offer concrete options to subjects. The second question required subjects to view themselves from their interlocutor's point of view - again to see whether speech partners' ratings of each other tally - to inform results and offer suggestions for further research.

Questions 3 and 5 were the same but from different viewpoints - question 3 enabled the subject to provide specific details regarding problematic areas of his/her interlocutor's pronunciation. It was necessary for the sake of the study to clarify which elements of the speech act cause intelligibility problems, as deemed by the listener. Question 5 required the subject respondent to reflect on which aspects of his/her pronunciation may be problematic for the interlocutor. Again, this was to force subjects to reflect on their own communicative abilities and to gauge whether their assumptions were in-line with their interlocutors' views or not - to be referred to in the Observations section and for future research purposes. Both questions offered five specific options to choose from, while also offering an 'other' option, to allow subjects to offer their own explanations or reasons, if so needed. Providing options made analysis of information gleaned from questionnaires more effective in that it directed the respondent to relevant information concerning the subject under investigation while providing a frame of reference in order to effectively catalogue information from all the questionnaires, to make overall observations regarding L2:L2 communication for this test. The 'other' option allowed for some flexibility and freedom on the part of the respondent, to provide additional information to inform results and to avoid limiting subjects' answers by merely supplying a number of

options for questions.

Questions 6 and 7 referred specifically to accommodative strategies employed by the subject and his/her interlocutor, to inform results and provide information which could shape possible future research into psycholinguistic aspects of communication. Successful oral communication is dependent on both the speaker and the listener - it is a two-way process. The interlocutor can also attempt to improve the communicative process if s/he senses his/her pronunciation or some other aspect of speech is hindering intelligibility or the content of what s/he is saying is not being fully understood - questions 5, 6 and 7 address this issue. These questions forced the participant to think about how s/he currently accommodates interlocutors and how s/he may improve speech reception. By becoming aware of possible reception difficulties to his/her speech, the respondent and his/her partner could help each other to be more intelligible - through both productive and receptive processes. The listener could make it known to the speaker that s/he does not understand what has been said, for example, by asking the speaker to repeat or clarify a statement. In the same way, the speaker could help the listener by ensuring that s/he speaks clearly and looks to the listener for indications of comprehension or confusion, to determine whether s/he was intelligible to the listener or not. Questions 8 and 9 referred to paralanguage, which is another phenomenon along with accommodation which aids the communicative process and whose inclusion was necessary to gauge speakers' effectiveness at communicating in English. This information was also useful for informing results and providing insights into communicative processes worthy of future research. The final question was a general rating of the communicative process between the subject speaker and his/her interlocutor - to compare both speakers'

comments and in turn, to compare these to the recordings, to determine if how L2 users of English view themselves and their interlocutors tallied with their actual performances - which can be referred to in the Observations section and which can also lead to further research in this area.

How the Questionnaires Relate to the Test Research Questions

The questionnaires were each designed to obtain specific data which would provide evidence to answer the research questions, or at least, to inform the results which would in turn be referred to in the Observations and Conclusions sections of this research test. The following sections detail specifically how each questionnaire used in this test is designed to procure data which is relevant to the research questions.

Language Learning Background Questionnaire

The Language Learning Background Questionnaire provided necessary and valuable information regarding participants' first languages and proficiency levels in second or additional languages with particular reference to English. This was to gauge whether similarity or indeed dissimilarity has a corresponding effect on participants' English speech production and reception. The questionnaire also noted how long subjects had been learning/using English and how much exposure they had to L1 English speech - to determine whether this has any noticeable effect on their ability to produce intelligible speech and in turn, if it has an effect on their speech reception. Such information would inform the test results and provide greater insights into L2 and L3 language learning in general.

Reflective Language Use Questionnaire

The Reflective Language Use Questionnaire ascertained how often each subject uses English in her/his day-to-day communication and how s/he rated her/his ability to communicate with both L1 and L2 users of English. This was to gauge possible factors which influence the participant's intelligibility when speaking as well as her/his willingness and ability to accommodate L1 and L2 English users. This questionnaire was also designed to gain an insight into the subjects' experiences and perceptions of communicating in English with L1 and L2 English speakers, to uncover which was easier or more difficult and possible reasons for this. Each participant was also required to give her/his opinion on accent versus intelligibility - to choose which of the two options was more important for them and reasons for this. Various studies referred to in this research (Jenkins, 2007, 2000, Och, 1993, Labov, 1972) show that attitudes to accents have an influential effect on a user's preferred choice of accent and questions 8 and 9 referred specifically to this, to ascertain if participants in this study reflected similar attitudinal patterns. Subjects were also required to give reasons for their answers, to get a better insight into and understanding of reasons for preferred accents.

Subjects were asked how important both intelligibility and having a standard accent are to them. However, they were not asked to choose between the two in case it would 'lead' them to respond in a particular way or affect subjects' views on these issues and thereby affect the study's results. For a 'standard accent', both RP and GA were given as options as subjects may have been educated or exposed to one form or the other and/or may have a preference. By providing a choice, the question was designed so as

not to restrict or indeed lead subjects to provide a particular answer or influence their participation during the remainder of the study. The Reflective Language Use Questionnaire allowed participants to rate their own perceived ability to communicate in English. It also allowed them to rate other speakers of English while providing an insight into their experiences and attitudes to communicating in English

Interlocutor Intelligibility Questionnaire

The Interlocutor Intelligibility Questionnaire gave participants the opportunity to rate their interlocutors' ability to communicate in English. The questionnaire also enabled respondents to rate each other's pronunciation, as the notion of what is 'intelligible' can differ from person to person - it can be a subjective concept. It was necessary that the subjects themselves decided what was or was not intelligible, as this researcher could have been biased due to work experiences with a variety of L2 English accents. Question 3 listed a number of possible reasons why a listener has difficulty with his/her interlocutor's speech. It was necessary for the sake of the study to clarify which elements of the speech act cause intelligibility problems, as deemed by the listener. For questions 3 and 5, a range of options were provided for subjects to choose when asked about elements of pronunciation difficulty with an 'other' option also, allowing subjects to provide their own example if not covered in the list of options. Subjects were asked to explain their 'other' choice, to provide more clarity.

This questionnaire also required the respondent to rate his/her own pronunciation from another person's standpoint - to look at his/her own pronunciation in a whole new, objective and perhaps enlightening way - reflective questions 2, 4, 5, 7 and 9. It

could be difficult to answer questions based on what you believe to be another person's opinion but once you have answered such questions from your own perspective, it should be easier to imagine the same case from another person's viewpoint.

Successful oral communication is dependent on both the speaker and the listener - it is a two-way process. The interlocutor can also attempt to improve the communicative process if s/he senses his/her pronunciation or some other aspect of speech is hindering intelligibility or the content of what s/he is saying is not being fully understood - questions 5, 6 and 7 address this issue. These questions forced the participant to think about how s/he currently accommodates interlocutors and how s/he may improve speech reception. By becoming aware of possible reception difficulties to his/her speech, the respondent and his/her partner could help each other to be more intelligible - through both productive and receptive processes. The listener could make it known to the speaker that s/he does not understand what has been said, for example, by asking the speaker to repeat or clarify a statement. In the same way, the speaker could help the listener by ensuring that s/he speaks clearly and looks to the listener for indications of comprehension or confusion, to determine whether s/he was intelligible to the listener or not. Such reflective questions also supported the Reflective Language Use Questionnaire further. The term 'paralanguage' (questions 8 and 9) was explained as it is a specialised term and taken that most subjects would not have been familiar with it.

The first two questionnaires (Language Learning Background Questionnaire and Reflective Language Use Questionnaire) were given at the start of each test and the

Interlocutor Intelligibility Questionnaire was given in Tests 4 and 5 after each pair of subjects undertook a speaking task together (in Test 5 this was given at both the pre- and at the post-practice stages).

Test 5 Judges' Extract Intelligibility Ratings Sheet

This sheet was given to judges for all three tests (A, B and C) in Test 5. Immediately after each judge verbally recalled each extract after hearing it, s/he then had to score the extract on a Likert scale from 1-5, on the level of intelligibility of the speaker as indicated below:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

The purpose of this questionnaire is to offer an unbiased, independent observer's rating of speakers' intelligibility and pronunciation. It was also to support the verbatim recall task which the judges undertook in order to determine how much of a speaker's pronunciation could accurately be accessed and repeated, i.e., how much of the snippet was intelligible to the listener judges. The fact that the judges were all L1 English speakers also broadened the scope of the judgements on intelligible speech to include L1 English speakers (not just L2 interlocutors) who are also members of the EIC community. Because the independent judges were Hiberno-English speakers, their judgements had particular relevance for the test subjects who communicate daily

with other Hiberno-English speakers because they live and study/work in Ireland in an Irish institution.

Many previous studies which investigated perceived intelligibility of speakers were flawed in that the scales used were biased by requiring judges to rate speech on its level of accentedness, such as that of Anderson-Hsieh et al (1992: 538) which used a scale measuring speech from the lowest point which was, 'heavily accented speech that is unintelligible' to the highest point, which was, 'near-native speech'. This study does not wish to infer that intelligibility is linked to L1-like speech or that a lack of intelligibility is due to deviance from standard-like L1 norms, such as RP or GA. The word 'intelligibility' was not used in the ratings sheet, to avoid confusing judges or leading them to provide particular information - the rating options offered provided sufficient insights into how judges rated each speaker and snippet. The Judges' Extract Intelligibility Ratings sheet was used to calculate whether the scores for perceived intelligibility of speakers was in-line with or indeed differed from the results of the Verbatim Recall task. However, the Verbatim Recall task was deemed to be the most effective means of ascertaining how intelligible a listener judge found a particular speech extract and indeed, a particular L2 speaker. Intelligibility speech ratings alone merely indicate attitudinal responses and are thus not objective measurements of intelligibility (Rajadurai, 2007: 92). If there was a difference between perceived intelligibility of a speaker and actual ability of the judge to accurately recall the extract verbatim, then the results would indicate that there was a difference between perceived intelligibility of a speaker and actual intelligibility, which would indicate that listeners' attitudes or perceptions to speakers do not actually reflect the reality of actual intelligibility of a speaker's speech which in turn,

would require further investigation. A number of studies in this area by Derwing and Munro (1997, Munro and Derwing, 1995a, 1995b) uncovered a lack of conformity in results for *actual* intelligibility and *perceived* intelligibility. The Judges' Extract Intelligibility Ratings sheet was included in this test to investigate whether similar or indeed differing results would be uncovered in this test sample and to posit possible reasons for the results. The judges were not required to judge speakers based on their accentedness or any other aspect of their speech or indeed, their personality, level of education or any other attitudinal evaluations. Many studies have been undertaken in this area and it is fraught by many variables which cannot be easily controlled or indeed, accounted for and seems to remove the focus from intelligibility, which is the main area of investigation in this study. Indeed, Rajadurai (2007:) notes that, 'equating accentedness with lack of intelligibility is a false comparison'. This test was limited to measuring intelligibility of speakers with pronunciation training:

- with the application of slow-down software
- without the use of the slow-down
- without any formal pronunciation training, over the course of a one month period,

to ascertain whether the pronunciation training had any effect on the actual and perceived intelligibility of speakers by L1 judges in an L1 English-speaking environment

The author acknowledges that only L1 English-speaking judges were used in the study. The reason for this is that the use of L2 judges would introduce far more variables into the study than can be controlled or indeed investigated within the confines of a study of this small scale. In personal communication with the psycholinguist John Field, it was decided to avoid further variables being introduced

by using L2 judges, namely ascertaining whether intelligibility of speakers was based on their speech performance or indeed judges' English language level and/or experience with hearing English speech as spoken by L2 users. The Interlocutor Intelligibility Questionnaire was a means of including L2 interlocutors' comments on subjects' speech while avoiding complicated calculations of intelligibility which could be affected by aspects of L2 judges' English level or experience. Also, previous tests in this study have investigated L2 speakers' judgements on L1 speech (see Tests 3 and 4). The extracts of speakers were randomly mixed (except for paired pre- and post-training extracts in Test2), to avoid any comparison between speakers which could have affected the judging process. Rajadurai (2007: 92) found that previous studies in the area of speech intelligibility were flawed due to some speakers being negatively judged based on their comparison to a previous, more intelligible speaker. By randomly mixing the short extracts, it was hoped to avoid comparison between speakers and thus avoid any bias or negative influence on judgements of intelligibility.

Test 5 Test and Control Groups' Pronunciation Practice Log

This was given to all subjects in Groups A and B - Test Group and Control Group - to note their daily practice times and which phonemes were covered, to determine whether amount of practice reflected pronunciation progress. Subjects were given an A4 sheet with a two-column table. The left-hand column showed days and dates for one month, sequentially listed down the margin beginning from the day after the pre-training test day while the right-hand column was blank for subjects to note down

which phonemes they practised from the pronunciation training programme and for how long they practiced – in minutes.

Test 5 Non-Intervention Group's Daily English Communication Log

The NIG group did not keep a practice log as they did not undertake a pronunciation practice programme as members of the Test and Control Groups did. Instead, these subjects were required to note their daily communication in English and to differentiate how much was with L1 users and how much was with L2 users of English. This log was used to inform the test results and to determine whether amount of communication in English – whether with L1 or L2 English users – had a corresponding effect on their pronunciation over the month-long test period.

The Test Group received an individually-designed phoneme pronunciation training programme (lessons targeting problematic phonemes are given on CD + booklet) using the slow-down, the Control Group received the same pronunciation programme but without the slow-down facility, to ascertain if the slow-down is effective or not and if so, to measure how effective it is. The Non-Intervention Group received no pronunciation training programme, to ascertain whether direct pronunciation training was effective in increasing subjects' spoken intelligibility or not.

Tests 1-5 Data Collection and Analysis

A number of means were used in the five tests in this study to collect data from participants, which were: transcription (of snippets), comprehension questions,

verbatim recall, questionnaires and ratings sheet.

The subjects in each test were issued with answersheets to record their written answers (transcription). Transcription requires the student to hear the snippet correctly, remember what has been uttered and write it down exactly. The most challenging part of this exercise is to hear exact words in the snippet in the stream of conversational or 'messy' speech, complete with elisions, assimilations, and other verbal reductions (Cauldwell, 2002). An exercise using comprehension questions involves understanding the questions being asked, listening for specific information and answering the questions correctly. The comprehension questions were not found to be a reliable means of gauging subjects' intelligibility and so were not used in this study after Test 1. The oral repetitions (verbatim recall) by subjects are analysed to gauge how many words in the snippets they correctly repeat - which should give a more accurate impression of what subjects' find intelligible in the snippet, as repetition is much faster than transcribing and short term memory (STM) will be able to work more effectively due to the speedier method of response (oral repetition).

The researcher then analysed subjects' responses (from worksheets and recordings) for occurrences of intelligibility breakdown. Both the worksheet responses and the recorded responses were tabulated and the data was analysed counting the number of correct elements out of the total number of elements (words) present in the test material. These results were then mathematically presented, based on a percentage-scoring scheme and/or on a numerical scheme (1, 2, 3, etc.). The information gleaned from the questionnaires was largely used to inform the test data. As each test is quite

different, the data collection and analysis for each one will be discussed separately in the following sections.

Test 1 Data Collection and Analysis

The subjects in this study are three groups (from three classes) of forty-five, third-level L2 English-speaking students. The materials used are a cassette with an extract of conversation by a female L1 Spanish speaker of English, cassette-player, worksheets and Personal Information Sheets (one sheet per student). The subjects had to fill in a worksheet with tasks pertaining to the content of the recording - first to transcribe a snippet from the recording, answer eight comprehension questions based on the entire recording and then two more transcription attempts of the same snippet as used in step 1. The researcher then studied the subjects' responses for occurrences of intelligibility breakdown. The worksheets were analysed in an attempt to uncover reasons for such breakdowns in intelligibility, in an attempt to eradicate such problems in EIC communication in the future. Once the data was collected, it was analysed based on a percentage-scoring scheme. Scores reflected the two aspects of the worksheet:

- 1) three attempts at transcription of extract A from recording
- 2) eight comprehension questions based on entire recording

The comprehension questions referred to specific details in the recording and were marked correct or incorrect. One point was given for each correct answer. The total was converted to percentages based on overall accurate answers of the eight questions. The comprehension questions were to determine whether listener subjects'

overall comprehension of the recording corresponded to their intelligibility of speaker, as reflected in the transcriptions.

The transcription results were also given in percentages, based on accuracy. The score was calculated by counting the number of correct words transcribed for each hearing (out of 27). For the majority of participants, the number of words transcribed, as well as accuracy, increased with each hearing. In most cases the third and final score was the result presented, as this was almost always the highest score – these shall be discussed in the Observations section. The possible problems subjects could encounter when listening to an L1 Spanish speaker of English are listed below.

Test 2 Data Collection and Analysis

There were separate answer sheets for every snippet and for every exposure - nine for every subject from both groups. The answer sheets were blank A4 pages which were grouped according to colour, which indicated a particular snippet:

white = Snippet 1, peach = Snippet 2, green = Snippet 3

The answer sheets were marked:

Recording 1/2/3 (A), Recording 1/2/3 (B), Recording 1/2/3 (C)

This was to indicate:

- 1) The first snippet (A), the second snippet (B) or the third snippet (C)
- 2) Exposure A = 100% (Group A and B), Exposure B = 100% (Group A) or 80% (Group B) Exposure C = 100% (Group A) or 60% (Group B)

This made it easier for the researchers to group the particular answer sheets correctly,

so all three transcriptions for each snippet could be analysed together. Before each transcription attempt, each subject had to write his/her group number on the top of the answer sheet - this was the number on each student's computer screen, which was either A or B (Control or Test Group) and the desk number, for example, 22B referred to a student in the Test Group and at desk number 22. Subjects also had to supply a consistent three-digit number on each of their answer sheets - the last three digits of their mobile telephone numbers were suggested. This was an extra identification marker, to ensure the researchers could accurately identify each subject from their respective answer sheets, which was very important to the study results. The snippets are presented in a way to reduce the cumulative effect of repetition where subjects rely on trace elements within their working memories to build up the entire snippet over a number of exposures (Field, 2003a). The experiment was designed in such a way that Group B (Test Group) subjects were initially tested on how much of each snippet is intelligible to them at full speed, as they would hear an L1 user produce naturally. The snippets were then slowed to 80%, to investigate if this led to any improvement and then to a speed of 60%, to discover if there was any further improvement in the subjects' ability to recognise the reduced elements of natural, connected speech when it was slowed even more. Obviously subjects were aware that they had already heard the snippets (during this session) on the second and third exposures, but their memory of these snippets had been interfered with the intervening snippets, reducing this tracing effect.

The students were brought to a language laboratory, where they were divided into two groups: A - the Test Group and B - the Control Group. All subjects underwent testing at the same time, to maintain the same test conditions for both groups. The

headphones and grouping capability of the language laboratory made the test possible, as each group were exposed to different snippets without being exposed to the snippets of the other group. The answer sheets were collected after each snippet exposure, so subjects could not read back on what they had written on previous transcription attempts and so researchers could accurately file them in the correct order for analysis.

The subjects were first given a Personal Information Sheet (the same as used in Test 1) to gain an insight into each subject's English language learning history, as this will inform the researcher of the learner's ability in English. The test was anonymous, so students had to state their gender, age and L1 and use a three-digit number, to maintain their anonymity while enabling the researcher to accurately identify each subject's answer sheets. While gender is not a main focus of the study, it is recorded as part of personal information of the students, and since their responses are anonymous it is another way of identifying them. The running of the experiment was somewhat difficult as researchers had to ensure they collected all answer sheets after each transcription and that all subjects had marked both their group and individual three-digit numbers on each answer sheet.

Transcriptions were analysed by counting the number and percentage of words written for each attempt and the number and percentage of correct words transcribed. The results in Appendix 2 are presented in a table – 'y' denotes 'yes' to indicate that the word was correctly transcribed, near approximations or interesting interpretations of words were also noted in the table and are referred to in the Observations section.

Not only did this enable the researcher to document correct interpretations but also to see where intelligibility broke down and gain an insight into possible reasons for this. Field believes all responses should be analysed to provide clues to the actual listening process which in turn can give insights as to how the L2 English user can be a more effective and accurate listener. The sentences were colour-coded according to tonic stress, as it was placed by the speakers in the original recorded snippets:

Red = primary stress

Blue = secondary stress

Yellow = stress

L1 English users naturally place stress on the most important elements within a sentence, to draw the listener's attention to them. Analysis of results includes determining if subjects were more capable of correctly transcribing the stressed elements within the snippets compared with the unstressed ones. This is to be expected as stressed elements are highlighted by a speaker by being produced louder, longer, at a higher pitch or a combination of two or more of these, so it is easier for the listener to 'catch' or hear these stressed elements in the stream of speech and thus may be produced closer to citation form. This was to uncover if stressed elements were more likely to be correctly identified by subjects, as generally it is weak, unstressed elements which prove difficult for learners of English to capture when listening to natural, connected L1 speech. The slow-down tool was tested to investigate whether it could increase a listener's speech reception, which is one of the main aims of this study.

Test 3 Data Collection and Analysis

First, subjects were brought individually to a quiet room, for optimum test conditions. Each subject signed a participation permission form, for ethical purposes and L2 users only completed a language learning background questionnaire, to give an insight into their learning history and level of English language. It also indicated any other languages spoken, only if bilingual, fluent or proficient. The form also recorded subjects' age and gender. Subjects were divided into groups A or B and given a corresponding test answer sheet – A or B. They were told they would hear ten extracts of English language speech. They were required, extract-by-extract, to listen to each one, recall verbatim what they heard as soon as the extract ended (recorded on an MD player) and then transcribed what they heard in the relevant space on the answer sheet. The pdf tests were accessed via a laptop and each extract was played by touching the relevant extract button with the mouse.

The recordings were phonetically transcribed and analysed to ascertain which extracts yielded more accurate responses from subjects – the slowed versions (using the slow-down software) or those at full speed. The researchers' transcriptions were compared with the subjects' orthographic transcriptions, to ascertain differences, if any, between what subjects transcribed and what they actually recalled verbatim. The results of groups A and B were compared. The results of L1 English users were compared to those of L2 English users, to observe any differences between the effectiveness of the slow-down application between such speakers.

Test 4 Data Collection and Analysis

The subjects were put in pairs: one male:one female, and given a Cambridge Speaking Test, to initiate conversation without prompting any particular language forms or use. The speaking test was a sheet with illustrations of twelve well-known and regularly used items and a worksheet with questions for the subjects to discuss. The advantage of using the Cambridge speaking tasks is that they are specifically designed to initiate authentic speech with themes which the students could all relate to and share despite their individual differences and interests, namely studying at third level, learning English, using common everyday objects, and so forth. In this respect, the speaking tasks were employed to enable subjects to communicate more intelligibly in terms of using top-down processing skills to interpret contextual information, which Rajadurai (2007: 90) believes has been largely ignored in studies on L2:L2 communication.

Each question on the first part of the worksheet was read aloud by the researcher and any difficult words were explained. Subjects were asked if they had any questions or problems concerning their understanding of the questions or of what was required of them during the course of the experiment, so as to clear up any misunderstandings and enable the experiment to run as smoothly as possible. The first section required that they speak about the items in general. Then they had to choose four which were important to them and state their reasons for this. The subjects were given about four minutes for this part. They were then given the second part of the activity – slips of paper with four statements and questions to answer and discuss. They were given about eight minutes for this section. The conversations were recorded on an MD player with one MD player and one microphone per pair of speakers. The two pairs

were recorded at the same time in the same room, to minimize differing external effects and ensure similar experimental conditions for all participants. The subjects were recorded as they conversed in their pairs for approximately twelve minutes. The subjects were then required to complete an Interlocutor Intelligibility Questionnaire - to determine their views on their interlocutor's intelligibility and ability to communicate in English and also to get their impressions of how they themselves performed in the speaking activity. The study included participants' opinions and views of themselves for two reasons: 1) they know themselves better than anyone else in the study and therefore their views are enlightening; 2) while some participants' views of themselves may differ from those of their interlocutor, it is interesting to see if results and opinions tally or if there is a great difference and if so, to uncover possible reasons for this. The data from the recordings and questionnaires were then analysed to uncover answers to the research questions and to see if they corresponded with subjects' responses.

Once the data was collected, it was analysed based on a percentage-scoring scheme.

Scores reflect three sources of information/data:

- i. Personal Background Information Sheet
- ii. Reflective Language Use Questionnaire
- iii. Interlocutor Intelligibility Questionnaire

The information gained from these sources was then compared with the recordings, to see if subjects' comments matched the researcher's observations of their speech and to uncover possible reasons for what was observed.

The data was specifically categorised according to the questionnaires used in the study. The subject responses to the questions in the questionnaires were both numerical (based on a Likert scale of 1-5) or in percentages (based on a qualitative scale). Responses were also given as words or phrases, such as yes/no or when providing specifics, such as ‘speaks slowly’ (in reply to ‘how do you help your partner understand your pronunciation?’). The numerical and percentage data was analysed by comparing results between subjects, to determine the most intelligible speaker. The written responses from the questionnaires were used to inform results, to offer reasons for the results.

Test 5 Data Collection and Analysis

Subjects from Groups A and B undertook similar pre- and post-practice tests under the same conditions. The setting for the tests was a quiet room in the college with a desk and chair for each participant, speaking activity instructions and pictures, for the paired speaking tasks and a laptop, headphones, pronunciation practice booklet and CD - for the pre- and post-test practice sessions.

After four weeks of targeted pronunciation practice, subjects were re-tested:

i) alone, going through the content of their CDs in a new random order from before at 100% only

The purpose of retesting in this way was:

- a) to determine any changes in phoneme production at the end of the pronunciation practice period
- b) to establish whether speakers’ intelligibility altered since the start of the study

iii) the interlocutor's comments could be compared with their comments from the pre-practice test speaking task, to note any perceived changes in the speaker's intelligibility and to compare this with the judges' intelligibility ratings of speakers, to note any similarities or differences and offer possible reasons for this, which could also lead to further investigation for another study.

Recordings were analysed by the researcher and four independent judges. It is unsuitable for the researcher to be the lone judge as:

- a) it may be difficult to maintain objectivity
- b) as a TEFL teacher, the researcher's ability to decipher L2 English speech is most likely to be better than the average L1 or L2 English user
- c) the study concerns English for International Communication, therefore L1 users of English should also be included to make judgments on the intelligibility of subjects' speech production. The judges' responses were collected in the following order:

1. using headphones, they listened to the 40 Test and Control Group extracts in random order (Test A) and were recorded repeating each extract as soon as they heard it
2. judges rated each extract as soon as they had finished the verbatim recall task
3. judges listened to the 40 Test and Control Group extracts in pairs (Test B) and were recorded repeating each extract
4. they rated each extract as soon as they had completed the verbatim recall element of the test
5. the judges listened to the Non-Intervention Group's extracts, repeated each one as soon as they had heard them and then rated them

The judges' ratings scores were based on a Likert scale from 1 ('very difficult to understand') to 5 ('extremely easy to understand'). These rating scores were tabulated and mean scores were calculated. Then the ratings scores from the pre- and post-tests were compared for each group, to determine whether there was any perceived improvement of the subjects' pronunciation at the end of the test period. The judges' verbatim recall responses were recorded

The NIG did not engage in pronunciation training. Instead, their pronunciation was observed at the start and at the end of a month-long period. Five extracts were chosen per subject from both the pre- and the post-observation speaking tasks and were given to the judges for verbatim recall and ratings tests. As the extracts from the pre-observation differed from the post-observation speaking tasks (no pairs of the same sentences unlike the Test and Control Groups), the mean scores for the five extracts from both the pre- and post-observation tests were calculated and compared, to determine any changes in perceived overall intelligibility of NIG subjects' speech. While 4-5 phonemes were diagnosed as problematic for each member of the NIG group, each extract chosen for the pre- and post-observation tests included at least one and up to three problematic phonemes, making direct comparison between pre- and post-observation extracts difficult as no two sentences were the same, unlike in Tests 1 and 2 for the Test and Control Groups. Instead of comparing scores for individual extracts from the pre- and post-observation tests, the mean score for the five extracts was compared between pre- and post-observation, to determine any changes in NIG subjects' spoken intelligibility.

CHAPTER 8: DISCUSSION

This chapter will outline in detail how the main findings of this study relate to the existing literature referred to specifically in Chapter 3 of this thesis.

8.1. Findings of this Study which Agree With the Literature

A number of findings from Tests 1-5 undertaken in this study are in agreement with the current literature referred to in this thesis. Each one is presented below along with reference to the corresponding literature.

The 1st finding: ‘L2 English users’ pronunciation can be influenced by their L1’ is in line with the literature on L1 Transfer/Interference in Chapter 4, section 4.3 (see Swan and Smith, 2001, Jenkins, 2000, Brown, 1990 and Lado, 1957). This was noted specifically in Tests 1 and 5. The extract used in Test 1 was spoken by an L1 Spanish speaker of English and a number of Spanish-influenced pronunciations were noted and are listed in Chapter 6, section 6.2 of this study. In Test 5, the subjects’ speech was recorded in order to diagnose problematic pronunciations with particular attention given to phoneme production. Many of these pronunciation problems were due to L1 influence (see Chapter 6, section 6.6).

The 2nd finding: ‘English phonemes which correspond to, or are similar to, those in an L2 English user’s L1 are usually heard and produced more intelligibly’ is supported by the literature (see Swan and Smith, 2001, Jenkins, 2000 and Kenworthy, 1987).

This was observed in Test 1 where English was found to be more intelligible and receptive to L1 Germanic speakers than those from a Romance or other language background.

The 3rd finding in this study: ‘When a speaker mishears or does not recognise a word, s/he will then search for the nearest lexical match in her/his linguistic repertoire’. This observation was made on a number of occasions when analysing subjects’ transcriptions in Tests 1, 2 and 3 and agrees with observations made by Field (2003).

The 4th finding: ‘Previous exposure to a speaker’s speech/accents can increase receptive intelligibility’. This is because the listener can match the speaker’s sounds and words with internalised cognitive phonological and morphological imprints from previous exposure(s) which enables the listener to identify the speaker’s sounds/words (Field, 2003b, 2003c). This view is also echoed in the section on Speech Intelligibility (Chapter , section 2.1) and was observed in Test 4.

The 5th finding: ‘An interlocutor’s desire to understand a speaker’s intended message can increase receptive intelligibility’ is supported by the literature, specifically Accommodation Theory and Convergence in the sections on Accommodation and Accent and Identity (see Chapter 4, section 4.3).

The 6th finding: ‘It is not necessary for L2 English users to acquire an L1-like accent/pronunciation in order to be intelligible to interlocutors’ is in agreement with

Jenkins (2000) and Abercrombie (1949) in the discussion on whether a pronunciation model for EIC is possible (see Chapter 2, section 2.8).

The 7th finding: ‘The majority of L2 English users place great importance on the improvement of their English pronunciation’ relates specifically to study findings on L2 users’ views and desires as speakers of English (Timmis, 2002) and also in writings by L2 English-speaking linguists, such as Sobkowiak (2005) and Bowen (1999) in the discussion on whether a pronunciation model for EIC is possible (see Chapter 2, section 2.8).

3.5. Findings of this Study which Differ from the Literature

While a number of findings from Tests 1-5 undertaken in this study agree with the current literature referred to in this thesis, only one finding disagreed with the literature and a comprehensive explanation for this is offered. The literature states that L2 speakers of English from the same or similar L1 language backgrounds are more intelligible to each other (Jenkins, 2000 and Kenworthy, 1997). However, it was observed in Test 1 that Spanish and other Romance L1 subjects (French and Italian) performed much worse in the speech reception tests than German and Dutch subjects. There are two main possible reasons for this outcome. The first is that the recording of (Spanish) speaker was a monologue. Therefore, it differs from conversation between two speakers who can negotiate meaning by a number of means such, as facial expressions, body language, asking for clarification, and so forth. None of these were available to the subjects in this test, so receptive intelligibility was negatively

affected. Also, the Spanish speaker in the recording was not aware of her listenership and therefore did not alter her speech in order to accommodate or be more receptive to listeners. Another reason for this observation in the test was that although the speaker in the recording was an L1 Spanish speaker, she was speaking English, which is quite different from Spanish and other Romance languages, particularly as there are many more vowel sounds in English which are not present in Romance languages, which again is more challenging to such speakers compared with Germanic L1 speakers whose phoneme inventory is more similar to English.

5.3. Personal Reflection

Starting out on this research endeavour a number of years ago, I was inexperienced in empirical practices and other academic-related activities. I feel the most significant personal gain I have made from this study is the ability to seek answers to questions in a more reliable and effective manner. This is no small gain and it is a skill that I hope to incorporate in other areas of my life, not just academic. I now realise that when one seeks to uncover the answer to a question, one must also look at possible affective variables and also not to expect a particular outcome. True enquiry is anchored in a genuine search for answers, rather than proving or disproving a theory.

Another important discovery was that people are unique, with different backgrounds and experiences. This can be challenging when undertaking tests involving subjects, particularly psycholinguistic or other psychological or cognitive tests, as it can be difficult to identify what is going on in a subject's mind. It is also challenging to

gauge or indeed limit the effect of variables on subjects as there can be many and some are more difficult to control than others. I did find that questionnaires were useful to gain further awareness and knowledge of variables, such as subjects' language learning experiences, their opinions of themselves and others as L2 English users and other information which helped to inform the results and following tests design.

I am an English language teacher as well as an Applied Linguist, and as such, I have a continued interest in practical and applicable linguistic and pedagogic aspects for ELT. I learned a great deal about language pedagogy which, I am confident, will inform my teaching. Also, during this study, I had an opportunity to test a software application – the slow-down speech tool. Prior to this study, I had little knowledge or experience with technical devices. I now feel more confident and competent about using CALL and other speech-related software because of this study and look forward to expanding my technical knowledge.

CHAPTER 9: CONCLUSION

9.1. Summary

This thesis has investigated speech reception and production difficulties in EIC and how these may be overcome. The main aim was to add to the continuing body of research into English language use between L2 users and also between L2 and L1 users.

While the term EIL is generally used to refer to this international form of English, for the sake of clarification, the term EIC – English for International Communication was used in this study as it includes communication amongst L2 and L1 users of English as well as communication solely between L2 English users. While EIL is regarded as English communication between L2 English users, a broader view – EIC – was taken in this study for two main reasons:

- 1) location of study: due to the study being conducted in an L1-English using context – an Irish third-level educational institution – it seemed more relevant to include L1 English users in the study – as speakers, subjects and judges
- 2) ever-increasing numbers of L2 English users coming to Ireland: L2 English users are coming for either short-term or long-term purposes, such as to work, study or to live permanently.

The objective of the thesis was two-pronged:

- 1) to determine aspects of speech which hinder intelligibility in terms of English speech reception and production, concentrating specifically on phonetic aspects in later tests
- 2) to test the effectiveness of the slow-down speech facility for use in ELT to increase speech reception and production amongst L2 English users

At the start of this study, aspects of speech reception difficulty were investigated to try to pinpoint where speech reception was hindered and reasons for this. From the initial tests into speech reception, it was decided that the focus of the study should change to investigate speech production, as less research has been done in this area. This investigation was coupled with testing the effectiveness of the speech software to determine whether slowing down speech without tonal distortion could be applied to a pronunciation training programme to increase subjects' spoken intelligibility. This was achieved by using the slow-down software to slow down recordings of detailed pronunciation lessons for each Test subject's targeted phonemes. With the use of individually-designed training CDs and accompanying booklets, Test subjects trained over a one-month period – hearing each lesson first at 100% speed, then 80% and then 60% - to help them hear how the targeted sounds are produced naturally by an L1 non-RP English-speaking model and for them to repeat what they hear – in an effort to increase their spoken intelligibility.

While the slow-down software was not deemed much more effective when compared with Control subjects who underwent the same pronunciation training without the application of slow-down facility, it does not invalidate the usefulness of the slow-down in ELT. Further testing is needed and perhaps a review of the testing procedures

adopted for Test 5 in this study is called for before more concrete results for the effectiveness of the slow-down speech tool for pronunciation training can be achieved. It is difficult to objectively determine if and when a speaker is intelligible or not – as by and large, spoken intelligibility is a subjective concept which is dependent on the listener's aptitude for listening, English language level, experience with a variety of accents, attitudes towards particular accents, basic listening and processing skills, and so forth. The main judges of spoken intelligibility in Test 5 - the four non-language specialist L1 English speakers – may not have been the most formidable but they were used as examples of likely interlocutors to the subjects in this study, who are all based in Ireland.

The testing methods used in the final test of this study could be questioned in terms of their effectiveness. After 3 years of previous testing, excellent advice from specialists in the field (including Jenkins, Field and Roberts, all referred to in this study and in the bibliography) and much thought, the methodology used in Test 5 was deemed to be the most effective and applicable for the scope of this study. In hindsight, the researcher would change the methodology used in Test 5 particularly for obtaining Non-Intervention Group members' test extracts (as used for verbatim recall and intelligibility ratings tests). Extracts from natural conversations taken from the speaking tasks at the pre- and post-observation period were used to obtain the pronunciation of the NIG subjects as they would naturally produce, as compared to scripted material which would involve reading and thus, alter speakers' pronunciation. Naturally-produced conversations also ensure that the speakers only use words which are known to them and which they are more likely to know (though not always) the correct pronunciation for, in comparison to using scripted speech which may include

words unknown to the speaker and which s/he in turn has difficulty in pronouncing. While this was useful for diagnosing subjects' pronunciation problems in targeting problematic phonemes, it was problematic when it came to assessing NIG subjects' pronunciation development over the month-long observation period, as extracts could not be adequately compared as no identical pairs of extracts were available, as was the case for the Test and Control Groups.

For future testing, the NIG group members' problematic phonemes would also be diagnosed from the first speaking task and elements of a pronunciation programme similar to the Test and Control Groups would be created. Namely, sentences containing numerous occurrences of diagnosed problematic phonemes would be presented to the NIG members in a CD and booklet format. They would then be recorded listening to and repeating these sentences at the pre- and post-observation stages but without the possibility of training with the materials during the observation period. In this way, judges would have identical pairs of extracts to compare at the pre- and post-observation stages, which would make assessment of subjects' pronunciation development far more straightforward (comparing like with like), reliable and in turn, easier to compare with both the Test and Control Groups' results.

9.2. Implications for Pedagogy

The slow-down could be incorporated into ELT materials for oral/aural work or in a software package for independent learning, where users could choose how slow to hear items and how often, which could have a positive effect on learning. CALL is

becoming more and more prevalent in ELT and language learning, as are the application of algorithms similar to the slow-down used in this study.

The observations from this study could help inform current linguistic work (such as that being undertaken by Seidlhofer and Mauranen) in documenting and describing features of EIC, with a view to altering or indeed replacing current ELT pedagogical approaches and practices in the area of speech reception and production.

The observations from this study could also inform assessment and testing procedures for ELT. ELT pedagogy should provide a concrete definition of intelligibility, detailing necessary pedagogical aspects to be focussed on, and refer specifically to this in oral and aural lessons and assessment.

9.3. Limitations

Although five tests were carried out in this study, a number of limitations are apparent on analysis of results and on further reflection at the final post-testing stage.

1. **Measurement of Intelligibility:** the concept of intelligibility was defined for the sake of this study and focussed specifically on phoneme production. However, when people listen to speech, they do not merely focus on phoneme production alone. Intelligibility, in general terms (and which subjects may have adhered to, at least at times, in the tests) is increased due to other features present in speech, namely suprasegmentals. Also, listeners listen for meaning, so semantics or collocations/multi-word sequences can help the listener to

identify what has been uttered. The study is also limited in how it gauged levels of intelligibility: comprehension questions, transcription, verbatim recall and rating of speakers. In future research, the author is open to exploring other means of measuring intelligibility, such as multiple choice questions or response tasks.

2. **Application of the Slow Down:** as the slow-down algorithm was being developed during the course of this study, it was not possible at the time of testing for subjects to access the slow-down as a stand-alone tool. It was not possible for subjects to slow the recordings to speeds of their choosing. Previous tests on speech rate, such as those by Derwing and Munro(2001) show subjects have a preferred speaking rate, which may have a corresponding effect on intelligibility.
3. **Variety of Subjects:** this study used subjects from the student population of Dublin Institute of Technology, Dublin, Ireland. This limits the research in terms of variety of L2 English users. Future testing would include subjects from a variety of backgrounds (not just third level students) and a greater range of ages (the subjects in this study were mostly in their 20s).
4. **Length of Training/Observation Period:** At the end of Test 5, it was concluded that the subjects in all 3 groups (Test, Control, NIG) would have benefited from a longer training/observation period for more conclusive results. Future testing would allow for a longer training period.

9.4. Suggestions for Further Research

Following on from the discussion above regarding the methodology design used in Test 5, future testing could investigate alternative means of assessing speaker intelligibility other than verbatim recall and ratings tests. Also, a greater spectrum of judges could be used – to include those who have a lot of experience with L2 speech/accents versus those with very little, L2-speaker judges, including bi- and multi-lingual speakers as well as those with differing English language levels.

Future research could also investigate other variables in pronunciation learning and speech production, such as issues concerned with motivation, language learning experience and use, identification with an L2 or L1 English-speaking community, correlation of language level with spoken intelligibility, and so forth. The effectiveness of the slow-down tool for training suprasegmentals could also be investigated, as initial observations using the slow-down indicate that it is useful in highlighting tone contours in speech (see Meinardi, 2006). This study could also investigate further and more reliable indicators of rating speakers' phoneme production and overall intelligibility, such as employing mathematical equations, to display more exact findings. The design and application of a user-interface, which guides users as they use the pronunciation practice programme, along with an immediate, reliable feedback system are also required as they may assist in the learning process and are necessary if the programme were to be implemented for commercial use.

One could compare pronunciation (spoken intelligibility) or other language/speech features of:

- a) ESL within and outside the users' home countries, eg, Indian English speakers' use of English in India compared with their use in Ireland
- b) EFL within an ENL country compared with those within speakers' home countries or within other non-ENL countries, eg, Chinese English speakers' use of English in Ireland compared with how it is used in China and/or in Italy, for example.
- c) ESL with EFL, for example, pronunciation features of Polish immigrants living in Ireland compared with those of Polish Erasmus students living in Ireland for one or two college semesters.

Further investigation could also be conducted into links between attitudes to L2 speech and intelligibility ratings comparing the attitudes of listeners to a variety of L2 English accents/speech. It can also be said that much more research is needed before it can be confidently ascertained where the line should be drawn between BES and NBES proficiency in expanding circle varieties of English. In other words, what can be considered to be part of interlanguage phonology and what to be part of an L2 regional accent? It is essential to clarify this distinction. Another problem is the need for empirical evidence from different international groupings to confirm (or not) the detailed claims of Jenkins' LFC. In this regard, the continuing lack of empirical research into phonology in EIL and EIC contexts remains disappointing. Much more work of this kind will be necessary before one can be confident that the definitive core of EIL/ELF has been established (see da Silva, 1999, Jenkins, 1996a and Walker, 2001a, 2001b).

9.5. This Study's Contributions to the Field of Applied Linguistics

1. Explored and evaluated the use of the slow-down technology for both speech reception and production in Tests 1-5 with an overall outcome that the slow-down can lead to some improvement but more tests could be carried out in future for more conclusive results. This includes providing a longer period of training with the slow-down tool (Test 5), a more informed and equal division of subjects into groups (see point 7 on this list) and testing all groups based on similar activities/test methods (refer to point 8).
2. Developed methodologies over 5 distinct tests, discussed in detail in Chapter 4, to look at and evaluate this exploration.
3. Established that targeted phoneme practice alone is not sufficiently effective for improving the intelligibility of an L2 English speaker. Chapters 1-3 discuss in detail the number of affective variables on L2 speakers of English, with Chapter 3 referring specifically to intelligible pronunciation production. L2 speech production, and pronunciation in particular, is affected by many factors such as complex psychological, political and sociological issues as well as length of time learning/using English, motivational factors, age of learner, learner's L1 and so forth. All these factors must be taken into consideration and addressed as much as possible in ELT pedagogical practices.
4. Ascertained that previous knowledge between subjects can hamper results in two ways:
 - a) subjects who have had previous exposure to their interlocutor's speech/accents find them more intelligible. This is because the listener can match the speaker's sounds and words with

internalised cognitive phonological and morphological imprints from previous exposure(s) which enables the listener to identify the speaker's sounds/words (Field, 2003b, 2003c).

- b) subjects are more likely to accommodate each other when they know each other and are on friendly terms with one another. This is because knowledge between subjects (and specifically in Test 4 where interlocutors were classmates) infers a greater willingness on the part of both interlocutors to engage in successful communication, in order to maintain good relations and/or complete tasks effectively.
5. Verified that in speech reception tests, the quality of the recording should be of a high standard, free from background noise or artefacts, otherwise listeners can be distracted and results can be negatively affected. This observation was made in Tests 2 and 3, from comments made by the subjects at the post-test phase and the researcher's own auditory observations of the extracts when slowed, particularly at 60% and 50% reduced rates. By the time Test 5 was implemented, the slow-down algorithm had been improved, leading to a much higher standard of sound quality.
 6. Confirmed that division of subjects into groups (Test, Control, NIG) based on linguistic ability should be carried out in a deliberate and fair manner to ensure more reliable results, as word recognition is influenced by linguistic ability. Because the subjects were all studying in an L1 English-speaking third level institute, were of similar age and from similar educational backgrounds, the researcher naively assumed that their English language levels would be

somewhat similar but a larger disparity in English linguistic ability became apparent on analysis of results.

Discovered the importance of comparing groups' results from similar activities/test methods. In Test 5, it was problematic when comparing a non-intervention group's results with test and control groups when the NIG's evidential material for assessment differed in nature from the test and control groups.

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Appendix 1: Test 1 Material

This appendix contains the following material pertaining to Test 1: Subjects' Background Information; Subjects' Language Learning Background Questionnaire (Tests 1-5); Test 1 Tapescript; Test 1 L2 English User Recording Worksheet; Test 1 Additional Results for Transcription and Comprehension; Test 1 Comprehension Question Test Scores,; Test 1 Table of Terms used for Transcription Scores; Test 1 Transcription Scores Table; Test 1 Transcription and Comprehension Test Results Table

Test 1 Subjects' Background Information

The subjects who participated in this test were from three classes in a third-level institute setting in Dublin, Ireland – a first year International Business and Languages (IBL) class²²⁶ (Group 1), an English for Academic Purposes (EAP) class²²⁷ (Group 2) and an Irish Cultural Studies (ICS) class²²⁸ (Group 3) – the last two classes are comprised of Erasmus students from various courses and years, for either one or two semesters. The study includes subjects from eleven different L1s, namely, French, German, Spanish, Italian, Dutch, Chinese and Polish.

²²⁶ This is a four year degree course run in the third-level institute where half the modules are dedicated to the study of two languages – 1 Major and 1 Minor, and the other half of the course is comprised of Business modules. L2 English users major in English and minor in another language such as French, German, Italian or Chinese.

²²⁷ Erasmus students must undertake two hours of Academic English instruction per semester, for 5 ECT credits.

²²⁸ Erasmus students must choose electives for ECT credits and Irish Cultural Studies, which highlights important aspects of Irish culture and history, is one such course offered in the third-level institute – a two-hour per week class for 5 ECTs per semester.

Group 1

Nationality	Gender	Age	Other Language(s)
German	F	24	No
Chinese	F	18	No
Polish	F	20	No
Italian	M	22	No
German	F	20	No
German	F	24	No
French	F	20	No
Dutch	F	19	Italian & English
Chinese	F	22	English
Chinese	F	18	No

Group 2

Nationality	Gender	Age	Other Language(s)
German	M	27	No
French	F	20	No
Spanish	M	23	No
German	M	28	No
French	F	22	No
Spanish	F	19	No
Spanish	M	23	No
Spanish	M	23	No
Spanish	M	21	No
German	M	27	No
German	F	24	No
French	M	20	No
French	F	22	No
French	M	22	Hebrew

Group 3

Nationality	Gender	Age	Other Language(s)
Catalan	F	27	Spanish
Filipino	F	22	English
Czech	M	22	English
German	F	22	No
Dutch	M	20	English
Czech	M	23	Slovak & English
Catalan	M	25	Spanish
Czech	F	21	German & English
Czech	F	22	German & English
Finnish	F	23	English
Tagalog	F	23	English
French	M	24	English
Czech	M	27	No
Czech	F	23	English

German	F	20	No
German	M	24	English
French	F	21	English
French	F	24	No
Dutch	F	20	English
Czech	F	23	English
French	M	22	No

Subjects' Language Learning Background Questionnaire (Tests 1-5)

Mother tongue:

Gender:

Age:

Are you fluent/proficient in any other foreign language besides English?

How many years have you been studying English?

Mark on the scale below how much exposure you have had, approximately, to native English speech since you started learning English.

very little	a small amount	a reasonable amount	a good deal	a lot
1	2	3	4	5

How did you gain this exposure to native English? For example, do you have relatives / friends, etc who are native English speakers or is it from the radio / TV / etc?

How long have you been living in Ireland?

Have you ever lived in any other English language speaking country? If yes, for how long?

Test 1 Tapescript

Extract: **'He's a permanent; he has been here for donkeyS' years and he, every year he asks me the same thing and I hate when people play thick'.**

Extract: 'But then she's very good at, at talking. I think she should be a secretary herself. She should be working here because she's like, I mean that in a nice way. As a matter of fact, she's good at dealing with people. Like, she's smiling and a lot at. I'm not. I thought that I will be good at a job that involves dealing with people and you know, but I'm not, I just...I'm not, I just...Yes, you know, I, I hate, I just hate when I...Like there is this person that came yesterday and asked me for a class list and every year, I have been here for three years, and every year this person, has b., he's from Business, he has asked me the question. Well he has been here, I don't know ten, seventeen years. **He's a permanent. He has been here for donkeyS' years. And he, every year he asks me the same thing and I hate when people play thick.** I don't mind people asking me and if I can help, I'll do my best but when they just...they know the answer and they are asking me the question it just, gets on my nerves, you know.'

h. What do people do that annoys her?

3. Listen to the extract again and write out, underlining any changes or new words you have included.

4. Listen and write out a third time, again underlining any changes or new words you have included.

Test 1 Additional Results for Transcription and Comprehension

Test 1 Second Highest Transcription Score

The second highest score, 85%, was achieved by a female Dutch student who is fluent in English and Italian and has previously lived in the US and Italy, where she communicated in English the majority of the time and would have been exposed to both L1 and L2 varieties of English. The significant increase of this subject's score from initial attempt at 7% to 44% on the second try to 85% for the third transcription is worthy of note. Perhaps this subject needed the second and third exposures to build up the entire extract, as the speaker in the recording speaks quickly, which makes transcription challenging. Unlike some other subjects who merely wrote out previously missed sections of the extract on later exposures, this subject built up the extract each time, so on the third listening, she had transcribed almost the entire extract, word for word, correctly. This subject is from a Germanic language background and perhaps needed some time to familiarise herself with the accent and rhythm of the speaker on the tape, who is from a different L1 background.

Test 1 Third Highest Transcription Score

The third highest score, 78%, is from two females in Group 3 – a Filipino and a German. The Filipino woman is fluent in English, having learnt and spoken it since she was a child in the Philippines. Perhaps the reason why she did not perform better despite being a fluent English speaker is that she is more used to Filipino English than other L2 English varieties, particularly those outside of Asia. The German subject has been studying English since she was nine years old (she is twenty now), communicates regularly with her L1-English

speaking friends in Ireland, whom she has known for over three years. Also, many of her college courses in Germany were taught through English.

Test 1 Unusual Transcription Score Patterns

Two of the ten students in Group 1 did not note any words in the first transcription – an Italian male, whose highest overall score was 22% and a French female, whose overall score was 56%. It is interesting to note that these are both speakers of Romance languages, as is the speaker in the recording. While the Italian subject's second and third attempts yielded the same results of 22%, the French subject's score increased significantly from 0% to 41% for the second attempt and increased again on the third attempt to 56%, which was the joint fourth highest overall score. Although Italian has the same CV²²⁹ structure as Spanish, it is likely that this Italian's level of English is lower than that of the French student.

While the highest score was from a Chinese student (with Irish citizenship) in Group 1, two of the three lowest scores in that class were also from Chinese subjects. The Chinese subject with the highest score has been living in Ireland for about five years and is married to an Irishman, with whom she communicates with entirely in English. In all aspects of her life – private, social and professional, she communicates in English the majority of the time. The two other Chinese speakers with the lowest scores both arrived in Ireland less than six months ago and it is their first time spending any time in an ENL country. Their poor performance in the test is due to the fact that they have had little exposure to spoken English before arriving in Ireland for study and they have rarely been exposed to a Spanish speaker of English before.

²²⁹ CV = consonant-vowel

Reception was also challenging because Chinese is from a very dissimilar language family to English and Spanish.

Test 1 Lowest Transcription Scores and Absence of Transcription

Only one subject overall failed to write any words for the first and second extract exposures but did manage to write something the third time – a French female student from Group 2. This student seemed to need to hear the extract a number of times before she was able - or confident enough - to attempt transcription. She still only managed to write three words out of twenty-seven, of which only one was correct.

While eight subjects²³⁰ overall (18%) failed to transcribe any words on the first attempt²³¹, four of these (9% overall) did not transcribe anything in all three transcription attempts while three overall (7%) were then able to write something on both the second and third attempts. These ‘non-transcribers’ are from three L1 language backgrounds: Spanish (1 subject), French (1 subject) and Czech (2 subjects) - 2 out of the 4 are from a Romance language background, as is the speaker of the extract (please see the Conclusions section below for more on the transcription exercise). After the test, these subjects were not asked to offer reasons for their non-performance during the transcription task.

²³⁰ L1 ratios of non-transcribers on 1st attempt: 1 Spanish male-EAP, 1 French female-EAP, 1 Catalan female-ICS, 2 Czech females-ICS, 1 Czech male-ICS, 1 French female-IBL, 1 Italian male-IBL.

²³¹ No explanation was offered by the subjects for this so the researcher can only surmise as to the failure to transcribe.

Test 1 Falling Transcription Score Patterns

A handful of subjects managed to perform better in the first transcription than the second – a German female from Group 2 went from an initial score of 26% to 0% to 22%, a German female from Group 3 went from 11% to 7% to 19% and a Filipino female, also from Group 3, went from 67% to 48% to 78%. Two subjects from Group 3 improved from the first to the second transcription but worsened on the third go – a French female got 44%, 56% then went down to 30% while a French male went from 7% to 19% to 15%.

Two cases, both from Group 3, are worthy of note, however, as they involve more than the changing or omission of just one word. The first is a Filipino female who wrote nineteen words in the first attempt, of which eighteen were correct. On the second try, the subject wrote eighteen words, of which thirteen were correct. In this case, it seems that on the second attempt, the student ignored a section that she had already transcribed successfully and opted to concentrate on the last section of the extract which she did not catch fully on the first listening. With the length of the extract, it becomes obvious that if one concentrates on a difficult section, it is likely that a subject can omit or ignore another section which is not so problematic. The other subject was a French female who wrote twelve words correctly for the first transcription, fifteen for the second but just seven for the third attempt. Again, it is evident when one sees the answer sheet that this student chose on the third listening to ignore the sections which she had correctly transcribed and chose to concentrate on a section which she could not catch on previous exposures. Just one person, a German

male from Group 2, transcribed the first and second time but wrote nothing the third time. No explanation is apparent for this.

Test 1 Average Transcription Scores

The average scores for the three classes is quite low overall, partly because the recording was fast paced and challenging for the subjects, they seem to have little practice in transcribing spoken material, and they may not have had much, if any, previous exposure to a Spanish speaker of English. The scores show that Group 1 performed the best overall with the average score being 51%. This was significantly better than the second highest score of 30% for Group 2. Group 3 performed the worst out of the three groups, with an average score of 19%. The degree course which Group 1 members are from has a strong focus on languages, English in particular for L2 English users such as the subjects in this study. Group 1 subjects have ten contact hours of English language instruction per week, including two hours of oral/aural instruction while Groups 2 and 3 receive between two to four classes of English instruction per week with less focus on speaking and listening skills and more on grammar and academic language and cultural content respectively.

Test 1 Lowest Comprehension Scores

Three subjects from Group 1 scored 25%, the third lowest overall score. These subjects were all female and included German, French and Chinese subjects. One subject from Group 2, a Spanish male, achieved a grade of 25%. The other members of Group 2 performed quite poorly in the comprehension question exercise with one-third (five out of fourteen) subjects

gaining a score of 13% and four subjects failing to score any points. These four subjects did not even attempt to answer the questions on the worksheet. These zero scores belonged to one French female and three Spanish males. As with the transcriptions, these students found this exercise difficult due to the influence of their L1s, which have much fewer vowel sounds than English, thus making such exercises more difficult for them than for students of a Germanic background. It is obvious from the scores that Group 2 had much more difficulty with the comprehension questions than Group 1.

Test 1 Comprehension Question Test Scores

The scores are presented in order from the first to the eighth question, as they appear on the worksheet. The overall scores range from 88% to 0%. In the subject column, the colour scheme is as follows: blue =Group 1, red = group 2 and green = Group 3

Subject	Q. 1	Q. 2	Q. 3	Q. 4	Q. 5	Q. 6	Q. 7	Q. 8	Total
German F, 24	-	.	-	.	-	-	.	-	38%
Chinese F, 18	-	×	.	×	63%
Polish F, 20	-	.	.	-	.	×	.	-	50%
Italian M, 22	-	×	×	×	-	-	×	.	13%
German F, 20	-	-	-	-	.	×	×	.	25%
German F, 24	.	×	.	×	.	×	×	.	50%
French F, 20	×	×	-	.	×	-	×	.	25%
Dutch F, 19	-	-	×	.	.	×	×	.	38%
Chinese F, 22	-	.	.	.	×	×	×	.	50%
Chinese F, 18	-	-	-	.	-	×	×	.	25%
German M, 27	-	-	-	.	.	×	.	×	38%
French F, 20	-	×	-	-	-	-	-	-	0%
Spanish M, 23	-	.	-	×	-	.	.	-	38%
German M, 28	-	88%
French F, 22	-	-	-	-	-	-	-	-	0%
Spanish F, 19	-	-	-	-	-	-	-	-	0%
Spanish M, 23	-	-	-	-	-	-	-	-	0%

Spanish M, 23	-	-	-	-	-	-	-	-	0%
Spanish M, 21	-	-	-	-	-	.	.	-	25%
German M, 27	-	-	-	-	-	×	.	-	13%
German F, 24	-	-	-	-	-	×	-	.	13%
French M, 20	-	-	-	-	-	×	×	.	13%
French F, 22	-	-	-	.	-	×	×	-	13%
French M, 22	-	×	×	.	-	-	×	×	13%
Catalan F, 27	×	.	×	.	×	×	×	×	25%
Filipino F, 22	-	-	-	×	×	.	.	×	25%
Czech M, 22	-	-	-	-	-	×	×	-	0%
German F, 22	-	-	.	-	-	×	×	-	13%
Dutch M, 20	×	-	.	-	.	×	×	×	25%
Czech M, 23	-	-	-	.	-	×	×	.	25%
Catalan M, 25	-	-	-	.	-	.	×	.	38%
Czech F, 21	-	-	-	×	-	-	×	-	0%
Czech F, 22	-	-	-	-	-	-	-	-	0%
Finnish F, 23	-	-	.	-	×	×	.	×	25%
Tagalog F, 23	×	-	-	×	×	×	×	×	0%
French M, 24	×	×	×	×	×	×	.	×	13%
Czech M, 27	-	-	-	-	-	-	-	-	0%
Czech F, 23	-	-	-	-	-	×	.	-	13%
German F, 20	×	.	.	.	×	×	×	×	38%
German M, 24	-	.	.	-	-	×	×	×	25%

French F, 21	.	.	-	×	.	×	.	×	50%
French F, 24	-	-	-	-	-	-	×	×	0%
Dutch F, 20	×	×	.	.	75%
Czech F, 23	-	-	-	-	-	×	.	.	25%
French M, 22	×	-	-	×	-	×	.	-	13%

Test 1 Table of Terms used for Transcription Scores

No T-I: no tune-in	Subject is not familiar with speaker's speech on 1 st exposure
L1i:	Phonemes present in Spanish but not in English – may be unintelligible, particularly to non-Romance L1-using listener
L1ii:	Speaker has difficulty producing English phonemes not in Spanish – English words pronounced unintelligibly
Li: Lexicon i	Speaker's words incomprehensible to listener, most probably due to speed of utterance or speaker's accent
Lii: Lexicon ii	Speaker uses words unknown to listener – speaker may have a broader range of English lexical items than listener
Liii: Lexicon iii	Speaker uses words incorrectly - unsuitable to context or false friends that are incomprehensible to listener
Si: Syntax i	Speaker's use of syntax is incorrect, confusing the listener
Sii: Syntax ii	Speaker's use of syntax is more advanced, so the listener has difficulty following what is being said
Colloquialism(s):	Speaker uses words/phrases familiar in L1 lexicon of particular area/country but are unknown to listener
SFi: Suprasegmental features i	Speaker's use of stress, rhythm, intonation and features of connected speech may be incorrect/misplaced
SFii: Suprasegmental features ii	Speaker's use of stress, rhythm, intonation and features of connected speech may be new or unknown to the listener
Non-Specific: None of the above problems	Include listener unable to hear recording due to poor hearing or noise interference, lack of subject attention or interest, etc

Test 1 Transcription Scores Table

Scores refer to percentages and are presented in order, for example, the first line is the first transcription results, the second line, the second transcription results and so on.

Subject	Words Written	Correct Words	% Correct	Nature of Difficulty
German F	7	6	22%	No T-I, L1 i
24 yrs old	11	7	26%	Sii
NOL*	11	7	26%	Sii
Chinese F	5	4	15%	No T-I, L1 i
18 yrs old	6	4	15%	L1 I
NOL	1	0	0%	Non-Specific
Polish F	7	6	22%	No T-I, colloquialism
20 yrs old	18	17	63%	L1 ii (year)
NOL	25	24	89%	Lii
Italian M	0	0	0%	No T-I
22 yrs old	7	6	22%	Lii, colloquialism
NOL	7	6	22%	Lii, colloquialism
German F	6	5	19 %	No T-I, colloquialism
20 yrs old	13	11	41%	Colloquialism
NOL	17	12	44%	Lii, colloquialisms
German F	9	7	26%	No T-I, L1 iii
24 yrs old	17	13	48%	Lii, colloquialism
NOL	22	18	67%	Lii, colloquialism
French F	0	0	0%	No T-I, L1 iii
20 yrs old	16	11	41%	L1 ii, colloquialism
NOL	22	15	56%	L1 ii, colloquialism
Dutch F	2	2	7%	No T-I, colloquialism
19 yrs old	15	12	44%	Colloquialisms
Italian, Eng	25	23	85%	Colloquialisms
Chinese F	15	10	37%	No T-I, colloquialisms
22 yrs old	27	24	89%	Lii
English	28	24	89%	Lii
Chinese F	8	7	26%	No T-I, colloquialism
18 yrs old	0	0	0%	Non-Specific

* No Other Language

NOL	0	0	0%	Non-Specific
German M	5	3	11%	No T-I, colloquialisms
27 yrs old	4	3	11%	Colloquialisms
NOL	16	14	52%	Colloquialisms
French F	0	0	0 %	No T-I, Lii, Sii, colloquialisms
20 yrs old	0	0	0%	Lii, Sii, colloquialisms
NOL	3	1	4%	Lii, Sii, colloquialisms
Spanish M	9	4	15%	No T-I, Sii, colloquialisms
23 yrs old	0	0	0%	Lii, Sii, colloquialisms
NOL	4	4	15%	Lii, Sii, colloquialisms
German M	6	6	22%	No T-I, colloquialism
28 yrs old	16	15	56%	Lii
NOL	0	0	0%	Non-Specific
French F	1	0	0%	No T-I, Lii, Sii, colloquialisms
22 yrs old	0	0	0%	Lii, Sii, colloquialisms
NOL	1	1	4%	Lii, Sii, colloquialism
Spanish F	5	3	11%	No T-I, colloquialism
19 yrs old	0	0	0%	Lii, Sii, colloquialisms
NOL	0	0	0%	Lii, Sii, colloquialisms
Spanish M	4	2	7%	No T-I, colloquialisms
23 yrs old	3	2	7%	Lii, Sii, colloquialisms
NOL	4	3	11%	Sii, colloquialisms
Spanish M	0	0	0%	No T-I, Lii, Sii, colloquialisms
23 yrs old	0	0	0%	Lii, Sii, colloquialisms
NOL	0	0	0%	Lii, Sii, colloquialisms
Spanish M	0	0	0%	No T-I, Lii, Sii, colloquialism
21 yrs old	0	0	0%	Lii, Sii, colloquialism
NOL	0	0	0%	Lii, Sii, colloquialism
German M	2	1	4%	No T-I, colloquialisms
27 yrs old	6	5	19%	Colloquialisms
NOL	13	12	44%	Lii, colloquialisms
German F	8	7	26%	No T-I, colloquialisms
24 yrs old	0	0	0%	Lii, colloquialisms
NOL	7	6	22%	Colloquialisms
French M	2	2	7%	No T-I, colloquialisms
20 yrs old	6	6	22%	Sii, colloquialisms

NOL	6	6	22%	Sii, colloquialisms
French F	0	0	0%	No T-I, Lii, Sii, colloquialisms
22 yrs old	0	0	0%	Lii, Sii, colloquialisms
NOL	0	0	0%	Lii, Sii, colloquialisms
French M	2	1	4%	No T-I, Lii, Sii, colloquialisms
22 yrs old	5	2	7%	Lii, Sii, colloquialisms
Hebrew	7	7	26%	Lii, Sii, colloquialisms
Catalan F	0	0	0%	No T-I, Lii, Sii, colloquialisms, SFii
27 yrs old	2	2	7%	Lii, Sii, SFii
Spanish	0	0	0%	Non-Specific
Filipino F	13	6	22%	Error: student paraphrased extract
22 yrs old	13	8	30%	Colloquialisms, SFii
English	15	11	41%	Colloquialisms, SFii
Czech M	5	3	11%	No T-I, colloquialisms, Lii, Sii, SFii
22 yrs old	0	0	0%	Non-Specific
NOL	0	0	0%	Non-Specific
German F	3	3	11%	No T-I, colloquialisms, Lii, Sii, SFii
22 yrs old	3	2	7%	Colloquialisms, Lii, Sii, SFii
NOL	6	5	19%	Colloquialisms, Sii, SFii
Dutch M	3	1	4%	No T-I, colloquialisms, Lii, Sii, SFii
20 yrs old	10	7	26%	Colloquialisms, Lii, Sii, SFii
NOL	9	8	30%	Colloquialisms, Sii, SFii
Czech M	12	0	0%	Error: student paraphrased extract
23 yrs old	4	2	7%	Colloquialisms, Lii, Sii, SFii
NOL	0	0	0%	Non-Specific
Catalan M	7	3	11%	No T-I, colloquialisms, Lii, Sii, SFii
25 yrs old	0	0	0%	Non-Specific
Spanish	15	15	56%	Colloquialisms, Lii, SFii
Czech F	0	0	0%	No T-I, colloquialisms, Lii, Sii, SFii
21 yrs old	0	0	0%	Non-Specific
NOL	0	0	0%	Non-Specific
Czech F	3	2	7%	No T-I, colloquialisms, Sii, SFii
22 yrs old	3	2	7%	Colloquialisms, Sii, SFii
NOL	2	2	7%	Colloquialisms, Sii, SFii
Finnish F	7	4	15%	No T-I, colloquialisms, Lii, Sii, SFii
23 yrs old	6	6	22%	Colloquialism, Lii, Sii, SFii

NOL	10	7	26%	Colloquialism, Lii, Sii, SFii
Tagalog F	19	18	67%	No T-I, Li, colloquialisms
25 yrs old	18	13	48%	Colloquialisms, Li, SFii
English	27	21	78%	Colloquialisms, Li
French M	6	5	19%	No T-I, Li, Lii, Sii, colloquialisms, SFii
24 yrs old	13	10	37%	Li, Lii, Sii, Sfii, colloquialism
NOL	15	11	41%	Li, colloquialism, SFii
Czech M	0	0	0%	No T-I, colloquialisms, Li, Lii., Sii, SFii
27 yrs old	0	0	0%	Non-Specific
NOL	0	0	0%	Non-Specific
Czech F	2	2	7%	No T-I, colloquialisms, Li, Sii, SFii
23 yrs old	0	0	0%	Non-Specific
NOL	0	0	0%	Non-Specific
German F	10	8	30%	No T-I, colloquialism, Li, Lii,
20 yrs old	16	15	56%	Li, Lii, colloquialism
NOL	25	21	78%	Li, Lii, colloquialism
German M	6	6	22%	No T-I, colloquialisms, Li, Lii, Sii, SFii
24 yrs old	8	6	22%	Colloquialisms, Li, Lii, Sii, SFii
NOL	10	8	30%	Colloquialisms, Li, Sii, SFii
French F	12	12	44%	No T-I, colloquialism, Li
21 yrs old	16	15	56%	Colloquialism, Li, SFii
NOL	7	7	26%	Colloquialism, Li, SFii
French F	4	3	11%	No T-I, colloquialisms, Li, Lii, Sii, SFii
24 yrs old	0	0	0%	Non-Specific
NOL	9	6	22%	Colloquialisms, Li, Lii, Sii
Dutch F	12	10	37%	No T-I, colloquialism, Li, Lii, Sii, SFii
20 yrs old	16	16	59%	Colloquialism, Li, SFii
NOL	21	21	78%	Li, colloquialism
Czech F	0	0	0%	No T-I, colloquialisms, Li, Lii, Sii, SFii
23 yrs old	2	1	4%	Li, Lii, colloquialisms, Sii, SFii
NOL	7	6	22%	Li, Lii, colloquialisms, SFii
French M	6	2	7%	No T-I, colloquialisms, Li, Lii, Si, SFii
22 yrs old	7	5	19%	Colloquialisms, Li, Lii, Si, SFii
NOL	11	4	15%	Colloquialisms, Li, Lii, Si, SFii

Test 1 Transcription and Comprehension Test Results Table

Subjects' Gender+Age	Transcription Results	Comprehension Qs Results	Comments on Result Scores
German F 24	26	38	
Chinese F 18	15	63	Good score for comprehen., low score for transcription
Polish F 20	89	50	Highest transcription score*
Italian M 22	22	13	
German F 20	44	25	
German F 24	67	50	
French F 20	56	25	
Dutch F, 19	85	38	Very good score for trans., low score for comprehension
Chinese F, 22	89	50	Highest transcription score*
Chinese F 18	26	25	Almost identical low score for both tests
German M 27	52	38	
French F, 20	4	0	Very low overall score Zero score in comprehension
Spanish M 23,	15	38	
German M 28	56	88	Highest score for comprehension test
French F, 22	4	0	Very low overall score Zero score in comprehension
Spanish F, 19	11	0	Very low overall score Zero score in comprehension
Spanish M 23	11	0	Very low overall score Zero score in comprehension
Spanish M 23	0	0	No score for both tests
Spanish M 21	0	25	Low overall score, zero score in transcription
German M 27	44	13	
German F 24	26	13	
French M,			

20	22	13	
French F 22	0	13	Very low overall score - Zero score in transcription
French M 22	26	13	
Catalan F 27	7	25	
Filipino F 22	41	25	
Czech M 22	11	0	Very low overall score -Zero score in comprehension
German F 22	19	13	Similar low score for both tests
Dutch M 20	30	25	Similar score for both tests
Czech M 23	7	25	
Catalan M 25	56	38	
Czech F 21	0	0	No score for both tests
Czech F 22	7	0	Similar score for both tests - Zero score in comprehension
Finnish F 23	26	25	Almost identical low score for both tests
Tagalog F 23	78	0	Very high score for trans., zero score in comprehension
French M 24	41	13	
Czech M 27	0	0	No score for both tests
Czech F 23	7	13	Virtually same score for both tests
German F 20	78	38	High transcrip score, much lower score for comprehen.
German M 24	30	25	Similar score for both tests
French F 21	56	50	Similar score for both tests
French F 24	22	0	Zero score in comprehension
Dutch F 20	78	75	Highest overall test score – similar score for both tests
Czech F 23	22	25	Very similar score for both tests
French M 22	19	13	Similar low score for both tests

Appendix 2: Test 2 Material

This appendix contains the following material pertaining to Test 2: Test 2 Subjects' Background Information; Transcription Results Tables for Extracts 1, 2 and 3 and Data Calculations for Extracts 1, 2 and 3.

Test 2 Subjects' Background Information

First Language/L1	No. Years' Learning/Using English	Group
Czech	10	Control (C)
Czech	6	C
German	11	C
German	10	C
German	12	C
Czech	5	Test (T)
Spanish	8	T
Czech	10	T
German	9	T
French	16	T
German	8	T

Test 2: Extract 1 Transcription Results

Stud+It.	If	I	am	invited	to	a	special	occasion	and	I'm	looking for	shoes	I	dread	it
1+A	y	y	am	invited	to	a	special	occasion	and	I'm	looking for	shoes	y	dread	it
1+B	y	y	have	number	of		y	y					y	read	
1+C	y			number	of		y	y					y	shread	
2+A														y	
2+B			have				specially	occasionally					y	y	
2+C							special	occasional					y	y	
3+A															
3+B															
3+C	y		y	advised	for	y	y	case	to	be	my	y			
4+A				advice	for	y	y	case	to	see					
4+B				advised	for	y	y	case	to	see					
4+C	Year	y	y	advised	y	y	location		number				I'd	read	
5+A													a	dread	
5+B													a	dread	
5+C													a	dread	
6+A	y	y	y	y	y	y	location	location	look	y	to		y	dread	
6+B	y	y	y	invite	y	y	location	location	y					dread	
6+C	y	y	y	y	y	y	y	y						dread	
7+A	y	y	y	y	y	y	y	y						dread	
7+B	y	y	y	y	y	y	y	y						dread	
7+C	y	y	y	y	y	y	y	y						dread	
8+A	The first						allocation		a		her		by		
8+B	time														

Test 2: Extract 2 Transcription Results

Stud+It.	1	on	the	3	3	as	what	I	have	2
	Exactly			same	Style					here
1+A	I		y	y	Y			y	y	y
1+B	Rafly	I have	y	y	Y			y	y	y
1+C	Rafly	I have	y	y	Y			y	y	y
2+A			y	y	Stuff					y
2+B	y		y	y	Y			we	y	y
2+C	y		y	y	Y		y	y	y	y
3+A	y	of	y	y	Y	of	y	y	y	y
3+B	y	of	y	y	Y	of	y	y	y	y
3+C	y	of	y	y	Y	of	y	y	y	y
4+A	Definitely	y	y	y	Y		y	we	y	y
4+B	Definitely	y	y	y	Y	in	y	y	y	y
4+C	Definitely	y	y	y	Y	in	y	y	y	y
5+A									happier	
5+B	y		y	y	Y			we	y	y
5+C	y		y	y	Y		y	we	y	y
6+A	y	I'm	y	y	Y		y	y	<input type="text"/>	hear
6+B	y	I'm	y	y	Y	like		y	y	heard
6+C	y	I'm	y	y	Y		y	y	<input type="text"/>	heard
7+A	y	at	y	y	Time				from	y
7+B	y	at	three	hours		walking			from	y
7+C	y	at							from	y
8+A				y	Y					y
8+B		I am		y	Y					y
8+C	Objectly	I am		y	Y			y	had	y
9+A	y	of	y	y	Y	of	y	we're	having	y
9+B	y	of	y	y	Y	of	y	we	y	y
9+C	y	I'm	y	y	Y	of	y	we are	having	y
10+A	y	y	y	y	Y			y	y	done earlier
10+B	y	y	y	y	Y			y	y	heard
10+C	y	y	y	y	Y			y	y	heard
11+A		of	y	y	Y	of	y	y	y	y
11+B	Definitely	of	y	y	Y	of	y	y	y	y
11+C	Defi	have	y	y	Y	of	y	y	y	y

Test 2: Extract 3 Transcription Results

Strud+It.	I	used	to	always	see	3	2	With	all	the	3	1	but	2	1	could	never	2	get	them
1+A	y	have				my	friends	If				shoes		I've	1	never	could	have	get	them
1+B	It			was			friend	She	has		twenty	y	and	I've	2	never	could	met	y	
1+C				was			friend	She	has		twenty	y		I've	1	never	could	met	y	
2+A											twenty	y			never	could		met	y	
2+B											twenty	y			never	could		met	y	
2+C											twenty	y			never	could		met	y	
3+A	y	have	y					Until		y	25th			I've	y	y	y	got	y	
3+B	y	have	y					Until		y	25th			I've	y	y	y	got	y	
3+C	y	have	y					Until		y	25th			I've	y	y	y	got	y	
4+A																				
4+B			y																	
4+C		nice	y																	
5+A																				
5+B																				
5+C																				
6+A																				
6+B																				
6+C																				
7+A																				
7+B																				
7+C																				
8+A																				
8+B																				

Test 2 Data Calculations - Test Extracts 1, 2 and 3

Test 2: Extract 1 Data Calculation (16 words)

Subject	Iteration	No. Filled	No. Correct	% Filled	% Correct
Czech L1 (10yrs) 1C	A-100%	5	4	31%	25%
	B-100%	8	4	50%	25%
	C-100%	7	5	44%	31%
Czech L1 (6yrs) 2C	A-100%	0	0	0%	0%
	B-100%	4	2	25%	13%
	C-100%	6	3	38%	19%
German L1 (11yrs) 3C	A-100%	0	0	0%	0%
	B-100%	0	0	0%	0%
	C-100%	3	2	19%	13%
German L1 (10yrs) 4C	A-100%	9	2	56%	13%
	B-100%	5	2	31%	13%
	C-100%	10	4	63%	25%
German L1 (12yrs) 5C	A-100%	0	0	0%	0%
	B-100%	2	0	13%	0%
	C-100%	3	1	19%	6%
Czech L1 (5yrs) 1T	A-100%	8	7	50%	44%
	B-80%	9	6	56%	38%
	C-60%	9	6	56%	38%
Spanish L1 (8yrs) 2T	A-100%	0	0	0%	0%
	B-80%	5	0	31%	0%
	C-60%	5	1	31%	6%
Czech L1 (10yrs) 3T	A-100%	3	1	19%	6%
	B-80%	3	3	19%	19%
	C-60%	7	4	44%	25%
German L1 (9yrs) 4T	A-100%	3	3	19%	19%
	B-80%	8	5	50%	31%
	C-60%	13	10	81%	63%
French L1 (16yrs) 5T	A-100%	0	0	0%	0%
	B-80%	5	0	31%	0%
	C-60%	0	0	0%	0%
German L1 (8yrs) 6T	A-100%	10	5	63%	31%
	B-80%	13	7	81%	44%
	C-60%	10	7	63%	44%

Test 2 Extract 2 Data Calculations (10 words)

Subject	Iteration	No. Filled	No. Correct	% Filled	% Correct
Czech L1					
1C	A-100%	7	6	70%	60%
1C	B-100%	8	6	80%	60%
1C	C-100%	8	6	80%	60%
Czech L1					
2C	A-100%	4	3	40%	30%
2C	B-100%	7	5	70%	50%
2C	C-100%	8	7	80%	70%
German L1					
3C	A-100%	10	7	100%	70%
3C	B-100%	10	7	100%	70%
3C	C-100%	10	7	100%	70%
German L1					
4C	A-100%	9	7	90%	70%
4C	B-100%	10	8	100%	80%
4C	C-100%	10	8	100%	80%
German L1					
5C	A-100%	1	0	10%	0%
5C	B-100%	7	5	70%	50%
5C	C-100%	8	6	80%	60%
Czech L1					
6T	A-100%	8	5	80%	50%
6T	B-80%	9	5	90%	50%
6T	C-60%	9	6	90%	60%
Spanish L1					
7T	A-100%	7	3	70%	30%
7T	B-80%	7	1	70%	10%
7T	C-60%	4	1	40%	10%
Czech L1					
8T	A-100%	3	3	30%	30%
8T	B-80%	4	3	40%	30%
8T	C-60%	7	4	70%	40%
German L1					
9T	A-100%	10	5	100%	50%
9T	B-80%	10	6	100%	60%
9T	C-60%	10	5	100%	50%
French L1					
10T	A-100%	8	6	80%	60%
10T	B-80%	8	6	80%	60%
10T	C-60%	8	6	80%	60%
German L1					
11T	A-100%	9	7	90%	70%
11T	B-80%	10	7	100%	70%
11T	C-60%	10	7	100%	70%

Test 2 Extract 3 Data Calculations (18 words)

Subject	Iteration	No. Filled	No. Correct	% Filled	% Correct
Czech L1					
1C	A-100%	9	2	50%	11%
1C	B-100%	10	3	56%	17%
1C	C-100%	13	5	72%	28%
Czech L1					
2C	A-100%	4	2	22%	11%
2C	B-100%	4	3	22%	17%
2C	C-100%	6	4	33%	22%
German L1					
3C	A-100%	15	11	83%	61%
3C	B-100%	15	11	83%	61%
3C	C-100%	15	11	83%	61%
German L1					
4C	A-100%	10	10	56%	56%
4C	B-100%	13	13	72%	72%
4C	C-100%	14	13	78%	72%
German L1					
5C	A-100%	0	0	0%	0%
5C	B-100%	5	5	28%	28%
5C	C-100%	6	6	33%	33%
Czech L1					
6T	A-100%	8	8	44%	44%
6T	B-100%	11	8	61%	44%
6T	C-100%	12	8	67%	44%
Spanish L1					
7T	A-100%	11	6	61%	33%
7T	B-100%	11	6	61%	33%
7T	C-100%	12	4	67%	22%
Czech L1					
8T	A-100%	9	8	50%	44%
8T	B-80%	8	7	44%	39%
8T	C-60%	13	7	72%	39%
German L1					
9T	A-100%	13	11	72%	61%
9T	B-80%	12	10	67%	56%
9T	C-60%	14	6	78%	33%
French L1					
10T	A-100%	12	6	67%	33%
10T	B-80%	13	7	72%	39%
10T	C-60%	13	9	72%	50%
German L1					
11T	A-100%	13	12	72%	67%
11T	B-80%	15	13	83%	72%
11T	C-60%	14	12	78%	67%

Appendix 3: Test 3 Material

This appendix contains the following material pertaining to Test 2: Test 3 Subjects' Background Information; Verbatim Recall and Transcription Results for Group A; Verbatim Recall and Transcription Results for Group B.

Test 3 Subjects' Background Information

Test Subjects' L1s & Ages	No. & Sex	Group	Using Eng/In L1 Country
Hiberno-English (Ireland)	3M ²³²	2 = A 1 = B	All their lives – their L1
German A = i) 26 years old ii) 26 years old B = a) 24 years old b) 25 years old c) 30 years old	5M	2 = A-i, ii 3=B-a,b,c	i) 8yrs/3months in Ireland ²³³ ii) 15yrs/2 mths living in Ire. a) 7yrs/1yr in Ire, 6mths UK b) 9yrs/10 months in Ireland c) 6yrs/3 months in Ireland
Mandarin 22 years old	1M	A	8 years; 3 years living in Ireland
Telugu ²³⁴ (India) 23 years old	1M	A	18 years; 8 months living in Ireland
Malayalam ²³⁵ (India) 27 years old	1M	A	20 years; 2 years living in Ireland
Russia 34 years old	1F	B	9 years; 4 years living in Ireland
Mina ²³⁶ (West Africa)	1M	B	4 years;

²³² M = Male; F = Female

²³³ 8 years learning/using English and 2 months living in Ireland, along with 2 months living in the US

²³⁴ An Indian language from the south-eastern state of Andhra Pradesh

²³⁵ An Indian language from Kerala state, in south-western India)

21 yrs old; L2 = French			4 years living in Ireland
Spanish 29 years old	1M	B	4 years; 3.5 years living in Ireland

Test 3 Verbatim Recall and Transcription Results for Group A

Subject	Extract	Correct Verbatim Recall	Correct Transcription	Speed
1A	1	100%	100%	100%
2A	1	75%	100%	100%
3A	1	75%	100%	100%
4A	1	100%	100%	100%
5A	1	75%	100%	100%
6A	1	50%	50%	100%
7A	1	25%	25%	100%
1A	2	100%	100%	100%
2A	2	57%	57%	100%
3A	2	25%	28%	100%
4A	2	100%	100%	100%
5A	2	0%	0%	100%
6A	2	71%	100%	100%
7A	2	28%	28%	100%
1A	3	100%	100%	50%
2A	3	100%	100%	50%
3A	3	40%	60%	50%
4A	3	100%	100%	50%
5A	3	80%	60%	50%
6A	3	100%	100%	50%
7A	3	100%	100%	50%
1A	4	100%	75%	50%
2A	4	100%	100%	50%
3A	4	100%	100%	50%
4A	4	100%	100%	50%
5A	4	0%	0%	50%
6A	4	100%	100%	50%
7A	4	100%	100%	50%
1A	5	0%	0%	100%
2A	5	100%	100%	100%
3A	5	0%	0%	100%
4A	5	0%	0%	100%
5A	5	0%	0%	100%

²³⁶ A West African language spoken in Benin, Cameroon and Togo

6A	5	0%	0%	100%
7A	5	0%	0%	100%
1A	6	100%	100%	50%
2A	6	100%	100%	50%
3A	6	100%	100%	50%
4A	6	100%	83%	50%
5A	6	83%	66%	50%
6A	6	83%	83%	50%
7A	6	100%	100%	50%
1A	7	80%	80%	50%
2A	7	80%	80%	50%
3A	7	100%	80%	50%
4A	7	100%	80%	50%
5A	7	100%	100%	50%
6A	7	0%	20%	50%
7A	7	60%	80%	50%
1A	8	83%	83%	100%
2A	8	100%	100%	100%
3A	8	100%	100%	100%
4A	8	100%	83%	100%
5A	8	100%	83%	100%
6A	8	83%	83%	100%
7A	8	83%	83%	100%
1A	9	25%	25%	50%
2A	9	50%	50%	50%
3A	9	0%	0%	50%
4A	9	0%	0%	50%
5A	9	25%	0%	50%
6A	9	25%	25%	50%
7A	9	50%	25%	50%
1A	10	100%	100%	100%
2A	10	100%	100%	100%
3A	10	100%	50%	100%
4A	10	100%	100%	100%
5A	10	0%	0%	100%
6A	10	66%	50%	100%
7A	10	66%	66%	100%

Test 3 Verbatim Recall and Transcription Results for Group B

Subject	Extract	Correct Verbatim Recall	Correct Transcription	Speed
1B	1	100%	100%	50%
2B	1	25%	50%	50%
3B	1	0%	0%	50%
4B	1	100%	100%	50%
5B	1	50%	50%	50%
6B	1	0%	0%	50%
7B	1	50%	50%	50%
1B	2	0%	0%	50%
2B	2	0%	0%	50%
3B	2	0%	0%	50%
4B	2	0%	0%	50%
5B	2	14%	14%	50%
6B	2	14%	14%	50%
7B	2	42%	42%	50%
1B	3	100%	100%	100%
2B	3	100%	40%	100%
3B	3	80%	40%	100%
4B	3	100%	100%	100%
5B	3	100%	100%	100%
6B	3	80%	40%	100%
7B	3	80%	80%	100%
1B	4	100%	100%	100%
2B	4	100%	100%	100%
3B	4	100%	75%	100%
4B	4	100%	100%	100%
5B	4	100%	100%	100%
6B	4	100%	100%	100%
7B	4	100%	100%	100%
1B	5	0%	0%	50%
2B	5	0%	0%	50%
3B	5	83%	83%	50%
4B	5	0%	0%	50%
5B	5	0%	0%	50%
6B	5	0%	0%	50%
7B	5	0%	0%	50%
1B	6	100%	100%	100%
2B	6	83%	83%	100%
3B	6	0%	0%	100%
4B	6	100%	100%	100%
5B	6	100%	100%	100%
6B	6	66%	66%	100%
7B	6	100%	100%	100%

1B	7	80%	100%	100%
2B	7	100%	60%	100%
3B	7	0%	0%	100%
4B	7	60%	80%	100%
5B	7	80%	80%	100%
6B	7	40%	20%	100%
7B	7	60%	60%	100%
1B	8	40%	40%	50%
2B	8	40%	0%	50%
3B	8	0%	0%	50%
4B	8	83%	100%	50%
5B	8	16%	33%	50%
6B	8	83%	33%	50%
7B	8	100%	100%	50%
1B	9	0%	0%	50%
2B	9	0%	0%	50%
3B	9	83%	83%	50%
4B	9	0%	0%	50%
5B	9	50%	50%	50%
6B	9	0%	0%	50%
7B	9	50%	50%	50%
1B	10	100%	100%	100%
2B	10	33%	33%	100%
3B	10	83%	50%	100%
4B	10	83%	100%	100%
5B	10	49%	49%	100%
6B	10	33%	16%	100%
7B	10	66%	66%	100%

Appendix 4: Test 4 Material

This appendix contains the following material pertaining to Test 4: Test 4 Subjects' Background Information; Subjects' Reflective Language Use Questionnaire; Interlocutor Questionnaire; Interlocutor Intelligibility Questionnaire Responses and Reflective Language Use Questionnaire Responses

Test 4 Subjects' Background Information

L1/Nationality	Age	Learning/Using English	Time Living in L1 Country
Hungarian	24	11 years	2 years
German	26	8 years	2.5 months
Mandarin/Chinese	25	5 years	3.5 years
Russian/Ukrainian	25	4 years	4 years

Subjects' Reflective Language Use Questionnaire (Tests 4 and 5)

1. Please mark on the scale below how much of your day-to-day communication is in English

almost none	a little	moderate amount	good deal	all/almost all
1	2	3	4	5

2. How much of this communication is with native speakers of English?

almost none	a little	moderate amount	good deal	all/almost all
1	2	3	4	5

3. Please mark on the scale how proficient you consider yourself at speaking in English

very poor	quite poor	Reasonable	quite good	excellent
1	2	3	4	5

4. Please mark on the scale how proficient you consider yourself at listening in English

very poor	quite poor	Reasonable	quite good	excellent
1	2	3	4	5

5. When communicating in English, who understands you better
- a) native speakers of English?
 - b) non-native speakers of English?
 - c) no difference between native and non-native speakers of English?

Please explain giving reasons for your answer.

6. Whom do you tend to understand better when listening to English
- a) native speakers of English?
 - b) non-native speakers of English?
 - c) no difference between native and non-native speakers of English?

Please explain giving reasons for your answer.

7. Who do you find it easier to communicate with in English
- a) native speakers of English?
 - b) non-native speakers of English?
 - c) no difference between native and non-native speakers of English?

Please explain giving reasons for your answer.

8. Please rate each alternative 1-5 in terms of how essential they are to you:
- a. that you are intelligible to as many (both native and non-native) English speakers as possible.

not important at all	not so important	moderately important	quite important	extremely important
1	2	3	4	5

- b. that you master a standard English accent, such as RP or GA.

not important at all	not so important	moderately important	quite important	extremely important
1	2	3	4	5

9. Please rate your English pronunciation in terms of intelligibility

very poor	quite poor	Reasonable	quite good	excellent
1	2	3	4	5

Interlocutor Questionnaire (Tests 4 and 5)

1. How would you rate your partner's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

2. How do you think your partner would rate your pronunciation?

very poor	quite poor	reasonable	Quite good	excellent
1	2	3	4	5

3. What makes it difficult for you to understand your partner's pronunciation?

- a. speaks too fast
- b. does not pronounce certain *sounds* properly
- c. does not pronounce certain *words* properly
- d. does not complete words
- e. uses incorrect *word* stress
- f. uses incorrect *sentence* stress
- g. other – please explain.

4. Does your partner easily understand your pronunciation? Give reasons for your answer.

5. Which elements of *your* pronunciation, if any, do you think your partner has difficulty with?

- a. certain sounds (phonemes)
- b. certain words
- c. word stress
- d. sentence stress
- e. accent
- f. other, please explain

6. Please explain how you help your partner to understand your pronunciation better.

7. Explain how your partner helps you to understand his/her pronunciation better.

8. Do you easily understand your partner's paralinguistics, ie, his/her body language, facial gestures, tone of voice and other effects?

9. Do you think your partner easily understands your paralinguistics? Please explain.

10. How would you rate ease of communication (intelligibility) between you and your partner?

very poor	quite poor	reasonable	Quite good	excellent
1	2	3	4	5

Test 4 Interlocutor Intelligibility Questionnaire Responses

The numbers for the scales used in questions 1, 2 and 10 are given in the data representation and explanations, as given in the questionnaires, shall be presented here:

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

	Mandarin L1 Speaker	German L1 Speaker	Russian L1 Speaker	Hungarian L1 Speaker
Rate Partner's Pronunciation	4	3	4	4
Think Partner Rates Your Pronunciation	4	3	4	5
Difficult To Understand in Your Partner's Pronunciation	Yes	Yes	Yes	Yes
Does Your Partner Easily Understand Your Pron?	Yes	Yes	Yes	Yes
Elements of Your Pron Your Partner Has Difficulty With	certain words (b)	certain words, word stress & sentence stress (b, c & d)	certain words and sounds (a & b)	certain sounds (a)
How Do You Help Your Partner Understand Your Pron?	speaks slowly	asks for feedback & explains words she cannot pronounce well/properly	don't know – repeats if necessary	don't know – spoke same as usual
How Does Your Partner Help You?	speaks slower & louder	explains meaning of words	by checking that I understand	don't know – was talking the same as usual
Understand Your Partner's Paralanguage?	Yes	Yes	Yes	Yes
Your Partner Understand Your Paralanguage	Yes	Yes (hopefully)	No	Yes
Ease of Communication	5	4	3	4

Test 4 Reflective Language Use Questionnaire Responses

Scales with percentages (questions 1 and 2) and with number (3, 4, 8, 9 and 10) are used

in this questionnaire and the scales are presented below:

Percentage scales:

0-10%	10-25%	25-50%	50-70%	70-100%
none-almost none	a little	a moderate amount	a good deal	almost all-all

Number scales:

1	2	3	4	5
Very poor	quite poor	reasonable	quite good	excellent

	Mandarin L1 Speaker	German L1 Speaker	Russian L1 Speaker	Hungarian L1 Speaker
Daily Communication in English	50-70%	25-50%	70-100%	70-100%
Amount With L1 Speakers	25-50%	10-25%	70-100%	70-100% (90%)
Self-Marking Proficiency in English Speaking	4	3	4	5 (did Cambridge Proficiency test)
Proficiency in Eng. Listening	4	3	4	5
Understood Better By	L1 English Speakers	L2 English Speakers	L2 English Speakers	No Difference
Understand Better	L2 English Speakers	L1 English Speakers	L1 English Speakers	No Difference
Easier to Communicate With L1 or L2?	Depends on subject discussed	L2	L1	L1
How Essential: be intelligible to as many L1 & L2 speakers as possible	10	10	8-9	8-9
How Essential: master a standard accent	7	1	6-7	7 (British)
Rate Your Pronunciation in Terms of Intelligibility	4	3	4	5

Appendix 5: Test 5 Material

This appendix contains the following material pertaining to Test 2: Test 5 Subjects' Background Information; Test 5 Judges' Background Information; Test 5 Judges' Speaker Intelligibility Questionnaire, Judges' Extracts (Tests A, B and C); Judges' Verbatim Recall Results (Tests A, B and C); Judges' Extract Ratings Results (Tests A, B and C) and Subjects' Pronunciation Practice Times

Test 5 Subjects' Background Information

Group	L1	S	Age	Bi-Lingual/ L2Proficient	Yrs Using English	Time in Ireland
T	Russian	M	36	No	2	1.5 years
T	Polish	F	24	No	8	2 weeks
T	Bahasa	M	27	No	15	3 weeks
T	Spanish	M	34	No	2	2 years
T	Mandarin	M	26	No	14	6 months
C	French	M	21	No	10	2 weeks
C	Korean	F	29	No	7	16 months
C	Malayalam	M	27	No	15	10 months
C	Italian	F	30	Spanish	2.5	2.5 years
C	Spanish	F	28	German	16	2 weeks
NI	German	M	23	No	11	1 month
NI	Bulgarian	F	26	No	6	4 months
NI	Italian	M	22	No	2	1 month
NI	French	F	21	No	9	6 weeks

T = Test, C = Control, NI = Non-Intervention

Test 5 Judges' Background Information

L1	Sex	Age	Bi-Lingual/ Proficient in L2	Lived in L2 Eng. Speaking Country	Lived with L2 Eng. Speakers
English	M	32	No	No	No
English	F	29	No	No	No
English	M	50	No	No	No
English	F	31	No	No	No

Test 5 Judges' Speaker Intelligibility Ratings Questionnaire

The following phrases/sentences are taken out of context. Please try to repeat what each speaker says then rate the speakers' intelligibility. You will hear each recording only once.

Extract 1:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Extract 2:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Extract 3:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Extract 4:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Extract 5:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Extract 6:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Extract 7:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Extract 8:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Extract 9:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Extract 10:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Extract 11:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Extract 12:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Extract 13:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Extract 14:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Extract 15:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Extract 16:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Extract 17:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Extract 18:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Extract 19:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Extract 20:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Extract 21:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Extract 22:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Extract 23:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Extract 24:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Extract 25:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Extract 26:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Extract 27:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Extract 28:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Extract 29:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Extract 30:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Extract 31:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Extract 32:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Extract 33:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Extract 34:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Extract 35:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Extract 36:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Extract 37:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Extract 38:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Extract 39:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Extract 40:

How would you rate this speaker's pronunciation?

very difficult to understand	quite difficult to understand	reasonably able to understand	quite easy to understand	extremely easy to understand
1	2	3	4	5

Test 5 Judges' Extracts: Test A – Mixed Order (Test and Control Groups Only)

- 1) 'With television, you can choose which channel to watch.'(Sp1T, 2ndA)
- 2) 'I knew that if I left it to you, you'd do something stupid.'(Sp2T, 1stA)
- 3) 'I may be poor but I have my pride.'(Sp1C, 2ndA)
- 4) 'You remember when I rescued him from the river last February?'(Sp2C, 1stA)
- 5) 'Why are you wearing your wellingtons?'(Sp3T, 2ndA)
- 6) 'Did everything belong to him?'(Sp3C, 1stA)
- 7) 'We had a wonderful meal by the river.'(Sp4C, 1stA)
- 8) 'He hurried her to the hospital.'(Sp4T, 2ndA)
- 9) 'They went home by road.'(Sp5T, 1stA)
- 10) 'I'll throw this thing the length of the path.'(Sp5C, 2ndA)
- 11) 'I wasn't gone long, was I?'(Sp1C, 1stB)
- 12) 'Isn't it a bit chilly to go swimming?'(Sp3C, 1stB)
- 13) 'He hurried her to the hospital.'(Sp4T, 1stA)
- 14) 'You said you'd be in bed by midnight.'(Sp1T, 2ndB)
- 15) 'I'll shove it under the front door.'(Sp3T, 1stB)
- 16) 'I knew that if I left it to you, you'd do something stupid.'(Sp2T, 2ndA)
- 17) 'We had a wonderful meal by the river.'(Sp4C, 2ndA)
- 18) 'They're on their honeymoon in Honolulu.'(Sp5C, 2ndB)
- 19) 'That dress doesn't do anything for you, my dear.'(Sp5T, 2ndB)
- 20) 'You remember when I rescued him from the river last February?'(Sp2C, 2ndA)
- 21) 'When he opens his mouth, you can see three teeth.'(Sp4C, 1stB)
- 22) 'Why are you wearing your wellingtons?'(Sp3T, 1stA)
- 23) 'I was just driving over the bridge on the edge of the village.'(Sp4T, 2ndB)

- 24) 'Did everything belong to him?' (Sp3C, 2ndA)
- 25) 'With television, you can choose which channel to watch.' (Sp1T, 1stA)
- 26) 'I was just adjusting the engine.' (Sp2C, 2ndB)
- 27) 'They're on their honeymoon in Honolulu.' (Sp5C, 1stB)
- 28) 'That dress doesn't do anything for you, my dear.' (Sp5T, 1stB)
- 29) 'I reckon that's the end of the adventure.' (Sp2T, 2ndB)
- 30) 'I wasn't gone long, was I?' (Sp1C, 2ndB)
- 31) 'I'll throw this thing the length of the path.' (Sp5C, 1stA)
- 32) 'You said you'd be in bed by midnight.' (Sp1T, 1stB)
- 33) 'I'll shove it under the front door.' (Sp3T, 2ndB)
- 34) 'I may be poor but I have my pride.' (Sp1C, 1stA)
- 35) 'I reckon that's the end of the adventure.' (Sp2T, 1stB)
- 36) 'When he opens his mouth, you can see three teeth.' (Sp4C, 2ndB)
- 37) 'I was just driving over the bridge on the edge of the village.' (Sp4T, 1stB)
- 38) 'I was just adjusting the engine.' (Sp2C, 1stB)
- 39) 'They went home by road.' (Sp5T, 2ndA)
- 40) 'Isn't it a bit chilly to go swimming?' (Sp3C, 2ndB)

Test 5 Judges' Extracts: Test B – Ordered (Test and Control Groups Only)

- 1) 'With television, you can choose which channel to watch.'(Sp1T, 1stA)
- 2) 'With television, you can choose which channel to watch.'(Sp1T, 2ndA)
- 3) 'I may be poor but I have my pride.'(Sp1C, 1stA)
- 4) 'I may be poor but I have my pride.'(Sp1C, 2ndA)
- 5) 'I knew that if I left it to you, you'd do something stupid.'(Sp2T, 1stA)
- 6) 'I knew that if I left it to you, you'd do something stupid.'(Sp2T, 2ndA)
- 7) 'You remember when I rescued him from the river last February?'(Sp2C, 1stA)
- 8) 'You remember when I rescued him from the river last February?'(Sp2C,2ndA)
- 9) 'Why are you wearing your wellingtons?'(Sp3T, 1stA)
- 10) 'Why are you wearing your wellingtons?'(Sp3T, 2ndA)
- 11) 'Did everything belong to him?'(Sp3C, 1stA)
- 12) 'Did everything belong to him?'(Sp3C, 2ndA)
- 13) 'He hurried her to the hospital.'(Sp4T, 1stA)
- 14) 'He hurried her to the hospital.'(Sp4T, 2ndA)
- 15) 'We had a wonderful meal by the river.'(Sp4C, 1stA)
- 16) 'We had a wonderful meal by the river.'(Sp4C, 2ndA)
- 17) 'They went home by road.'(Sp5T, 1stA)
- 18) 'They went home by road.'(Sp5T, 2ndA)
- 19) 'I'll throw this thing the length of the path.'(Sp5C, 1stA)
- 20) 'I'll throw this thing the length of the path.'(Sp5C, 2ndA)
- 21) 'You said you'd be in bed by midnight.'(Sp1T, 1stB)
- 22) 'You said you'd be in bed by midnight.'(Sp1T, 2ndB)
- 23) 'I wasn't gone long, was I?'(Sp1C, 1stB)

- 24) 'I wasn't gone long, was I?' (Sp1C, 2ndB)
- 25) 'I reckon that's the end of the adventure.' (Sp2T, 1stB)
- 26) 'I reckon that's the end of the adventure.' (Sp2T, 2ndB)
- 27) 'I was just adjusting the engine.' (Sp2C, 1stB)
- 28) 'I was just adjusting the engine.' (Sp2C, 2ndB)
- 29) 'I'll shove it under the front door.' (Sp3T, 1stB)
- 30) 'I'll shove it under the front door.' (Sp3T, 2ndB)
- 31) 'Isn't it a bit chilly to go swimming?' (Sp3C, 1stB)
- 32) 'Isn't it a bit chilly to go swimming?' (Sp3C, 2ndB)
- 33) 'I was just driving over the bridge on the edge of the village.' (Sp4T, 1stB)
- 34) 'I was just driving over the bridge on the edge of the village.' (Sp4T, 2ndB)
- 35) 'When he opens his mouth, you can see three teeth.' (Sp4C, 1stB)
- 36) 'When he opens his mouth, you can see three teeth.' (Sp4C, 2ndB)
- 37) 'That dress doesn't do anything for you, my dear.' (Sp5T, 1stB)
- 38) 'That dress doesn't do anything for you, my dear.' (Sp5T, 2ndB)
- 39) 'They're on their honeymoon in Honolulu.' (Sp5C, 1stB)
- 40) 'They're on their honeymoon in Honolulu.' (Sp5C, 2ndB)

Test 5 Judges' Extracts: Test C (Non-Intervention Group Only)

1. 'You have more contact.' (Sp3, 1B)
2. 'I need a good computer because I make some programmes.' (Sp2, 1B)
3. 'I have my PC so I don't need the TV.' (Sp1, 1A)
4. 'You have to know about the things that happen.' (Sp4, 1A)
5. 'You have to choose only one.' (Sp2, 1A)
6. 'I understand time it's important.' (Sp3, 1A)
7. 'I think computer facilities are really important.' (Sp1, 1B)
8. 'First I check on the computer.' (Sp4, 1B)
9. 'You need time to go around.' (Sp3, 2B)
10. 'I can sit here watching TV.' (Sp2, 2A)
11. 'Then they check by subject.' (Sp4, 2B)
12. 'I always want to be on time.' (Sp3, 2A)
13. 'So which two are really the most important for you?' (Sp1, 2B)
14. 'We have to choose two.' (Sp2, 2B)
15. 'It depends on the purpose.' (Sp3, 3B)
16. 'I'm not sure if we have too much fast food.' (Sp4, 2A)
17. 'The last few weeks it was really cold.' (Sp1, 2A)
18. 'It's important to have something for reading.' (Sp2, 3A)
19. 'Students just go to the catalogue on the computers.' (Sp4, 3B)
20. 'You have to look on your own.' (Sp3, 4B)
21. 'Do you have many fast food chains in your country?' (Sp1, 3A)
22. 'We haven't online subscription to journals.' (Sp2, 3B)
23. 'I don't like to watch television too much.' (Sp3, 3A)

24. 'Some people are rich or they can afford it.' (Sp4, 4B)
25. 'You don't even know your colleagues.' (Sp1, 3B)
26. 'Now they bring you what you need.' (Sp2, 4B)
27. 'You have to eat all these things during the day.' (Sp3, 4A)
28. 'It takes a long time to read.' (Sp4, 3A)
29. 'Maybe you have to go to another building.' (Sp1, 4B)
30. 'Only chips and maybe mayonnaise or ketchup—we can eat that.' (Sp4, 4A)
31. 'It's not so important but it's nice to have it.' (Sp2, 4A)
32. 'You have to buy the books.' (Sp3, 5B)
33. 'I load it down on the internet.' (Sp1, 4A)
34. 'You feel quite alone or isolated.' (Sp4, 5B)
35. 'You can't ask questions.' (Sp2, 5B)
36. 'My parents inform me about what is happening in Italy.' (Sp3, 5A)
37. 'Did you do some projects or something else?' (Sp1, 5B)
38. 'Here I use because here I have a lot of time.' (Sp2, 5A)
39. 'I can live without television.' (Sp4, 5A)
40. 'I don't want to sleep outside.' (Sp1, 5A)

Test A: Judges' Extract Verbatim Recall Results (Test and Control Groups Only)

1) 'With television, you can choose which channel to watch.' (Sp1T, 2ndA, L1: Spanish)

Judge No.	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	9	9	8	100%	89%
2	9	9	8	100%	89%
3	9	7	7	78%	78%
4	9	9	8	100%	89%
Mean					86%

2) 'I knew that if I left it to you, you'd do something stupid.' (Sp2T, 1stA, L1: Polish)

Judge No.	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	13	13	12	100%	92%
2	13	13	13	100%	100%
3	13	12	11	92%	85%
4	13	12	12	92%	92%
Mean					92%

3) 'I may be poor but I have my pride.' (Sp1C, 2ndA, L1: Malayalam)

Judge No.	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	9	9	5	100%	56%
2	9	9	6	100%	67%
3	9	9	9	100%	100%
4	9	9	9	100%	100%
Mean					81%

4) You remember when I rescued him from the river last February? (Sp2C1stAL1: Korean)

Judge No.	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	11	11	11	100%	100%
2	11	11	11	100%	100%
3	11	11	11	100%	100%
4	11	11	10	100%	91%
Mean					98%

5) 'Why are you wearing your wellingtons?' (Sp3T, 2ndA, L1: Mandarin)

Judge No.	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	6	6	6	100%	100%
2	6	6	6	100%	100%
3	6	6	6	100%	100%
4	6	6	6	100%	100%
Mean					100%

6) 'Did everything belong to him?'(Sp3C, 1stA, L1: Italian)

Judge No.	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	5	5	5	100%	100%
2	5	5	5	100%	100%
3	5	5	5	100%	100%
4	5	5	5	100%	100%
Mean					100%

7) 'We had a wonderful meal by the river.'(Sp4C, 1stA, L1: Spanish)

Judge No.	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	8	8	8	100%	100%
2	8	8	8	100%	100%
3	8	8	8	100%	100%
4	8	8	8	100%	100%
Mean					100%

8) 'He hurried her to the hospital.'(Sp4T, 2ndA, L1: Romanian)

Judge No.	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	6	6	4	100%	67%
2	6	6	5	100%	83%
3	6	6	5	100%	83%
4	6	6	5	100%	83%
Mean					79%

9) 'They went home by road.'(Sp5T, 1stA, L1: Bahasa)

Judge No.	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	5	5	5	100%	100%
2	5	5	5	100%	100%
3	5	5	5	100%	100%
4	5	5	4	100%	80%
Mean					95%

10) 'I'll throw this thing the length of the path.'(Sp5C, 2ndA, L1: French)

Judge No.	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	9	3	0	33%	0%
2	9	0	0	0%	0%
3	9	9	6	100%	67%
4	9	3	2	33%	22%
Mean					22%

11) 'I wasn't gone long, was I?' (Sp1C, 1stB, L1: Malayalam)

Judge No.	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	6	3	2	50%	33%
2	6	6	6	100%	100%
3	6	6	6	100%	100%
4	6	6	6	100%	100%
Mean					83%

12) 'Isn't it a bit chilly to go swimming?' (Sp3C, 1stB, L1: Italian)

Judge No.	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	8	8	8	100%	100%
2	8	9	8	113%	100%
3	8	7	6	88%	75%
4	8	8	5	100%	63%
Mean					85%

13) 'He hurried her to the hospital.' (Sp4T, 1stA, L1: Romanian)

Judge No.	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	6	6	5	100%	83%
2	6	6	4	100%	67%
3	6	4	4	67%	67%
4	6	5	2	83%	33%
Mean					63%

14) 'You said you'd be in bed by midnight.' (Sp1T, 2ndB, L1: Spanish)

Judge No.	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	8	8	8	100%	100%
2	8	8	8	100%	100%
3	8	8	8	100%	100%
4	8	8	8	100%	100%
Mean					100%

15) 'I'll shove it under the front door.' (Sp3T, 1stB, L1: Mandarin)

Judge No.	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	7	6	4	86%	57%
2	7	7	7	100%	100%
3	7	7	6	100%	86%
4	7	6	5	86%	71%
Mean					79%

16) 'I knew that if I left it to you, you'd do something stupid.'(Sp2T, 2ndA, L1: Polish)

Judge No.	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	13	13	13	100%	100%
2	13	13	13	100%	100%
3	13	13	11	100%	85%
4	13	13	13	100%	100%
Mean					96%

17) 'We had a wonderful meal by the river.'(Sp4C, 2ndA, L1: Spanish)

Judge No.	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	8	8	8	100%	100%
2	8	8	8	100%	100%
3	8	8	8	100%	100%
4	8	8	8	100%	100%
Mean					100%

18) 'They're on their honeymoon in Honolulu.'(Sp5C, 2ndB, L1: French)

Judge No.	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	6	6	6	100%	100%
2	6	6	6	100%	100%
3	6	6	6	100%	100%
4	6	5	4	83%	67%
Mean					92%

19) 'That dress doesn't do anything for you, my dear.'(Sp5T, 2ndB, L1: Bahasa)

Judge No.	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	9	9	8	100%	89%
2	9	9	9	100%	100%
3	9	9	9	100%	100%
4	9	9	9	100%	100%
Mean					97%

20) 'You remember when I rescued him from the river last February?'(Sp2C,2A,L1:Korean)

Judge No.	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	11	11	11	100%	100%
2	11	11	11	100%	100%
3	11	10	10	91%	91%
4	11	11	11	100%	100%
Mean					98%

21) 'When he opens his mouth, you can see three teeth.' (Sp4C, 1stB, L1: Spanish)

Judge No.	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	10	10	10	100%	100%
2	10	10	10	100%	100%
3	10	10	10	100%	100%
4	10	10	9	100%	90%
Mean					98%

22) 'Why are you wearing your wellingtons?' (Sp3T, 1stA, L1: Mandarin)

Judge No.	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	6	6	6	100%	100%
2	6	6	6	100%	100%
3	6	6	6	100%	100%
4	6	6	6	100%	100%
Mean					100%

23) 'I was just driving over the bridge on the edge of the village.' (Sp4T, 2ndB L1: Romanian)

Judge No.	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	13	15	10	115%	77%
2	13	15	12	115%	92%
3	13	15	11	115%	85%
4	13	13	9	100%	69%
Mean					81%

24) 'Did everything belong to him?' (Sp3C, 2ndA, L1: Italian)

Judge No.	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	5	5	5	100%	100%
2	5	5	5	100%	100%
3	5	4	4	80%	80%
4	5	4	4	80%	80%
Mean					90%

25) 'With television, you can choose which channel to watch.' (Sp1T, 1stA, L1: Spanish)

Judge No.	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	9	9	9	100%	100%
2	9	9	9	100%	100%
3	9	10	9	111%	100%
4	9	9	8	100%	89%
Mean					97%

26) 'I was just adjusting the engine.'(Sp2C, 2ndB, L1: Korean)

Judge No.	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	6	6	6	100%	100%
2	6	6	6	100%	100%
3	6	5	4	83%	67%
4	6	6	5	100%	83%
Mean					88%

27) 'They're on their honeymoon in Honolulu.'(Sp5C, 1stB, L1: French)

Judge No.	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	6	6	6	100%	100%
2	6	6	6	100%	100%
3	6	6	6	100%	100%
4	6	6	4	100%	67%
Mean					92%

28) 'That dress doesn't do anything for you, my dear.'(Sp5T, 1stB, L1: Bahasa)

Judge No.	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	9	9	9	100%	100%
2	9	9	9	100%	100%
3	9	9	9	100%	100%
4	9	9	9	100%	100%
Mean					100%

29) 'I reckon that's the end of the adventure.'(Sp2T, 2ndB, L1: Polish)

Judge No.	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	8	8	8	100%	100%
2	8	8	8	100%	100%
3	8	8	7	100%	88%
4	8	8	8	100%	100%
Mean					97%

30) 'I wasn't gone long, was I?'(Sp1C, 2ndB, L1: Malayalam)

Judge No.	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	6	6	6	100%	100%
2	6	6	6	100%	100%
3	6	6	6	100%	100%
4	6	6	6	100%	100%
Mean					100%

31) 'I'll throw this thing the length of the path.' (Sp5C, 1stA, L1: French)

Judge No.	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	9	9	3	100%	33%
2	9	9	3	100%	33%
3	9	10	7	111%	78%
4	9	3	2	33%	22%
Mean					42%

32) 'You said you'd be in bed by midnight.' (Sp1T, 1stB, L1: Spanish)

Judge No.	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	8	8	8	100%	100%
2	8	8	8	100%	100%
3	8	8	8	100%	100%
4	8	8	6	100%	75%
Mean					94%

33) 'I'll shove it under the front door.' (Sp3T, 2ndB, L1: Mandarin)

Judge No.	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	7	7	4	100%	57%
2	7	7	7	100%	100%
3	7	6	4	86%	57%
4	7	4	3	57%	43%
Mean					64%

34) 'I may be poor but I have my pride.' (Sp1C, 1stA, L1: Malayalam)

Judge No.	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	9	9	9	100%	100%
2	9	9	9	100%	100%
3	9	9	9	100%	100%
4	9	9	9	100%	100%
Mean					100%

35) 'I reckon that's the end of the adventure.' (Sp2T, 1stB, L1: Polish)

Judge No.	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	8	8	8	100%	100%
2	8	8	8	100%	100%
3	8	8	6	100%	75%
4	8	8	8	100%	100%
Mean					94%

36) 'When he opens his mouth, you can see three teeth.' (Sp4C, 2ndB, L1: Spanish)

Judge No.	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	10	10	10	100%	100%
2	10	10	10	100%	100%
3	10	10	10	100%	100%
4	10	10	10	100%	100%
Mean					100%

37) 'I was just driving over the bridge on the edge of the village.' (Sp4T, 1stB, L1: Romanian)

Judge No.	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	13	13	12	100%	92%
2	13	13	12	100%	92%
3	13	13	12	100%	92%
4	13	13	13	100%	100%
Mean					94%

38) 'I was just adjusting the engine.' (Sp2C, 1stB, L1: Korean)

Judge No.	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	6	3	3	50%	50%
2	6	6	6	100%	100%
3	6	6	6	100%	100%
4	6	6	5	100%	83%
Mean					83%

39) 'They went home by road.' (Sp5T, 2ndA, L1: Bahasa)

Judge No.	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	5	5	5	100%	100%
2	5	5	5	100%	100%
3	5	5	5	100%	100%
4	5	5	4	100%	80%
Mean					95%

40) 'Isn't it a bit chilly to go swimming?' (Sp3C, 2ndB, L1: Italian)

Judge No.	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	8	8	8	100%	100%
2	8	8	8	100%	100%
3	8	8	7	100%	88%
4	8	7	6	88%	75%
Mean					91%

Test 5, Test B: Judges' Extract Verbatim Recall Results

1) 'With television, you can choose which channel to watch.' (Sp1T, 1stA, L1: Span.)

2) 'With television, you can choose which channel to watch.' (Sp1T, 2ndA)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	1 st A	9	9	9	100%	100%
1	2 nd A	9	9	9	100%	100%
2	1 st A	9	9	9	100%	100%
2	2 nd A	9	9	9	100%	100%
3	1 st A	9	9	7	100%	78%
3	2 nd A	9	9	9	100%	100%
4	1 st A	9	9	9	100%	100%
4	2 nd A	9	9	9	100%	100%
Mean						97%

3) 'I may be poor but I have my pride.' (Sp1C, 1stA, L1: Malayalam)

4) 'I may be poor but I have my pride.' (Sp1C, 2ndA)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	1 st A	9	9	9	100%	100%
1	2 nd A	9	9	9	100%	100%
2	1 st A	9	9	9	100%	100%
2	2 nd A	9	9	9	100%	100%
3	1 st A	9	9	9	100%	100%
3	2 nd A	9	9	9	100%	100%
4	1 st A	9	9	9	100%	100%
4	2 nd A	9	9	9	100%	100%
Mean						100%

5) 'I knew that if I left it to you, you'd do something stupid.' (Sp2T, 1stA, L1: Polish)

6) 'I knew that if I left it to you, you'd do something stupid.' (Sp2T, 2ndA)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	1 st A	13	13	12	100%	92%
1	2 nd A	13	14	13	108%	100%
2	1 st A	13	13	13	100%	100%
2	2 nd A	13	13	13	100%	100%
3	1 st A	13	13	13	100%	100%
3	2 nd A	13	13	13	100%	100%
4	1 st A	13	12*	12	92%	92%
4	2 nd A	13	12*	12	92%	92%
Mean						97%

7) 'You remember when I rescued him from the river last February?' (Sp2C, 1stA, L1: Korean)

8) 'You remember when I rescued him from the river last February?' (Sp2C, 2ndA)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	1 st A	11	11	11	100%	100%
1	2 nd A	11	11	11	100%	100%
2	1 st A	11	11	11	100%	100%
2	2 nd A	11	11	11	100%	100%
3	1 st A	11	11	11	100%	100%
3	2 nd A	11	11	11	100%	100%
4	1 st A	11	11	11	100%	100%
4	2 nd A	11	11	11	100%	100%
Mean						100%

9) 'Why are you wearing your wellingtons?' (Sp3T, 1stA, L1: Mandarin)

10) 'Why are you wearing your wellingtons?' (Sp3T, 2ndA)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	1 st A	6	6	6	100%	100%
1	2 nd A	6	6	6	100%	100%
2	1 st A	6	6	6	100%	100%
2	2 nd A	6	6	6	100%	100%
3	1 st A	6	6	6	100%	100%
3	2 nd A	6	6	6	100%	100%
4	1 st A	6	6	6	100%	100%
4	2 nd A	6	6	6	100%	100%
Mean						100%

11) 'Did everything belong to him?' (Sp3C, 1stA, L1: Italian)

12) 'Did everything belong to him?' (Sp3C, 2ndA)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	1 st A	5	5	5	100%	100%
1	2 nd A	5	5	5	100%	100%
2	1 st A	5	5	5	100%	100%
2	2 nd A	5	5	5	100%	100%
3	1 st A	5	5	5	100%	100%
3	2 nd A	5	5	5	100%	100%
4	1 st A	5	5	5	100%	100%
4	2 nd A	5	5	5	100%	100%
Mean						100%

13) 'He hurried her to the hospital.'(Sp4T, 1stA, L1: Romanian)

14) 'He hurried her to the hospital.'(Sp4T, 2ndA)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	1 st A	6	6	5	100%	83%
1	2 nd A	6	6	6	100%	100%
2	1 st A	6	7	5	117%	83%
2	2 nd A	6	6	6	100%	100%
3	1 st A	6	6	4	100%	67%
3	2 nd A	6	6	6	100%	100%
4	1 st A	6	4	3	67%	50%
4	2 nd A	6	6	5	100%	83%
Mean						83%

15) 'We had a wonderful meal by the river.'(Sp4C, 1stA, L1: Spanish)

16) 'We had a wonderful meal by the river.'(Sp4C, 2ndA)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	1 st A	8	8	8	100%	100%
1	2 nd A	8	8	8	100%	100%
2	1 st A	8	8	8	100%	100%
2	2 nd A	8	8	8	100%	100%
3	1 st A	8	8	8	100%	100%
3	2 nd A	8	8	8	100%	100%
4	1 st A	8	8	8	100%	100%
4	2 nd A	8	8	8	100%	100%
Mean						100%

17) 'They went home by road.'(Sp5T, 1stA, L1: Bahasa)

18) 'They went home by road.'(Sp5T, 2ndA)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	1 st A	5	5	5	100%	100%
1	2 nd A	5	5	5	100%	100%
2	1 st A	5	5	5	100%	100%
2	2 nd A	5	5	5	100%	100%
3	1 st A	5	5	5	100%	100%
3	2 nd A	5	5	5	100%	100%
4	1 st A	5	5	5	100%	100%
4	2 nd A	5	5	5	100%	100%
Mean						100%

19) 'I'll throw this thing the length of the path.'(Sp5C, 1stA, L1: French)

20) 'I'll throw this thing the length of the path.'(Sp5C, 2ndA)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	1 st A	9	9	3	100%	33%
1	2 nd A	9	9	6	100%	67%
2	1 st A	9	9	7	100%	78%
2	2 nd A	9	9	7	100%	78%
3	1 st A	9	7	3	78%	33%
3	2 nd A	9	9	9	100%	100%
4	1 st A	9	4	3	44%	33%
4	2 nd A	9	8	6	89%	67%
Mean						61%

21) 'You said you'd be in bed by midnight.'(Sp1T, 1stB, L1: Spanish)

22) 'You said you'd be in bed by midnight.'(Sp1T, 2ndB)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	1 st B	8	8	8	100%	100%
1	2 nd B	8	8	8	100%	100%
2	1 st B	8	8	8	100%	100%
2	2 nd B	8	8	8	100%	100%
3	1 st B	8	8	8	100%	100%
3	2 nd B	8	8	8	100%	100%
4	1 st B	8	8	8	100%	100%
4	2 nd B	8	8	8	100%	100%
Mean						100%

23) 'I wasn't gone long, was I?'(Sp1C, 1stB, L1: Malayalam)

24) 'I wasn't gone long, was I?'(Sp1C, 2ndB)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	1 st B	6	6	6	100%	100%
1	2 nd B	6	6	6	100%	100%
2	1 st B	6	6	6	100%	100%
2	2 nd B	6	6	6	100%	100%
3	1 st B	6	6	6	100%	100%
3	2 nd B	6	6	6	100%	100%
4	1 st B	6	6	6	100%	100%
4	2 nd B	6	6	6	100%	100%
Mean						100%

25) 'I reckon that's the end of the adventure.'(Sp2T, 1stB, L1: Polish)

26) 'I reckon that's the end of the adventure.'(Sp2T, 2ndB)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	1 st B	8	8	8	100%	100%
1	2 nd B	8	8	8	100%	100%
2	1 st B	8	8	8	100%	100%
2	2 nd B	8	8	8	100%	100%
3	1 st B	8	8	7	100%	88%
3	2 nd B	8	8	7	100%	88%
4	1 st B	8	8	8	100%	100%
4	2 nd B	8	9	7	113%	88%
Mean						96%

27) 'I was just adjusting the engine.'(Sp2C, 1stB, L1: Korean)

28) 'I was just adjusting the engine.'(Sp2C, 2ndB)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	1 st B	6	6	6	100%	100%
1	2 nd B	6	6	6	100%	100%
2	1 st B	6	6	6	100%	100%
2	2 nd B	6	6	6	100%	100%
3	1 st B	6	6	6	100%	100%
3	2 nd B	6	6	6	100%	100%
4	1 st B	6	6	6	100%	100%
4	2 nd B	6	6	6	100%	100%
4	A	6	6	6	100%	100%
Mean						100%

29) 'I'll shove it under the front door.'(Sp3T, 1stB, L1: Mandarin)

30) 'I'll shove it under the front door.'(Sp3T, 2ndB)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	1 st B	7	6	4	86%	57%
1	2 nd B	7	7	4	100%	57%
2	1 st B	7	7	7	100%	100%
2	2 nd B	7	7	7	100%	100%
3	1 st B	7	7	6	100%	86%
3	2 nd B	7	6	4	86%	57%
4	1 st B	7	6	4	86%	57%
4	2 nd B	7	7	7	100%	100%
Mean						77%

31) 'Isn't it a bit chilly to go swimming?' (Sp3C, 1stB, L1: Italian)

32) 'Isn't it a bit chilly to go swimming?' (Sp3C, 2ndB)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	1 st B	8	8	8	100%	100%
1	2 nd B	8	8	8	100%	100%
2	1 st B	8	8	8	100%	100%
2	2 nd B	8	8	8	100%	100%
3	1 st B	8	8	8	100%	100%
3	2 nd B	8	8	7	100%	88%
4	1 st B	8	8	7	100%	88%
4	2 nd B	8	8	8	100%	100%
Mean						97%

33) 'I was just driving over the bridge on the edge of the village.' (Sp4T, 1stB, L1: Romanian)

34) 'I was just driving over the bridge on the edge of the village.' (Sp4T, 2ndB)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	1 st B	13	12	11	92%	85%
1	2 nd B	13	13	13	100%	100%
2	1 st B	13	13	13	100%	100%
2	2 nd B	13	13	13	100%	100%
3	1 st B	13	13	12	100%	92%
3	2 nd B	13	15	12	115%	92%
4	1 st B	13	13	13	100%	100%
4	2 nd B	13	13	13	100%	100%
Mean						96%

35) 'When he opens his mouth, you can see three teeth.' (Sp4C, 1stB, L1: Spanish)

36) 'When he opens his mouth, you can see three teeth.' (Sp4C, 2ndB)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	1 st B	10	10	10	100%	100%
1	2 nd B	10	10	10	100%	100%
2	1 st B	10	10	10	100%	100%
2	2 nd B	10	10	10	100%	100%
3	1 st B	10	10	9	100%	90%
3	2 nd B	10	10	10	100%	100%
4	1 st B	10	10	9	100%	90%
4	2 nd B	10	10	10	100%	100%
Mean						98%

37) 'That dress doesn't do anything for you, my dear.'(Sp5T, 1stB, L1: Bahasa)

38) 'That dress doesn't do anything for you, my dear.'(Sp5T, 2ndB)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	1 st B	9	9	9	100%	100%
1	2 nd B	9	9	9	100%	100%
2	1 st B	9	9	9	100%	100%
2	2 nd B	9	9	9	100%	100%
3	1 st B	9	9	9	100%	100%
3	2 nd B	9	9	9	100%	100%
4	1 st B	9	9	9	100%	100%
4	2 nd B	9	9	9	100%	100%
Mean						100%

39) 'They're on their honeymoon in Honolulu.'(Sp5C, 1stB, L1: French)

40) 'They're on their honeymoon in Honolulu.'(Sp5C, 2ndB)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	1 st B	6	6	6	100%	100%
1	2 nd B	6	6	6	100%	100%
2	1 st B	6	6	6	100%	100%
2	2 nd B	6	6	6	100%	100%
3	1 st B	6	4	2	67%	33%
3	2 nd B	6	6	6	100%	100%
4	1 st B	6	7	6	117%	100%
4	2 nd B	6	6	6	100%	100%
Mean						92%

Test C: Judges' Extract Verbatim Recall Results (NIG Only)

1) 'You have more contact.' (Sp3, B, L1: Italian)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	B	4	4	4	100%	100%
2	B	4	5	4	125%	100%
3	B	4	4	4	100%	100%
4	B	4	4	4	100%	100%
Mean						100%

2) 'I need a good computer because I make some programmes.' (Sp2, B, L1: Bulgarian)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	B	10	11	8	110%	80%
2	B	10	10	8	100%	80%
3	B	10	14	8	140%	80%
4	B	10	11	6	110%	60%
Mean						75%

3) 'I have my PC so I don't need the TV.' (Sp1, A, L1: German)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	A	10	10	9	100%	90%
2	A	10	8	8	80%	80%
3	A	10	4	3	40%	30%
4	A	10	9	8	90%	80%
Mean						70%

4) 'You have to know about the things that happen.' (Sp4, A, L1: French)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	A	9	10	9	111%	100%
2	A	9	9	7	100%	78%
3	A	9	8	8	89%	89%
4	A	9	9	9	100%	100%
Mean						92%

5) 'You have to choose only one.' (Sp2, A, L1: Bulgarian)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	A	6	8	2	133%	33%
2	A	6	6	4	100%	67%
3	A	6	5	3	83%	50%
4	A	6	6	6	100%	100%
Mean						63%

6) 'I understand time it's important.' (Sp3, A, L1: Italian)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	A	5	5	4	100%	80%
2	A	5	5	4	100%	80%
3	A	5	5	4	100%	80%
4	A	5	5	4	100%	80%
Mean						80%

7) 'I think computer facilities are really important.' (Sp1, B, L1: German)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	B	7	7	7	100%	100%
2	B	7	7	7	100%	100%
3	B	7	7	7	100%	100%
4	B	7	7	7	100%	100%
Mean						100%

8) 'First I check on the computer.' (Sp4, B, L1: French)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	B	6	6	4	100%	67%
2	B	6	6	6	100%	100%
3	B	6	6	6	100%	100%
4	B	6	6	6	100%	100%
Mean						92%

9) 'You need time to go around.' (Sp3, B, L1: Italian)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	B	6	6	6	100%	100%
2	B	6	6	6	100%	100%
3	B	6	6	6	100%	100%
4	B	6	6	6	100%	100%
Mean						100%

10) 'I can sit here watching TV.' (Sp2, A, L1: Bulgarian)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	A	6	6	6	100%	100%
2	A	6	6	6	100%	100%
3	A	6	6	6	100%	100%
4	A	6	6	6	100%	100%
Mean						100%

11) 'Then they check by subject.' (Sp4, B, L1: French)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	B	5	5	5	100%	100%
2	B	5	5	5	100%	100%
3	B	5	4	3	80%	60%
4	B	5	5	5	100%	100%
Mean						90%

12) 'I always want to be on time.' (Sp3, A, L1: Italian)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	A	7	7	6	100%	86%
2	A	7	9	6	129%	86%
3	A	7	6	6	86%	86%
4	A	7	7	6	100%	86%
Mean						86%

13) 'So which two are really the most important for you?' (Sp1, B, L1: German)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	B	10	10	10	100%	100%
2	B	10	10	10	100%	100%
3	B	10	10	8	100%	80%*
4	B	10	10	10	100%	100%
Mean						95%

14) 'We have to choose two.' (Sp2, B, L1: Bulgarian)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	B	5	4	3	80%	60%
2	B	5	5	3	100%	60%
3	B	5	4	4	80%	80%
4	B	5	5	5	100%	100%
Mean						75%

15) 'It depends on the purpose.' (Sp3, B, L1: Italian)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	B	5	5	5	100%	100%
2	B	5	5	5	100%	100%
3	B	5	6	5	120%	80%
4	B	5	5	5	100%	100%
Mean						95%

16) 'I'm not sure if we have too much fast food.' (Sp4, A, L1: French)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	A	10	10	9	100%	90%
2	A	10	10	9	100%	90%
3	A	10	10	7	100%	70%
4	A	10	9	9	90%	90%
Mean						85%

17) 'The last few weeks it was really cold.' (Sp1, A, L1: German)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	A	8	8	8	100%	100%
2	A	8	8	8	100%	100%
3	A	8	8	7	100%	88%
4	A	8	8	8	100%	100%
Mean						97%

18) 'It's important to have something for reading.' (Sp2, A, L1: Bulgarian)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	A	7	7	7	100%	100%
2	A	7	7	6	100%	86%
3	A	7	8	5	114%	71%
4	A	7	7	7	100%	100%
Mean						89%

19) 'Students just go to the catalogue on the computers.' (Sp4, B, L1: French)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	B	9	9	9	100%	100%
2	B	9	9	9	100%	100%
3	B	9	9	8*	100%	89%
4	B	9	9	8*	100%	89%
Mean						95%

20) 'You have to look on your own.' (Sp3, B, L1: Italian)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	B	7	7	7	100%	100%
2	B	7	6	3	86%	43%
3	B	7	7	7	100%	100%
4	B	7	7	5	100%	71%
Mean						79%

21) 'Do you have many fast food chains in your country?' (Sp1, A, L1: German)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	A	10	10	10	100%	100%
2	A	10	10	10	100%	100%
3	A	10	10	10	100%	100%
4	A	10	10	10	100%	100%
Mean						100%

22) 'We haven't online subscription to journals.' (Sp2, B, L1: Bulgarian)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	B	6	6	4	100%	67%
2	B	6	6	4	100%	67%
3	B	6	7	0	117%	0%
4	B	6	6	2	100%	33%
Mean						42%

23) 'I don't like to watch television too much.' (Sp3, A, L1: Italian)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	A	8	8	8	100%	100%
2	A	8	8	8	100%	100%
3	A	8	8	8	100%	100%
4	A	8	8	8	100%	100%
Mean						100%

24) 'Some people are rich or they can afford it.' (Sp4, B, L1: French)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	B	9	9	8	100%	89%
2	B	9	6	3	67%	33%
3	B	9	8	3	89%	33%
4	B	9	6	3	67%	33%
Mean						47%

25) 'You don't even know your colleagues.' (Sp1, B, L1: German)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	B	6	6	6	100%	100%
2	B	6	6	6	100%	100%
3	B	6	6	6	100%	100%
4	B	6	6	6	100%	100%
Mean						100%

26) 'Now they bring you what you need.' (Sp2, B, L1: Bulgarian)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	B	7	7	7	100%	100%
2	B	7	7	7	100%	100%
3	B	7	7	7	100%	100%
4	B	7	7	7	100%	100%
Mean						100%

27) 'You have to eat all these things during the day.' (Sp3, A, L1: Italian)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	A	10	10	10	100%	100%
2	A	10	10	10	100%	100%
3	A	10	10	10	100%	100%
4	A	10	11	10	110%	100%
Mean						100%

28) 'It takes a long time to read.' (Sp4, A, L1: French)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	A	7	7	7	100%	100%
2	A	7	7	7	100%	100%
3	A	7	7	6	100%	86%
4	A	7	7	7	100%	100%
Mean						97%

29) 'Maybe you have to go to another building.' (Sp1, B, L1: German)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	B	8	8	8	100%	100%
2	B	8	8	7	100%	88%
3	B	8	8	8	100%	100%
4	B	8	8	8	100%	100%
Mean						97%

30) 'Only chips and maybe mayonnaise or ketchup – we can eat that.' (Sp4, A, L1: French)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	A	11	11	10	100%	91%
2	A	11	10	9	91%	82%
3	A	11	8	7	73%	64%
4	A	11	8	8	73%	73%
Mean						78%

31) 'It's not so important but it's nice to have it.' (Sp2, A, L1: Bulgarian)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	A	10	10	10	100%	100%
2	A	10	9	8	90%	80%
3	A	10	10	8	100%	80%
4	A	10	9	8	90%	80%
Mean						85%

32) 'You have to buy the books.' (Sp3, B, L1: Italian)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	B	6	6	5	100%	83%
2	B	6	6	6	100%	100%
3	B	6	6	6	100%	100%
4	B	6	6	6	100%	100%
Mean						96%

33) 'I load it down on the internet.' (Sp1, A, L1: German)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	A	7	5	3	71%	43%
2	A	7	6	6	86%	86%
3	A	7	6	2	86%	29%
4	A	7	6	3	86%	43%
Mean						50%

34) 'You feel quite alone or isolated.' (Sp4, B, L1: French)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	B	6	7	4	117%	67%
2	B	6	6	4	100%	67%
3	B	6	6	6	100%	100%
4	B	6	6	6	100%	100%
Mean						84%

35) 'You can't ask questions.' (Sp2, B, L1: Bulgarian)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	B	4	4	4	100%	100%
2	B	4	4	4	100%	100%
3	B	4	4	3	100%	75%
4	B	4	4	4	100%	100%
Mean						94%

36) 'My parents inform me about what is happening in Italy.' (Sp3, A, L1: Italian)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	A	10	10	10	100%	100%
2	A	10	10	10	100%	100%
3	A	10	10	8	100%	80%
4	A	10	10	6	100%	60%
Mean						85%

37) 'Did you do some projects or something else?' (Sp1, B, L1: German)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	B	8	8	7	100%	88%
2	B	8	8	8	100%	100%
3	B	8	8	7	100%	88%
4	B	8	8	7	100%	88%
Mean						91%

38) 'Here I use because here I have a lot of time.' (Sp2, A, L1: Bulgarian)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	A	11	9	4	82%	36%
2	A	11	11	8	100%	73%
3	A	11	14	7	127%	64%
4	A	11	10	10	91%	91%
Mean						66%

39) 'I can live without television.' (Sp4, A, L1: French)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	A	5	5	4	100%	80%
2	A	5	5	5	100%	100%
3	A	5	5	5	100%	100%
4	A	5	5	3	100%	60%
Mean						85%

40) 'I don't want to sleep outside.' (Sp1, A, L1: German)

Judge No.	Iteration	No. Words	No. Iterated	No. Correct	% Iterated	% Correct
1	A	6	6	6	100%	100%
2	A	6	6	6	100%	100%
3	A	6	6	6	100%	100%
4	A	6	6	6	100%	100%
Mean						100%

Test 5 Judges' Extract Ratings: Test A

Subject's Extract	Judge 1	Judge 2	Judge 3	Judge 4	Mean Snip. Score	Mean Subj. Pre- & Post- Scores
TG:1T1A	3	4	5	4	4	$4 + 4 = 8/2$
1T2A	5	5	3	4	4.25	1T Pre- = 4
1T1B	4	5	3	4	4	$4.25 + 3 = 7.25/2$
1T2B	4	4	4	4	3	1T Post- = 3.625
2T1A	5	5	4	4	4	$4 + 4 = 8/2$
2T2A	5	3	4	5	4.25	2T Pre- = 4
2T1B	4	4	3	5	4	$4.25 + 4.5 = 8.75/2$
2T2B	4	4	5	5	4.5	2T Post- = 4.375
3T1A	3	3	3	5	3.5	$3.5 + 2 = 5.5/2$
3T2A	3	3	3	2	2.75	3T Pre- = 2.75
3T1B	1	2	3	2	2	$2.75 + 2.5 = 5.25/2$
3T2B	2	3	2	3	2.5	3T Post- = 2.625
4T1A	2	2	2	2	2	$2 + 3.5 = 5.5/2$
4T2A	3	4	3	3	3.25	4T Pre- = 2.75
4T1B	2	3	4	5	3.5	$3.25 + 2.5 = 5.75/2$
4T2B	3	2	2	3	2.5	4T Post- = 2.875
5T1A	3	3	3	5	3.5	$3.5 + 4.5 = 8/2$
5T2A	3	3	2	4	3	5T Pre- = 4
5T1B	3	5	5	5	4.5	$3 + 4.25 = 7.25/2$
5T2B	3	5	4	5	4.25	5T Post- = 3.625
Mean Total	-	-	-	-	69.5	
CG:1C1A	3	4	4	5	4	$4 + 3.25 = 7.25/2$
1C2A	4	3	3	4	3.5	1C Pre- = 3.625
1C1B	2	4	3	4	3.25	$3.5 + 4.25 = 7.75/2$
1C2B	4	4	4	5	4.25	1C Post- = 3.875
2C1A	4	3	3	3	3.25	$3.25 + 2.5 = 5.75/2$
2C2A	3	3	3	4	3.25	2C Pre- = 2.875
2C1B	2	2	3	3	2.5	$3.25 + 2.5 = 5.75/2$
2C2B	3	2	2	3	2.5	2C Post- = 2.875
3C1A	5	5	2	5	4.25	$4.25 + 3 = 7.25/2$
3C2A	4	3	4	4	2.75	3C Pre- = 3.625
3C1B	4	4	2	2	3	$2.75 + 4.25 = 7/2$
3C2B	4	5	4	4	4.25	3C Post- = 3.5
4C1A	4	4	3	4	3.75	$3.75 + 3.75 = 7.5/2$
4C2A	5	5	5	5	5	4C Pre- = 3.75
4C1B	4	4	3	4	3.75	$5 + 4.5 = 9.5/2$
4C2B	4	5	4	5	4.5	4C Post- = 4.75
5C1A	2	1	2	2	1.75	$1.75 + 3.25 = 5/2$
5C2A	2	2	3	2	2.25	5C Pre- = 2.5
5C1B	3	3	4	3	3.25	$2.25 + 2.5 = 4.75/2$
5C2B	3	1	4	2	2.5	5C Post- = 2.375
Mean Total	-	-	-	-	47.5	

Test 5 Judges' Extract Ratings: Test B

Subject's Extract	Judge 1	Judge 2	Judge 3	Judge 4	Mean Snip. Score	Mean Subj. Pre- & Post- Scores
TG:1T1A	3	4	4	4	3.75	$3.75 + 3.5 = 7.25/2$
1T2A	4	5	4	5	4.5	1T Pre- = 3.6
1T1B	4	3	3	4	3.5	$4.5 + 4 = 8.5/2$
1T2B	5	3	3	5	4	1T Post- = 4.25
2T1A	3	4	4	5	4	$4 + 4.25 = 8.25/2$
2T2A	4	3	4	4	3.75	2T Pre- = 4.125
2T1B	4	4	4	5	4.25	$3.75 + 4 = 7.75/2$
2T2B	4	4	3	5	4	2T Post- = 3.875
3T1A	2	3	4	4	3.25	$3.25 + 2.25 = 5.5/2$
3T2A	2	3	3	4	3	3T Pre- = 2.75
3T1B	1	2	3	3	2.25	$3 + 2.25 = 5.25/2$
3T2B	1	2	2	4	2.25	3T Post- = 2.625
4T1A	2	2	2	3	2.25	$2.25 + 3 = 5.25/2$
4T2A	3	3	3	4	3.25	4T Pre- = 2.625
4T1B	3	3	3	3	3	$3.25 + 3.5 = 6.75/2$
4T2B	4	3	3	4	3.5	4T Post- = 3.375
5T1A	3	4	3	4	3.5	$3.5 + 4 = 7.5/2$
5T2A	3	4	3	5	3.75	5T Pre- = 3.75
5T1B	3	4	4	5	4	$3.75 + 4 = 7.75/2$
5T2B	3	4	4	5	4	5T Post- = 3.875
Mean Total	-	-	-	-	69.75	
CG:1C1A	3	4	3	4	3.5	$3.5 + 3.25 = 6.75/2$
1C2A	4	3	3	4	3.5	1C Pre- = 3.375
1C1B	2	3	4	4	3.25	$3.5 + 4 = 7.5/2$
1C2B	4	3	4	5	4	1C Post- = 3.75
2C1A	2	3	3	4	3	$3 = 2.25 = 5.25/2$
2C2A	3	3	3	5	3.5	2C Pre- = 2.625
2C1B	1	3	2	3	2.25	$3.5 + 3 = 6.5/2$
2C2B	2	3	3	4	3	2C Post- = 3.25
3C1A	3	4	4	4	3.75	$3.75 + 3.25 = 7/2$
3C2A	4	4	4	4	4	3C Pre- = 3.5
3C1B	4	3	3	3	3.25	$4 + 3.75 = 7.75/2$
3C2B	5	3	3	4	3.75	3C Post- = 3.875
4C1A	3	3	3	4	3.25	$3.25 + 3.75 = 7/2$
4C2A	3	3	4	5	3.75	4C Pre- = 3.5
4C1B	3	4	4	4	3.75	$3.75 + 4 = 7.75/2$
4C2B	4	3	4	5	4	4C Post- = 3.875
5C1A	1	1	1	2	1.25	$1.25 + 2.75 = 4/2$
5C2A	2	1	3	3	2.25	5C Pre- = 2
5C1B	3	3	2	3	2.75	$2.25 + 3.75 = 6/2$
5C2B	4	3	3	5	3.75	5C Post- = 3
Mean Total	-	-	-	-	65.5	

Test 5 Judges' Extract Ratings: Test C²³⁷

Subject's Extract	Judge 1	Judge 2	Judge 3	Judge 4	Mean Subj. Pre- & Post Scores
1) L1 Ger.					
1A	2	3	1	4	2.5
2A	3	4	3	5	3.75
3A	4	5	3	5	4.25
4A	1	3	3	3	2.5
5A	4	4	5	5	4.5
Pre- Total	-	-	-	-	3.5
1B	3	3	5	5	4
2B	3	5	5	5	4.5
3B	5	5	5	5	5
4B	5	5	5	5	5
5B	4	5	5	5	4.75
Post- Total	-	-	-	-	4.65
2) L1 Bulg.					
1A	2	2	2	4	2.5
2A	3	4	5	5	4.25
3A	3	4	3	3	3.25
4A	4	4	3	4	3.75
5A	1	2	3	2	2
Pre- Total	-	-	-	-	3.15
1B	2	2	3	3	2.5
2B	1	2	1	3	1.75
3B	1	3	1	2	1.75
4B	3	4	3	3	3.25
5B	4	3	3	5	3.75
Post- Total	-	-	-	-	2.6
3) L1 Ital.					
1A	3	2	5	4	3.5
2A	3	3	3	3	3
3A	4	5	5	5	4.75
4A	2	4	3	3	3
5A	3	3	5	4	3.75
Pre- Total	-	-	-	-	3.6
1B	1	2	3	4	2.5
2B	3	4	5	4	4
3B	2	2	3	4	2.75
4B	2	2	3	2	2
5B	4	4	3	4	3.75
Post- Total	-	-	-	-	3

²³⁷ Non-Intervention Group only

4) L1 Fren.					
1A	3	3	3	5	3.5
2A	3	3	3	4	3.25
3A	1	4	3	3	2.75
4A	3	4	5	4	4
5A	3	3	3	3	3
Pre- Total	-	-	-	-	3.3
1B	2	4	5	4	3.75
2B	1	3	3	3	2.5
3B	3	4	3	3	3.25
4B	2	1	1	2	1.5
5B	2	4	3	4	3.25
Post- Total	-	-	-	-	2.85

Test 5 Subjects' Pronunciation Practice Times²³⁸

Subjects	Practice Times
1T	1hr 15mins
2T	6hrs 54mins
3T	7hrs 25mins
4T	7hrs 50mins
5T	5hrs 15mins
1C	6hrs 45mins
2C	2hrs 06mins
3C	2hrs 43mins
4C	2hrs 30mins
5C	4hrs 13mins
1NI	a: 14hrs 15mins b: 78hrs 20mins c: 92hrs 35mins
2NI	a: 6hrs 25mins b: 14h 15mins ²³⁹ c: 20hrs 40mins
3NI	a: 9hrs 45mins b: 7hrs 20mins c: 17h 05mins ²⁴⁰
4NI	a: 28hrs 05mins b: 7hrs 45mins c: 35hrs 50mins

²³⁸ Because the NIG did not do any formal pronunciation training, they were instead required to record all communication with: a) L1 English users, b) L2 English users, c) the total amount of communication - L1+L2

²³⁹ This research student does not attend classes in college and spends more time conversing with her fellow researchers who are mostly L2 speakers of English – from Italy, Germany, China and India.

²⁴⁰ This subject only attends 3 hours of classes in college per week.

Appendix 6: Review of Pronunciation Materials for ELT – *Streaming Speech* (2003), *Connected Speech* (2001), *Clear Speech* (2005) and *English Pronunciation in Use* (2007)

This section will review four well-known and widely used pronunciation materials in ELT. These include two British-produced and orientated publications: *Streaming Speech* (2003) and *English Pronunciation in Use Advanced* (2007); one US-produced publication, *Clear Speech* (2005); and one Australian-produced computer programme, *Connected Speech* (2001). The materials were chosen to represent some of the most up-to-date pronunciation materials available for English language learning from the main ENL countries involved in ELT: Britain, the US and Australia. The materials are designed for international use but also reflect varieties of ENL speech apart from the prestige varieties of RP and GA, increasing learners' receptive skills for when they come into contact with such varieties. No L2 English-produced pronunciation materials were reviewed as they were not readily available to the researcher and would likely have been targeted to one particular language background or country and therefore would not have adequately reflected materials which are specifically designed with an EIC focus, such as those reviewed here.

Review of *Streaming Speech*, Richard Cauldwell. 2003.

This course book and CD ROM developed by Richard Cauldwell are designed to teach listening and pronunciation skills to advanced learners of English, namely L2 English users who wish to study English (presumably at third/advanced level), for high-level oral exams and for L2ETs or those training to be English teachers. There is also a website

containing additional material, information, readings and so forth. The programme is designed for L2 users who want to aspire to L1 speech in terms of accuracy, speed and fluency and to adequately and effectively listen to and process fast L1 speech. Richard Cauldwell worked under the renowned phonetician David Brazil at the University of Birmingham before setting up 'speechinaction', a business which produces ELT materials for listening and pronunciation. The course book includes keys to the phoneme symbols (IPA) and notation as used in the book along with separate notes to students and teachers and an introduction detailing how the book is organised, how the materials can be used to achieve the best results and other necessary background information regarding the rationale for lesson content and design. The course material presents eight speakers – four male and four female, and there are ten lessons, nine of which focus on particular phonemes (chapters 1-6 and 9) and consonant clusters (chapters 7 and 8). Chapter 10 focuses on speech units and includes the use of tonic stress with guided dictation practice in transcribing speech units (see Brown (1990) for more on the usefulness of dictation). The book and CD ROM are very comprehensive, covering a wide variety of aspects of pronunciation and listening, such as linking words, rising, falling and level tones, self-correction, stress-shift and so forth. The speakers from the recordings are named and their pictures appear on the first page of the course book – they are not actors and represent a variety of accents from the British Isles, such as Liverpool, Newcastle upon Tyne, Birmingham and Dublin. This personalises the speakers and makes the experience more authentic for the user. It also exposes them to a variety of accents, which increases receptive accommodation - which Jenkins (2000) advocates for teaching English for international purposes. Users can also choose a particular accent to mimic, if they so choose. Each chapter has the same format, with a welcome note to introduce the speaker in the chapter along with his/her picture (each chapter has one speaker). The goals for

each particular chapter are then outlined, which helps to focus and motivate the student. There are explanations of the various terms used in the lessons in the book (explained chapter-by-chapter, as they arise) and/or on the CD ROM, such as speech units, long vowels and consonant clusters. There is listening practice with a comprehension test to help users contextualise the recording. This is followed by the lesson focus, where particular aspects of the speech signal are focused on, something that does not often form part of traditional listening ELT exercises. The students practice what they have heard and exercises in each lesson continue with the presentation of a speech phenomenon before users are required to practice producing it themselves. Reflective practice and self-assessment are built into each lesson – users can record themselves repeating modelled phrases/sentences - and can complete tables detailing their performance, noting which speech aspects they were able to produce successfully and which they found particularly difficult. However, there is no availability of outside/objective assessment of a user's performance, which limits the effectiveness of the assessment capability of the programme. The focus is on speech reception and production in terms of intelligibility. There is a distinct lack of comprehension exercises, which some users may require, though the material specifically states this is not the aim of the course. One last negative aspect of the course book is that it is in black and white only, which gives it a somewhat amateur appearance (even though it is not an amateur production) and may appear a bit boring to users. The CD Rom, however, is colourful and complements the course book in its contents and ease of use. Overall, *Streaming Speech* is professionally designed and includes a comprehensive programme for advanced L2 users of English to enable them to be more effective speakers and listeners in English.

Review of *Connected Speech*, Protea Textware. 2001.

Connected Speech is an interactive multimedia computer programme for L2 English users and focuses on pronunciation – the entire programme is contained on the CD-ROM (no course book). The programme includes nine speakers and there is a choice of three programmes available for three ENL varieties: North American, British and Australian, thus offering a range of accents and speaking styles. Each programme includes three language levels: lower intermediate, upper intermediate and advanced. The six modules cover aspects of pronunciation such as pause groups, pitch change, stress (sentence and word), linking, syllables and IPA. The activities are based on long passages of natural speech with a video of the speaker and the option of seeing the written text also. The speakers discuss themselves in terms of their lives – what they do, experiences they have had, and so forth, reflecting cultural aspects along with linguistic features. The programme includes interactive activities, tests, recording capabilities with speech recognition software to provide content-specific oral and visual feedback and tutorials for each module at the three different language levels. The language exercises include comprehension questions, cloze tests, and spelling and dictation activities. There are also explanations/definitions of words that appear in the text/video. Lesson material and answer sheets may be printed, which is ideal for classroom use. The programme is aimed at ESL and EFL learners for self-study and can also be used in a classroom situation. It includes video clips of each speaker as they talk, so users can observe the movement of the articulators and note how words are formed, as well as observing paralinguistic features (mainly facial expressions), which can help receptive intelligibility. There are also notes on each speaker's facial expressions as they appear in the recording section. The programme is comprehensive in terms of content and covers language levels from

low intermediate to advanced. It also includes a wide range of important aspects of pronunciation and objective feedback (as opposed to self-assessment²⁴¹). However, because each course is specifically designed to offer only one variety/accents of English – North American, British or Australian - it is limited in accent exposure for receptive purposes - given the international status of English and the increase in world-wide travel and communications, this is a limiting feature of the course material. A further problem is that a high-quality microphone is needed for the voice recognition software to operate effectively and even then, it sometimes does not operate well. This can result in the user's spoken responses not being processed. When this occurs, the programme does not signal to the user to try again or that the response item was incorrect, when in some cases the answer provided was in fact correct. However, the visual feedback is well-designed and a useful indicator to the user of how accurate s/he approximates to the speaker model.

Review of *Clear Speech*, Judy B. Gilbert, 2005.

As the full title of this course book suggests, *Clear Speech: pronunciation and listening comprehension in North American English* (3rd ed.), the focus is on North American English for productive and receptive speech purposes. It is aimed at intermediate and upper intermediate students of English. An audio CD is included with the course book and a teacher's resource book is also available. The book is comprised of fifteen units covering a wide variety of linguistic features relating to pronunciation and listening, such as syllables, vowel rules, linking, word stress patterns, emphasising content words, voicing, sibilants and thought groups. After the contents page, there are separate letters to students and teachers on how best to use the book along with a rationale for content and

²⁴¹ As is the case with Cauldwell's (2003) *Streaming Speech*

design (teacher's letter only). The range of activities includes listening and speaking tests (to be assessed by a teacher), pair work, dictation, rhythm practice and listening activities, to help students recognise certain sounds and stress patterns. Students are encouraged to record themselves reading dialogues (they are directed to speak 'as naturally as possible'). The student can then assess his/her own performance compared with the original recording, or the teacher can do so. A key providing the phoneme symbols as presented in the course book is compared with the corresponding phonemes as they appear in the IPA, as the two sets of symbols differ somewhat. Those used in the course book are designed to be more comprehensible and thus easier to use than those from the IPA. The book is mostly in black and white, though there are blue boxes illustrating pitch movement (which Gilbert terms 'music of English'), vowel length, linking sounds, and so forth. There are also black and white illustrations showing lip position for producing particular sounds and profiles showing tongue position inside the mouth. The book also includes activities to help students become more aware of and discern particular aspects of speech, such as tapping one's fingers to denote syllabification, stretching a rubber band between one's thumbs to grasp the concept of voiced and voiceless continuants and holding a mirror under the nose to note the difference when producing the sounds /n/ and /ŋ/. The course book includes listening comprehension activities so it addresses comprehensibility as well as intelligibility. There are also appendices which include diagrams of the speech articulators and tongue shapes for forming particular consonant sounds. This is very useful as it can be quite difficult to explain to students how to shape the tongue without a picture or diagram. The appendices also include activities for differentiating between similar consonant sounds, such as /v/ and /b/, as well as silent and reduced /t/, for receptive and productive purposes. The appendices also provide further practice activities for the topics covered in the course

book, such as aspiration, linking, word stress, sentence focus and thought groups plus a note on vowel rules. However, because there is no answer key in the student's book, users are reliant on a teacher or someone suitably knowledgeable to check their work. Also, because the book is limited to North American English, users will need to refer to other pronunciation materials if they wish to be exposed to other L1 and L2 accents/varieties of English.

Review of *English Pronunciation in Use*, Martin Hewings, 2007.

This advanced course book is accompanied by a set of five audio CDs (with recordings to be used with the course book) and a CD-ROM (with additional practice exercises) and is designed for self-study and classroom use. The book opens with an overview of contents, instructions on how to use the book, a note on phonetic symbols, pronunciation in speaking and listening, the variety of accents that appear in the recordings, where to find material for further practice, a glossary and how to use the recordings. The book is divided into five sections (A-E) with sixty units. The layout is the same as *English Pronunciation in Use Intermediate* (Hancock, 2003) where each unit comprises two pages, the first page is presentation of the pronunciation item with explanations and examples and the second is practice exercises. The first section discusses L1 and L2 English accents (two units), explains pronunciation of words as outlined in dictionaries and provides links to online resources – for self-study (two units) as well as detailing pronunciation differences in slow and fast speech (two units). The next section B presents pronunciation of words and phrases including consonant clusters, stressed and unstressed syllables and the pronunciation of foreign words. Section C includes pronunciation in conversations, connected speech features such as linking sounds, and details how

intonation patterns are used to confer meaning. Section D addresses pronunciation in formal situations such as for professional use, including business presentations. Section E provides practice exercises for IPA, consonant clusters and word stress along with a glossary and a list for further reading. There is also an answer key at the end of the book.

The first two units focus on accents of English and demonstrate the relatively recent shift in approach to pronunciation in ELT, as they provide examples of differences between British and American accents as well as including other L1 accents, namely northern England, Scotland, Wales, Northern Ireland, Canada and South America (unit 1) and between a variety of L2 accents (unit 2) including Polish, Jamaican, Japanese, Chinese, Spanish and Indian. Throughout the course material, British English accents are used as pronunciation models – for productive purposes – while other L1 and L2 accents are used to expose students to a variety of accents for receptive purposes. While the course book is similar to the other pronunciation books reviewed in terms of its lack of colour, the consistency in layout and division of units into just two pages each makes the book very user-friendly and comprehensive. This is also the only pronunciation material in this review which includes L2 accents. This is an important inclusion, given that there are currently four times more L2 users of English than L1 users and given the increase in world travel and international communication, where English speakers are far more likely to encounter a variety of L2 English accents. Each unit includes notes on speech features such as contractions, weak forms, assimilation, stress placement and so forth. However, unlike other materials in this review, this course does not refer to speech articulators or how sounds are produced in the oral cavity. This is most likely due to the fact that this course is aimed at advanced students who are already aware of how to produce English sounds, so the exclusion of such details is justified.

List of Publications

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