Pronunciation models in regional environments: a comparison and assessment of RP and SSE

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Abstract

For many years, the native speaker of English has been exclusively seen as the 'standard' or preferred pronunciation model of choice for L2 users of English, and the accent known as Standard British English, also called Received Pronunciation (RP), was seen as the normative. However, in environments where the aforementioned model has 'a negligible number of speakers' (Brown, 1991) and could even be described as 'phantom' (Daniels, 1995), the question of whether RP supports student perception and production better than a local standard model is particularly relevant. Scotland, with its range of academic institutions and growing number of international students could be considered such an environment.

In order to establish the most appropriate model for L2 students studying in Scotland, a 5-week explicit pronunciation study was conducted, with international students being exposed to 10 hours of pre-recorded pronunciation instruction with either an RP or a Scottish Standard English (SSE) model. Prior to beginning, and upon culmination of the course, students undertook diagnostic and summative testing in which perception and production of a range of pre-selected segmental and suprasegmental features was assessed. A control group was also assessed in order to establish whether any improvements in scores that occurred were due to the explicit pronunciation tuition, or were simply instances of implicit learning which developed upon exposure to the 21 hours of weekly English tuition all participants were receiving on their pre-sessional course.

Having been quantitatively analysed, test results show that after 5 weeks all groups, including the controls, made significant increases in their perception of Nuclear stress. There were also surprising significant increases in the perception of the tested, but not taught, segmental ɔ/o in the SSE and control group suggesting the occurrence of implicit learning. However, in terms of production, while results hint at a positive trend among SSE students, the RP group made the most significant increase in score after 5 weeks. This contrasts with the Control group's results which decreased over the same time period.

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1. Introduction

Life in the 21st century is lived internationally; due to globalisation and economic trends, work and study opportunities are drawing increasing numbers of people to countries in which the official language differs from that of their mother tongue (The United Nations, 2016). Regarding academically motivated moves, the United Kingdom is considered one of the most sought after locations for international students (Halman, 2015; Peak, 2015), with English language instruction attracting approximately 500,000 students annually (The British Council, 2017) and tertiary level education 438,010 in the 15/16 academic year alone (HESA, 2017). While historically such students may have headed to Cambridge, Oxford or London, Scotland is now receiving its own growing cohort across all educational levels and sectors, which can be expected to increase the demand for English language support. This can be seen at primary and secondary level, where 4-6% of students require English as an Additional Language classes (EAL) (Education Scotland, 2015). At tertiary level, the 2015/16 academic year saw the number of international students rise, with an increase of 1% in those from continental Europe to 20, 945 and 3% for non EU students to 29,980 (HESA, 2017). These numbers are noteworthy, particularly when compared with numbers in England, which over the same period remained unchanged, and in Wales and Northern Ireland which decreased by 11% and 7% respectively (ibid). With Scotland's largest international student nationality group being of Chinese domicile, a group who, as a condition of their visa, must meet strict English language requirements in order to begin their course of study, the growth of English language teaching in Scotland seems increasingly likely.

For international students, a relocation to a foreign country, be it for academic pursuits such as those mentioned above or otherwise, the ability to communicate orally in a new language is of vital importance. Without it, life can be 'socially inhibiting' and can even be 'damaging to a learner's ability to cope effectively' (Gilbert, 2016, p5). The provision of language support, in particular for spoken fluency and pronunciation, can therefore be an invaluable means by which to help students cope with the demands of life in their new linguistic community, to feel sufficiently confident to interact with interlocutors, be understood, and understand responses in return, and thus operate comfortably within society (Levis & Grant, 2003). Such training can raise awareness, highlight and correct points of articulation, provide a supportive environment in which students can listen to and replicate target models, undertake guided and

independent practice, and of course, receive immediate feedback from a tutor. However, in spite of the value of such explicit instruction for students, for tutors who do not speak with a Received Pronunciation (RP) accent, the predominant model used in pronunciation materials, the need to implement pronunciation instruction highlights an important question: which pronunciation model should be taught?

The following pages will endeavour to answer this question from the perspective of regional teachers, namely those with a Scottish Standard English (SSE) accent. It begins with a review of literature surveying the available options that teachers have in terms of pronunciation models (Chapter 2). Following this, Chapter 3 outlines the present study's research aims and questions. To answer these, a 5-week classroom based explicit pronunciation course was designed and implemented, using regional pronunciation model Scottish Standard English (SSE) or prestige pronunciation model RP. Chapter 4 presents the methods and Chapter 5 the findings of the perception and production study. Finally, Chapter 6 discusses the data and offers conclusions as to the role of prestige vs regional pronunciation models in the L2 classroom.

2. Literature Review

2.1 Why teach pronunciation?

Pronunciation's status as the 'pinnacle of importance' (Levis, 2005) has waxed and waned over the last century, including all but its disappearance from the 1970s onwards when communicative methods of language teaching emerged. However, signs that it is slowly starting to return to academic consciousness are appearing, with an increasing number of articles, book chapters, research studies, and conference presentations being dedicated to it. Although researchers are increasingly finding that pronunciation can be improved through explicit instruction (Derwing, Munro & Weibe, 1998), and even maintained after an interval of time has passed (Bradlow, Akahane-Yamada, Pisoni, & Tohkura, 1999), that is not the only benefit it can bring to students of English. Pronunciation training is also linked to an improvement in overall listening capabilities, with a growing number of studies highlighting students' ability to identify phonological features more clearly after receiving pronunciation instruction (Gilbert, 1995; Brown, 2011). Gilbert (2012, p34) encapsulates this when she writes that 'the most powerful signals in spoken English are expressed by intonational devices'. She goes on to name these signals as the boundaries or pausing between thought groups, and pitch change, or when combined, the 'musical patterns of English'. She states that when the music is incorrectly 'played', it can lead to a 'severe loss of comprehensibility' (ibid). What is

more, if in turn the student is unaware of these features, their own ability to understand can be significantly reduced. The consequences of such a breakdown in communication are of course 'embarrassment and discouragement' (ibid). As such, the integration of explicit pronunciation instruction can be beneficial not only to students' perception and production abilities, but also their confidence and motivation to participate in meaningful communication. Input such as this, the explicit tuition of phonological features, might be even more helpful in the regional English language classroom, where students are exposed to a new and different type of English in a form they may have never encountered before.

2.2 Pronunciation and Second Language Acquisition

For many students, the ability to speak English with native-like pronunciation, such as RP or GA, is a common goal. As a consequence, many make attempts to rid themselves of their accent, particularly if it 'colours' their productive English output in ways they dislike. However, despite the time and effort many dedicate to such a process, often it is to no avail. It seems that there are numerous uncontrollable factors which can affect L2 production. Focusing only on means to alter productive output, according to prevalent Second Language Acquisition (SLA) researchers, may not be enough. The following paragraphs will now address some of the main theories that exist within the field of SLA research.

The belief that perception and production are inextricably linked, and thus, the improvement of one will likely facilitate the other, is largely accepted as part of Second Language Acquisition (SLA), and in particular Flege's Speech Learning Model (1988). However, for Flege, and in accordance with the above example, the order of these two actions can be significant. To be able to accurately produce an L2, perception is a necessary starting point. Being able to discern even the small variations which exist between their L1 and L2 phonemes, supports learners' accurate production in a 'target like way' (Kissling, 2015).

The pronunciation of a new language and its phonemic inventory can be a complex process for adult learners. Typically, upon exposure to a new L2, such as during a language class, learners interpret its sound inventory by matching it to their closest L1 sound (Flege, Bohn & Jang, 1997). However, categorising new sounds in such a way can lead to difficulties in L2 perception (Rochet, 1995), and in turn, production. As such, intervention in the form of explicit pronunciation training could support learners' ability to distinguish between their L1 and new L2 sound systems, thus having a positive effect upon their comprehension and productive output.

While the provision of support in the form of perception training is expected to positively affect students' ability to hear, and subsequently, produce the new L2 sounds, sometimes, in spite of the explicit instruction, students simply do not improve. There are a range of additional factors which can affect L2 production, and one of the most frequently debated is that of the effect of age, and that adults who begin learning an L2 post-puberty rarely develop a native-like accent.

From the late 1950s onwards, researchers such as Pennfield & Roberts (1959) and Lenneberg (1967) hypothesised that upon entering adulthood, an innate neurological change occurs negatively affecting language acquisition. This position has proved controversial, and since its publication, many researchers have proposed additional alternative hypotheses as to why language acquisition decreases as age increases. For instance, DeKeyser (2000) suggests that it is due to a reduced ability to learn implicitly, with adult learners having to rely more on learning strategies and explicit instruction to improve. On the other hand, Flege and MacKay (2011) suggest that it could in fact be due to intrinsic aspects such as how motivated learners are. Amidst the differing interpretations, the one constant is that of the relationship between aging and L2 accent. Despite SLA researchers disagreeing on whether it is a physical, psychological, or social trigger which instigates this change, it remains a potential factor influencing L2 language acquisition.

An additional factor hypothesised to be responsible for affecting students' ability to replicate new L2 sounds is that of experience and exposure. In an attempt to confirm whether amount of exposure can positively influence perception and production of an L2, Fledge et al (1997) tested 80 international L2 speakers of English, assessing their ability to perceive and produce a range of English vowels sounds. The researchers controlled for the amount of exposure each participant had with English, and results revealed that the most experienced participants were more successful in perceiving and producing the pre-selected vowels. However, despite such a positive outcome, other studies have had contradictory results. Oyama's research (1976) assessing the production of 60 Italian immigrants to the US, also controlled for length of exposure, which in this study accounts for length of time spent living in the US. In contrast to Fledge et al, she found that the length of time the immigrants had resided in the US did not significantly affect their production scores. Derwing and Munro (2015, p39) suggest that studies of this nature, which investigate experience or exposure and its effect on production are a 'frustrating array of contradictions'. One way such inconsistent results could be interpreted is via the factor 'quantification of the L2 experience' (ibid); it suggests that it is not necessarily the length of time spent in an L2 country which predicts successful production, but instead, the

quality of the immersion experienced. It is possible that immigrants could be living in an L2 speaking country and have very limited interaction with the L2 language, such as if they reside in communities where the majority of speakers are of the same L1 background.

As can be seen in the previous paragraphs, there are a variety of variables which could affect an adult learner's ability to successfully perceive and produce a new L2. In accordance with SLA literature, a range of independent variables, including age and experience, were tested in this study in order to measure their potential influence on participants' perceptive or productive outcomes. The results of these variables' interactions can be found in chapter 5.

2.3 Pronunciation problems for regional L1 or L2 teachers

An increasing amount of literature is identifying that teachers are simply not including pronunciation in their lessons. Qualitative research has pinpointed several reasons why this could be, such as a lack of confidence due to minimal (or no) training, lack of time to research, and limited pronunciation content in major publications beyond decontextualised drilling exercises (MacDonald, 2002; Fraser, 2000; Yates, 2001; Bradford and Kenworthy, 1991; Murphy, 1997; Walker, 1999; Breikrutz, Derwing & Rossiter, 2001; Levis & Grant, 2003; Grant, 2014). As such, for the average teacher with limited knowledge and few suitable materials, it is not surprising that a 2011 study found that only 6% of teaching time focused on pronunciation (Foote, Holtby, & Derwing, 2011).

An additional issue which could cause further problems for teachers, in particular regional L1 or L2 speaking teachers, is the prevalence of two pronunciation models, Received Pronunciation and General American, in the limited range of available materials. When faced with such options, teachers may feel reluctant to include pronunciation in their lessons at all (MacDonald, 2002). The need for teachers to learn unfamiliar phonemes or phonetic realisations which they do not produce or hear on a daily basis could make phonological study increasingly challenging, not to mention the socio-psychological effects which can come from enforced adoption of one particular accent (Walker, 2010). With busy teaching schedules and limited time or appropriate resources in which to self-study, such teachers may prefer to limit, or indeed skip pronunciation instruction altogether.

The following pages will now examine the range of pronunciation models which are available to teachers at present.

2.4 Potential Pronunciation Model 1: Received Pronunciation (RP)

For decades, the native speaker of English has been exclusively seen as the 'standard' or preferred model of choice for L2 users of English. Received Pronunciation, in particular, has been seen as the normative, that is, the standard accent by which L2 speakers should measure their production. There are many reasons why Received Pronunciation has been the primary model for so long, but its historical and geographical claims cannot be discounted. Historically, RP was the form of spoken English used by the royal court in London, by the monarch, educated noblemen and women, and from the 1800s onwards became representative of the upper classes and the wealthy (Cruttenden, 2008). With the spread of the British Empire, the English language and RP, its model of prestige, were transported to countries such as India, Hong Kong, Kenya, and Nigeria to name but a few, where British colonial rule led to English being spoken as an official administrative language.

It was not until the early 20th century that the term 'Received Pronunciation' was established, and this is often accredited to the distinguished phonetician, Daniel Jones, producer of the Pronouncing Dictionary (1917), who used it as his target model throughout his many works. While at the time Jones stated that he was not trying to tell people how they should pronounce English, and that it was simply the form with which he was most familiar, gradually his writing grew to be more prescriptive. In an analysis of the term 'Standard English' Crowley (1987), who tracked Jones' publications over time, summarised that as early as 1917, Jones' target pronunciation was that of a native speaker, who attended one of England's renowned private boarding schools, who was domiciled in the south east of England, and who spoke in a pleasant, steady stream of speech (Jones, 1917). This definition continued to be adapted over Jones' subsequent publications, evolving into a standard said to be 'pleasing to the greatest number of educated speakers' (ibid). Other academics such as H.C. Wylde were more explicit in their linking of this standard form of English with the elite. Wylde controversially polarised speakers from the 'Oxford common room and the Officer's mess' against 'city vulgarians' (Wylde, 1927), that is, regional, non-RP speakers. In a paper entitled The Best English – a Claim for the Superiority of Received Standard English (1934) he states: 'no unbiased listener would hesitate in preferring R.P as the most pleasing and sonorous form'.

Until recently, RP's reputation as the standard model of pronunciation in the UK was supported by broadcasters such as the BBC, which is also why RP is often nicknamed 'BBC English'. It was standard practice for the BBC to employ largely RP speaking newsreaders, however this

has now started to change due to initiatives proposed first in the 1980s and again in 2008 in a bid to diversify the often described 'London-centric' nature of the corporation. (The Telegraph, 2008).

Despite its history, RP's claim to be the most appropriate model for the L2 classroom can be contested on several counts. Firstly, there has never been a single governing body of English with the authority to define the most appropriate standard form, despite such a body having been proposed in the 18th century. Kachru (1985, p49) states: 'The sanctity of models of English stems more from the social and attitudinal factors […] and more from elitism than authority'.

Secondly, RP pronunciation's traditional associations with social class may be an intrinsic reason why today some speakers avoid using it. In the United Kingdom, younger speakers in particular may view RP as more 'conservative', and be driven instead towards the increasingly visible Estuary English in a desire for 'credibility' amongst peers, given Estuary English's more 'consumer friendly' sound (Trudgill, 2002). For L2 users, the imposition of Received Pronunciation through publication and education may also bring negative historical and social associations, which some may prefer to avoid (Jenkins, 2010).

A third reason why RP's suitability may be subject to questioning is due to the phonological challenges it poses in comparison with other varieties of English. With its large number of vowels and diphthongs and lack of postvocalic /r/, phonologically and orthographically it may not be the easiest form to learn for all students. In an article advising upon choice of pronunciation model, Mompean (2008) states that teachers should consider factors including the 'degree of equivalency' between the L1 chosen and students' L2. In order to support uptake, consideration should be given to the most accessible form.

Consideration must also be given to current research suggesting that the phonology of RP is evolving with 'observable changes' now apparent (Roach, 2004), and the phonemic symbols representing its phonology being in need of modernisation (ibid). For instance, in a study based on broadcasts of 30 BBC newsreaders who were, as previously mentioned, typically RP speaking, noticeable changes appeared including: decreased usage of R-sandhi and an increased use of intrusive /r/, and a 30% increase in realisation of intervocalic /t/ as the tap [ɾ] rather than the plosive [t] (Hannisdal, 2006); all of these features are said to be less formal than standard RP and a reflection of its changing nature.

A final point to be considered concerning RP's continuing status as preferred model is that current research suggests it is rarely used or heard. Crystal (2010) estimated that only 3% of the UK population could classify themselves as a speaker of that accent, today that number is presumably even lower, or even, according to Roach (2004) 'a hypothetical construct' due to the constant development the English language and RP has been subject to. As such, it cannot be denied that its applicability in the wider world is limited, with the majority of L2 students of English now more likely to converse with other non-native speakers (Crystal, 2008) or native speakers of a diverse range of accents.

When we combine the increasing ubiquity and acceptance of other varieties of English, frequency of L2-L2 English communication, and a generation of speakers growing up with access to an array of pronunciation models (and their respective social and cultural associations), the applicability of RP as a panacea pronunciation model seems questionable as it does not represent English as it is spoken by the majority of native speakers. Deterding (2005) describes the continued reliance upon RP as impractical, given that it seems to prepare students to only understand English as it is used in news broadcasts, not in real life interactions. Despite the vocal resistance which occurs whenever any alternative to RP is suggested, L2 speakers are in need of exposure to 'non-standard' forms of English, in order to better equip them to communicate in real life scenarios (ibid).

2.5 Potential Pronunciation Model 2: General American

Despite the current study not including General American (GA) as one of its pronunciation models, a brief summary of some of the ways it differs phonologically from RP will be given in the following paragraphs.

General American is the variety of English in the United States considered to be the least regional, and as a consequence, the most neutral form. Wells (1982c, p470) refers to it as 'not a single unified accent […] but as a concept referring to non-Eastern and non-Southern accents'. Sometimes referred to as 'Network English' due its prevalence throughout network television programmes, it is highly likely that the American film and television industries have had a direct effect on the prevalence of this model being used around the world. It is increasingly being recognised as an alternative standard form of English to RP.

A summary of several of the main features in which General American and RP pronunciation diverge will now be outlined in accordance with Wells (1982c).

Firstly, with regards to vowels, General American contains 15 vowel sounds, of which 5 are diphthongs. While RP possesses three central diphthongs / ɪə ɛə ʊə/, these are not present in GA, and instead are realised as allophones of /ɪ ɛ ʊ/. An additional factor influencing realisations of vowels in GA is r colouring, when vowel realisation is affected, or 'coloured', by the following /r/.

With regards to consonants, one of the main distinctions between RP and GA is in the production of /t/. When between two vowels, the first of which being stressed, GA often uses a tap pronunciation. A second major distinguishing feature of GA consonants is the inclusion of the rhotic /r/. While RP does not pronounce /r/ post-vocalically, GA pronunciation does both before and after a vowel. (Wells, 1982c).

2.6 Potential Pronunciation Model 3: English as a Lingua Franca (ELF)

The English as a Lingua Franca (ELF) movement is largely attributed to Jenkins (2000) as is the Lingua Franca Core (LFC). However, despite the above heading, it must be stated that neither ELF nor the LFC are 'potential pronunciation models' or accents, but rather an array of phonological features considered to be most important for intelligible pronunciation, rather than native-likeness. Its evolution in recent years is in response to several key factors, namely the exponential rise in global business, education, tourism, technology, and science being conducted in English, the growth in the number of speakers of English as an L2, the L2-L1 ratio which was estimated to be 3:1 in 2008 (Crystal, 2008), and in particular, the increase in said L2 speakers using English as a medium of communication to converse with other L2 users.

The English as a Lingua Franca movement centres upon two main arguments:

1. Intelligibility is not solely derived from producing English with a native speaker accent, nor the reproduction of its entire range of phonological features (Jenkins, 2000; Walker, 2010). ELF stipulates that it is simply unnecessary to teach each and every English phonological feature in a manner exactly replicating a native speaker model in order to be understood. Jenkins (2000) stipulates that certain core features, those that are most likely to result in a communication breakdown, should be prioritised in class, so as to increase the potential for students to achieve intelligibility to the greatest number of speakers. The core items include: consonant sounds other than /θ/ and /ð/, consonant clusters, nuclear stress, that is, the selection and pronunciation of a particular word as prominent from amongst a group of words (phrase or sentence), and ultimately, vowel length before voiced and unvoiced consonants. The

teaching of items such as the English schwa and connected speech are simply considered inessential for students in terms of producing comprehensible speech (ibid), despite this, they are certainly useful receptive items to learn to support listening comprehension.

2. A native speaker model is not always the most suitable model for an L2 learner, this is especially significant in environments where English is being used as a medium in which to communicate with other L2 users, and not with native speakers (Jenkins, 2000; Walker, 2010). In such scenarios, conformity to native speaker accents, particularly prestige accents, is therefore contestable. For instance, should it be necessary for a South Korean pharmacist, who is learning English in order to communicate with other International delegates at a global conference in Bangkok, be taught to replicate features of native-English phonology, despite having no personal aspiration to attain a native accent? Especially given that their planned use of English is for L2-L2 based communication.

Yet even within a native speaking country, prescriptive tuition of prestige native English pronunciation standards also has the potential to yield difficulties. For example, a Kuwaiti student studying for a Master's degree in Liverpool, a community which typically is not RP (or GA) speaking, may experience perceptual challenges if they had hitherto only been exposed to prestige models. Had the student in question been unaware of, and thus unprepared for the English spoken in the city with its own unique phonological features, any subsequent struggles they experience could be demoralising. What is more, the production of a prestige accent, such as RP, in an area where it is considered to be 'phantom' (Daniels, 1995), could even be met with hostility given any historical, social or political ties which people may associate with it (Crystal, 2003). In such cases, there is a strong argument against one sole pronunciation model, such as RP, being used as the linguistic target; not only is developing a native speaker accent likely to be unsuccessful, but the benefits it offers students living outside of an immersive RP environment could be considered contentious.

An additional component of the ELF movement is the recognition of student choice at the centre of the debate around pronunciation models, especially given the socio-psychological issues attached to accent and speaker identity. As Johnston (2003) states: 'different varieties of English are highly value laden. Accents are closely linked to the identities of individuals and groups of people; to value one accent over another is, rather directly, to value one group of people over another'. It seems therefore, that to impose an unwanted accent upon an L2 student of English, may not only go against their academic goals, but also their own intrinsic

values. As such, should they desire to learn a prestige accent such as RP or GA, their instructor should do their utmost to support them in achieving this goal. However, the overriding belief that can be taken from Jenkins and other proponents of ELF is that intelligibility is not solely derived from producing English with a native speaker accent (Walker, 2010).

A final concern of ELF is the 'teachability' of native speaker pronunciation. It is already well-documented that expecting L2 users, especially post puberty, to be able to appropriate a native speaker accent is unrealistic. As discussed in chapter 2.2, the much debated Critical Period hypothesis (Lenneberg, 1967) proposes that while a post-adolescent student could theoretically attain a high degree of language competence, subject to variables such as motivation and exposure, the likelihood of developing native-like phonological features is extremely low (Chiswick & Miller, 2008). Intonation is an additional feature frequently linked to the concept of teachability, or lack thereof, particularly when concerning the intonational changes native speakers use to show emotion or attitude. Walker (2010, p21) states: 'Native speakers convey attitude through tone, which is the movement of the pitch of the voice', yet tone is thought to be 'resistant to classroom practice'. ELF practitioners feel that focusing on prosodic features beyond Nuclear Stress is less helpful due the variation that exists across speech and speakers, and also the frequency with which native speakers 'break the rules' concerning intonation.

However, while ELF has received increasing recognition in the years since its inception in the 1990s, it is not without its critics. In the classroom, Dauer (2005) highlights that certain features included in the core are actually relatively complex, which could potentially affect their teachability. Items such as vowel length can be particularly difficult for students to master, such as in the ɪ/ iː contrast. Inclusion of the phoneme / ʊ/ in the LFC, despite its rare appearances in common words, is also noteworthy. Dauer (2005) suggests that inclusion of such a segment was likely due to its infrequent appearance, and thus, rare misuse, during Jenkins period of data collection. This highlights a clear drawback of the LFC's mode of data collection and assessment, which were largely based on recorded observations.

Jenkins methods and small sample sizes are a clear point of consternation for many; her original conclusions were derived from 27 observed instances of pronunciation related miscommunication, and it was from these instances that the Lingua Franca Core's key principles were developed. As this data was not presented in the traditional format of an empirical study, it is difficult to pinpoint or locate the specifics of Jenkins' methodology, her range of participants, and the factors which could have influenced their miscommunication,

such as level of English, mother tongue, environment where observation took place, or the speech of the interlocutor. What is more, the *a posteriori* approach she employed can also be problematic, as it is more challenging to identify the reasons for breakdowns in communication occurring, for instance, if it was due to 'listener factors', such as being unfamiliar with vocabulary, or, 'speaker factors', such as that of mispronunciation (Sewell, 2017, p61). It is clear, therefore, that extensive replication of Jenkins' work still needs to be undertaken, with the objective of gathering further data on the ELF core. However, since the LFC's production this is something that many linguists, including Jenkins herself, have made repeated calls for, requesting that researchers undertake further research, and expand on her theory.

Given ELF's focus on intelligibility through its range of core features, rather than the attainment of native speaker accuracy, plus the acceptance and promotion of a range of target models, such as proficient L2 speakers of English, it is understandable how it could offer a more attractive, and potentially, more realistic option for L2 students wanting to improve their pronunciation. From a regional teacher's point of view, the common core simplifies pronunciation practice, removing the necessity to emulate an accent, and simply concentrate on uptake of a small range of features, all but two of which are already part of Scottish Standard English's phonological repertoire.

2.7 Pronunciation in the Scottish English Language classroom

Prior to the rise of ELF theory, the English language classrooms of Scottish educational institutions also had to consider their own choice of pronunciation model, with academics such as Abercrombie (1956) proposing that Scottish Standard English could, theoretically, be a suitable choice. Scottish Standard English (SSE), the formal and standardised form of English in Scotland, largely regarded as the language of professional or academic circles (McClure, 1994), began to appear in the 17th and 18th century during the country's religious reformation and the spread of religious texts in English, not Scots or Latin. The royal and political union with England also played a significant role in this change with increased trade links and travel between the two nations (Corbett & Stuart-Smith, 2012). SSE largely maintains the lexis of Standard British English, with some regional input from Broad Scots, however its phonological features diversify to include: rhoticity, SSE can be defined as rhotic, that is, /r/ is pronounced both pre and post-vocalically unlike in RP. Diversity between RP and SSE can also be observed in Scottish English vowel sounds, of which there are a reduced amount, 13 stressed vowel phonemes in comparison with RP's 20. What is more, vowel duration in Scottish

English does not depend on whether the following consonant is voiced or voiceless as in RP. Instead, in accordance with the Scottish Vowel Length Rule (Aitken, 1981), most vowel sounds are realised short, other than before a voiced fricative, /r/ or across a morpheme boundary. In SSE three particular vowels are known to conform to this rule: /i/ /u/ and /ai/ (Scobbie, Hewlett, & Turk, 1999). Consonant sounds in SSE can also diverge from other standards, with the consonant sounds featured in this study having their own unique characteristics, such as: less aspirated stops, /r/ being realised as post-alveolar and retroflex approximants, and inclusion of dark /l/ (Stuart-Smith, 2008).

For SSE speaking teachers of English in Scottish classrooms, as indeed with any regional or L2 English instructor, the publication of pronunciation materials relying almost entirely on RP and GA models can bring complications, especially if the instructor is lacking in confidence or training when teaching pronunciation from the outset, something which is becoming an increasingly identified problem (MacDonald, 2002). In the face of such circumstances, teachers are forced to consider alternative, more feasible options for themselves and their students. One such option to consider is the use of recorded pronunciation courses such as Hancock's *English Pronunciation in Use* (2003), or *Ship or Sheep* (Baker, 1977). While such courses provide a ready-made syllabus and a recorded model to which students can listen and repeat, hugely advantageous to busy teachers, they rely, almost in their entirety, on prestige model recordings. Such exclusion may reinforce the notion that the class teacher as a representative of the local community, or indeed the local model itself, is insufficient or improper. It may also gloss over the fact that a proficient L2 teacher can be a more realistic model for international students to emulate, demonstrating that pronunciation can be mastered without full adoption of RP or GA features.

A second approach regional teachers may explore should they have the confidence, is to emulate one of the prestige accents themselves, instead of using a pre-recorded course of materials. However, this would necessitate their adoption and modelling of the accent in the hope that it is sufficient and matches up with syllabi and pre-printed materials; again, confidence and ability to replicate such an accent may be a factor which limits tutors' uptake of this approach.

A final alternative leaves teachers with the job of researching and preparing their own materials, allowing them to become the pronunciation model and representative of students' new linguistic community. However, as mentioned above, lack of experience and training

could inhibit teachers from doing this, as could finding enough time to do so, and of course, finding space in what could already be a full curriculum.

3. Research aims

With the above considerations of each model taken into account, this study's aims were to examine the efficacy of RP as a pronunciation model (when used as an audio recording) in a regional environment where it is less likely to be heard or used outside of the classroom. This was contrasted with an SSE pronunciation model (also pre-recorded) to ascertain which, if either of the two models, led students to perceive several pre chosen phonological features more accurately, or produce them more intelligibly. It was hoped that such a course of study may offer insight into the role of congruence between accent model and that of the local linguistic environment, and whether tuition of a local standard within its own community is more or less beneficial for student uptake.

To achieve these aims, the following steps were taken:

1. A syllabus for an explicit 5-week pronunciation course was prepared for two pronunciation classes: one using an RP model, and the other an SSE model. The syllabus included segmental features of high functional load, plus nuclear stress. Five weeks of material were created following the Celce-Murcia Communicative Framework to teach Pronunciation (2010), this is a set of steps which students gradually progress through over the course of a lesson. The steps begin with description and simple listening and phoneme articulation practice. Then, productive exercises gradually increasing in complexity and contextualisation were introduced, leading to learners using the target pronunciation autonomously in a contextualised task. Given the divergent models' diverse phonological systems, the contents of each group's course were not identical, for instance, the RP group received tuition on the intrusive /r/, whereas the SSE group learned emulating SSE's rhotic style of pronunciation; the syllabus the course followed will be described in detail in chapter 4.3.2 and 4.3.3.

2. The course was administered to two groups: a primary group receiving explicit tuition using SSE as a pronunciation model (via recording), and a secondary group receiving RP pronunciation instruction (also via recording).

3. Both groups were assessed, first diagnostically prior to any participation on the course, and then summatively following 5 weeks of tuition, so as to ascertain whether the use of either

target model better supported student perception/ production while in a regional environment (a Scottish university setting).

4. A control group was also assessed but did not take part in any of the explicit instruction, as a means of comparison.

3.1 Research questions

As students were tested on both their perception and production of English, this study attempted to answer the following set of questions:

1. Which model, from a choice of two, RP or SSE, best supports international students' perception and production of English while studying in Scotland?
2. Does congruence between the local linguistic environment and classroom pronunciation model, in this case, a Scottish university and an SSE model, support greater student perception and production?

Finally, through use of the control group:

3. Is extensive exposure to English without explicit pronunciation instruction sufficient contact for students to improve their perception and production of English?

3.2 Hypothesis

It was hypothesised that students assigned a place in the SSE group had greater potential to improve their perception and production, and thus, achieve higher scores than those in the RP or Control group, due to congruence between their new linguistic environment of Scotland and matching classroom pronunciation model.

4. Methodology

4.1 Overview

The study was conducted at the University of Strathclyde in Glasgow over 5 weeks of the English Language department's 12 week pre-sessional English programme. This is a preparatory course for entry into university faculties, and involves 21 contact hours per week of task-based communicative and collaborative learning within an academic context, e.g. lecture listening, reading for research, writing a research project and giving an oral presentation. The students who participated in the study were enrolled on the pre-sessional programme and arrived in Module 1, i.e. weeks 1 – 4; their participation derived from an invitation to all module 1 students calling for volunteers. Those who volunteered were randomly assigned a place in one of two groups: an RP pronunciation model group or an SSE pronunciation model group. Groups adhered to the University of Strathclyde's regulations regarding number of students per classroom, capping the maximum number of participants at 16 per group.

The study began with a diagnostic evaluation of the students' production and perception, after which they were requested to attend 10 hours of pronunciation training: one 2-hour session per week. Within the allocated class time, students in both the RP and SSE groups followed a very similar syllabus, with differences occurring only on the features where RP and SSE phonology diverge, for instance, the different realisations of /r/, the different rules for lengthening and shortening vowels, and the different realisation of nuclear stress, full details of which can be found in section 4.3.2 and 4.3.3. The study concluded with a post-training evaluative assessment. Results were analysed quantitatively to identify any significant patterns.

A final control group also participated in the study, but without attending the 10-hour pronunciation course. This group was included so as to establish whether any improvements in scores that occurred were due to the explicit pronunciation tuition, or simply instances of implicit learning which developed upon exposure to the 21 hours of weekly English tuition all participants were receiving. The control group was tested diagnostically and summatively using the same means as the RP and SSE groups, but did not receive any other specific pronunciation training.

4.2 Participants

As previously mentioned, all participants were volunteers and non-native English speaking students who had arrived in Scotland in the 7 days preceding the start of the study. All were enrolled and participating in the University's pre-sessional programme before entry into faculty in September 2016. The students began the course with a similar language level, an overall IELTS 5.5 with no skill lower than 5; this represents an intermediate level of ability. All participants were 18 years old and above, with Chinese being the most prominent nationality.

Both the RP group and SSE group began with 16 participants each, but only 10 in each continued the study until the final week. In the RP group, out of the 10 taking part, 9 were female and 1 was male, all of whom were between the ages of 22 and 26. All participants described their mother tongue as Mandarin Chinese.

In the SSE group there were also 9 female students and 1 male, all of whom were aged between 22 and 29 years old. 7 participants were native speakers of Mandarin Chinese, 1 of Cantonese, and the remaining 2 participants spoke Thai.

Finally, in the Control group, although the diagnostic test was taken by 21 participants, only 10 returned to complete the evaluative test. Out of the 10 who completed both assessments, 5 were male and 5 were female, between the ages of 21 and 37 years old. 6 participants stated that their mother tongue was Mandarin Chinese, while 1 spoke Cantonese, 1 spoke Korean and 2 spoke Thai. To encourage participants to join the control group, they were offered 1 free pronunciation class later in the pre-sessional programme, after the 5-week study was completed. It is presumed that this was a more preferable option to control group members than committing to a 5-week programme of study.

4.3 Lesson contents

4.3.1 Means of Selection

The contents of the 5-week pronunciation course included a range of segmental and suprasegmental phonological features, chosen due to their importance for communicative intelligibility as seen in Jenkins' Lingua Franca Core (2000), and Functional Load Theory (King, 1967), which ranks segmental contrasts according to their importance for intelligibility (King, 1967; Catford, 1987; Brown 1991). While the study could have focused only upon the sounds in which the most significant differences exist between RP and SSE, Functional Load Theory was instead chosen as the means by which consonant and vowel sounds were selected,

due to the desire to meet the students' needs. Providing them with tuition in the features considered a priority for their intelligibility meant that the course was potentially of use to them outside the pronunciation classroom in their daily communication and throughout their pre-sessional course. Functional Load Theory's ranking procedure meant that identification of the items most likely to negatively affect students' intelligibility was swift due to its categorising of contrasts with a percentage score; the higher the score, the more likely problems ensue when mispronounced. The means by which linguists such as Catford (1987) and Brown (1991) identified the functional load score of segmental contrasts was due to factors such as 'frequency of minimal pairs, the neutralization of phonemic distinctions in regional varieties, segmental position within a word, and the probability of occurrence of individual members of a minimal pair.' (Munro & Derwing, 2006).

The use of Functional Load Theory was further strengthened by Munro and Derwing's 2006 study in which it was tested with 23 Cantonese speakers. It was found that the mispronouncing of high functional load items had a greater impact on listener perception than mispronunciations of low functional load items. They concluded that 'the functional load principle can be effectively employed in guiding some aspects of pronunciation instruction.' (p1).

4.3.2 Selected Segmental sounds

As can be seen in Table 1, all of the contrasts selected for use in this study possess a high ranking in accordance with Functional Load Theory.

Contrast	Percentage ranking
l/r	83 %
ɪ/iː	95%
p/b	98%
t/d/	72%
t/s	81%

Table 1: Functional Load of selected contrast by percentage (Catford, 1987)

The study's only two vowel sounds ɪ/iː were taught alongside tuition on factors influencing vowel length. The RP group learned, in accordance with RP and the Lingua Franca Core, that vowels are lengthened or shortened according to whether they are followed by a voiced or

unvoiced consonant sound. In contrast, the SSE group were taught about the Scottish Vowel Length rule (Aitken, 1981), and the conditions whereby vowels are lengthened, such as before a voiced fricative, across a morpheme boundary, or before an /r/ sound. However, students were not taught or given any specific information on differences in vowel quality between RP and SSE; a potential oversight. This is discussed further in the limitations section on page 52.

Additional features included in the 5-week course also included consonant clusters (word-initial and word-final), again this was due to their inclusion in the Lingua Franca core.

4.3.3 Selected Suprasegmental Features

The final element to be included on the pronunciation course was the suprasegmental feature of Nuclear stress, also known as Tonic stress. This is the act of making one word, often the final content word in a clause, more prominent. Participants in the RP group were introduced to the 'louder, higher, longer' principle involved in emphasising this word, with a rise then fall pitch action to represent 'higher'. To help them visualise this pitch change, Gilbert's Pronunciation Pyramid (2008) was used in their workbooks, with the peak of the pyramid aligning with the peak vowel of the final content word. The SSE group were instructed in a similar format, but, in accordance with the Glasgow standard accent, their pyramid was inverted, and participants were taught to place a fall then rise over the final content word. The pronunciation materials can be found in Appendix C: lesson 2. Jenkins (2000) describes the act of placing nuclear stress as one of the most integral structural elements in speech, drawing on previous research such as Hakuta's identifying of 'routines and patterns' (1974), 'lexical sentence stems' (Pawley & Syder, 1983), and 'Lexical Phrases' (Nattinger & De Carrico, 1992).

A summary of the lesson contents and organisation can be seen below in Table 2.

Lesson	Segmental contrasts:	Consonant clusters	Vowel duration	Suprasegmentals
Diagnostic assessment				
1	**/l/r/** **/p/b/**			
2				**Nuclear Stress:** Stressing the prominent word in a tonic group
3	**/t/d/** **/t/s/**	Word-initial clusters including: **/t/d/s/** e.g. straw/ drop		
4	**/I/ i:/**		Vowel Length	
5	**Review of weeks 1-4**	Word-final clusters including: **/p/b/l/r/t/d/s/** e.g. crisps/hands		
Evaluative Assessment				

Table 2: Syllabus broken down over 5 lessons

4.4 Lesson Procedure

All lessons followed the Celce-Murcia Communicative Framework to teach Pronunciation (2010), a set of five steps which students gradually progress through over the course of a lesson. The steps begin with description and simple articulation practice before gradually increasing in complexity and contextualisation, leading to learners using the target pronunciation autonomously in a contextualised task. A more detailed breakdown of the stages is as follows:

1. Perception: Introduction to the target phonological features with a clear presentation of the sound. 'Tools' such as paper, drinking straws, or even hands can be used to allow students to kinaesthetically feel where articulators produce sound and the facial movements needed (Brinton, 2012).

2. Perception – listening discrimination: students listen to a pronunciation model and develop sound awareness. For example, in the case of a segmental feature, providing examples of the feature in minimal pairs and relying on students to identify the correct one. Alternatively, students could work in pairs with read aloud exercises, enabling them to take turns reading and identifying the odd words out (ibid).

3. Production - controlled practice: Students engage in individual practice based on the articulation of the target language using exercises such as tongue twisters, read aloud sentences, games, or work with a partner to read a contextualised dialogue (ibid).

4. Production - Guided practice: students complete exercises combining the target pronunciations with contextualised language (ibid).

5. Communicative practice: students must work on fully contextualised tasks balancing content with articulation; this could involve a role playing communicative activity where a message must be relayed with attention paid to both intelligibility and specific content (ibid).

The full materials for each lesson are available in the appendix.

4.5 Audio Recordings

Despite both the RP and SSE classes being led by an SSE speaking teacher, all recordings for the perception tasks were provided by two additional speakers: one RP and the other SSE. While ideally the course would have been led by both an SSE and an RP teacher acting as a live model, time constraints and difficulty locating speakers of the appropriate accent made this impossible, what is more, it would also have been difficult to control for other factors, such as the teacher's skills and rapport with the class. The decision was therefore made to use pre-recorded audio models of the target accent. Two females were used: one 40 year-old female with an RP accent, and the other a 52 year-old female with an SSE accent from Glasgow. All audio recordings were made under sound studio recording conditions so as to ensure their quality and avoid the potential for any background noise which could hinder student comprehension.

While audio recordings were not the initial intended type of model, they do in fact emulate the scenario in which many teachers administer pronunciation instruction: pre-prepared photocopy-ready materials combined with targeted pronunciation audio recordings. Such a combination can be a flexible resource, and particularly helpful for less experienced or less confident teachers, or indeed for student self-access.

4.6 Motivations

As students elected to participate in the study, a questionnaire was administered after diagnostic testing in order to ascertain their reasons for wanting to take part. A variety of reasons were predicted for their enrolment, for instance, self-motivated students with specific ambitions for their L2 may volunteer in an effort to further improve their pronunciation in respect to their own goals. Alternatively, students could have chosen to participate having received negative feedback from colleagues, friends, teachers, or even strangers, when trying to put their English into practice. The questionnaire included both closed and open questions allowing students to provide further detail for their reasons. The questionnaire document is available in appendix C.

4.7. Assessment

4.7.1 Perceptive Diagnostic and Evaluative testing instrument

At the beginning of the course, the students participating in the study undertook a perception test consisting of 63 items designed to include the contrasts that would be included in the lessons. The items and response options were pre-printed in booklet form, and allocated to each individual. Participants were then tested in a group in their classroom, and the audio material was presented over speakers.

The test was broken down into two sections, the first of which consisted of 53 contextualised minimal pair sentences, for example: 'I think it's light/ right'. 27 of the sentences were spoken by an RP speaker, and the remaining 26 by an SSE speaker. Due to an error made while constructing the test document and some incorrect target sounds being accidentally included, certain sentences were removed at a later stage, prior to being coded. As such, while students completed a test of 53 items, in total, only 48 were used for statistical analysis, these are listed on the following two pages.

During the test, participants were instructed to listen to the sentences being read aloud, circling the word they heard. To ensure they fully comprehended the instructions, two examples plus answers were provided at the beginning of the test, as was additional time of 1 minute per page to allow students to read the sentences prior to the recording's commencement.

An extra contrast, ɔ/o, which was not taught during the 5-week course, was also included in the test as a control. It was inserted so as to establish whether or not participants were able to improve their perception of segmentals implicitly, through their attendance of 21 hours of weekly pre-sessional classes, and not via explicit instruction. All of the sounds included in the

diagnostic and evaluative perception test can be found in Table 3 below. Correct answers are underlined and in bold for identification.

Item	Test A	Test B
/r/	**Pre-vocalic:** **Red** right **rock** road **wrong** rice **reader** rump **Post-vocalic:** **turf** **sure** **tart** dart surf **sour** **sure**	**Pre-vocalic:** Reef **right** rake **wrong** race **read** rot **rhyme** **Post-vocalic:** beer **pier** **tear** deer **reader** leader
/l/	**Leaf** light **lake** long **lace** lead **lot** lime	Lead **light** lock **load** long **lice** leader **lump**
/ɪ/	**Bid** live **ship** hit **fill** lives **bins** gins	**Live** pick **lip** hit **din** fit **kin** sin
/i:/	Bead **leave** sheep **heat** feel **leaves** beans **jeans**	Leave **peak** leap **heat** dean **feet** keen **seen**
/p/	**Pie** pin **pull** pet **peach** pat **ping** pill	**Pine** pike **pier** pole **pin** pig **pugs** peat
/b/	Bye **bin** bull **bet** beach **bat** bing **bill**	Brine **bike** beer **bowl** bin **big** bugs **beat**
/t/	**Tin** **ten** tell tip **tub** **tart** tip tig **tell** **till** Tower time **tweet** **tent** ton	Tin **tail** tip **toe** **tack** tot tea **tear** **turf** **time** tail **tie** **told** tea
/d/	**Die** den **dip** dart **dig** dill **dime**	**Din** dale doe **dot** deer dime die **deal**
/s/	Sin **sell** **sure** sub **sip** sell **sour** sweet **sun**	Sail **sip** sack **sea** surf **sail** sold **so**
/ɔ/	Caught fawn **lawn** drawn **bought** Saw raw	**Nought** form **fall** ought chalk **talk** **law** flaw
/o/	Coat **phone** loan **drone** boat **Sew** **row**	**Flow** note **foam** foal **oat** **choke** tone low

Table 3: sounds included in diagnostic and evaluative perception test

Items that were originally included in the test but then discarded from analysis due to being either a distractor or the incorrect target sound were as follows:

Caught/ cot

Nought/ not

Awful/ offal

Chord/ cod

Fawned/ fond

Awed/ odd

Taught/ tot

Raw/rot

The limitations section on page 52 goes on to discuss the perception test's contents in more detail.

The second section of the test included a dialogue of 10 sentences, of which, once again, half were spoken by an RP speaker, and the remaining half by an SSE speaker. Examples to clarify and 30 seconds to read were allocated to participants before section 2's audio began, then, with the script in front of them, participants followed the dialogue listening for the most stressed item in each sentence. Upon hearing this, participants then circled the word to highlight their selection.

Two tests were prepared, henceforth referred to as A and B (both can be located in Appendix A). They were the same in structure, i.e. each contained the same number of items testing each contrast, however, they contained different specific words and sentences in order to prevent practice effects. In case one test was inadvertently more challenging than the other, the order of the tests was counterbalanced across participants. That is, half of each group sat Test A for the diagnostic test in week 1 and Test B for the evaluative in week 5. The other half sat Test B for the diagnostic test in week 1 and Test A for the evaluative test in week 5. This prevented the possibility that differences in difficulty of the two tests could skew the results.

4.7.2 Production Diagnostic and Evaluative testing instrument

In the first class, students were randomly assigned a partner and given a role, either A or B. Once assigned, students were provided with a dialogue script to read aloud and 5 minutes 'rehearsal' time before moving to another classroom to be recorded. The script, a pre-made

diagnostic test, was sourced from *Clear Speech Teacher's Book* (Gilbert, 2014), but adapted to contain the phonological items being evaluated during this 5-week study. Students replicated this dialogue, performing the exact same role in the week 5 summative test. It was also planned that students' spontaneous responses would be assessed through use of Diapix tests. However, while these were included in the assessments and recordings, it was decided that due to time limitations the data would not be included in this study.

4.8 Analysis

Having completed the 5-week pronunciation course to establish if explicit tuition using either RP or SSE better supported students' perception or production of the pre-selected phonological features, the following analysis process was undertaken.

For the perception data, the answers from the diagnostic and evaluative perception tests were first coded in binary format as either correct or incorrect, and then descriptive statistics were generated using R to assess the overall percentages of correctly perceived contrasts. The second step in the process was the use of logistic mixed-effects modelling, better known as logistic regression (Baayen, 2008) which was conducted also using R. This analytical process was chosen due to its ability to identify potential relationships among a range of variables and their effect on the subject, in ways that were simply not possible with standard T tests or ANOVA. As such, this technique enabled statistical analysis of a set of *fixed* predictors and their effect on participants (such as age, most recent IELTS scores for listening and speaking, gender, whether the test taken was Diagnostic or Evaluative, the phonological contrast being tested, the accent in which an item was spoken, etc.). At the same time, the technique enabled the effects of *random* predictors to be taken into account: the specific participant, and the specific item being perceived.

For the production data, students' responses were coded into two categories according to whether or not they intelligibly produced the target feature. Once coding was complete, a variety of graphs were produced to establish overall percentages correct and incurred, before logistic mixed-effects modelling was applied.

In the following pages, descriptive data will be provided first, followed by the modelling results.

5. Findings

5.1 Perception

The predictors that were explored descriptively, and/or tested in the statistical modelling, were as follows:

Key factors in the design:

Test: Diagnostic (i.e. the test taken in week 1) vs Evaluative (i.e. the test taken in week 5). This predictor reflects the possibility that there will be improvement (or worsening) in performance over the course of the study.

Group: RP (i.e. participants who heard an RP pronunciation model), SSE (i.e. participants who heard an SSE pronunciation model) or Control (participants who did not do the pronunciation course). This predictor reflects the possibility that participants in some training groups might perform better than others.

Contrast: The specific phonological contrast tested: r/l, ɪ/ iː, p/b, t/d, s/t, ɔ/o, or the location of nuclear stress. This predictor reflects the possibility that participants might perform better or worse (or improve more or less) on some contrasts compared to others.

Item accent: The accent in which test items were spoken: RP or SSE. This predictor reflects the possibility that participants might perform better in the evaluative test when hearing the accent that was their pronunciation model during the course.

Demographic factors:

Gender; Most recent IELTS listening mark; Months spent studying English prior to the course. (Other demographic factors about which information was gathered using the questionnaire, such as participant age, motivation for studying pronunciation, and prior experience of pronunciation training, were not tested because initial exploration suggested they did not show relevant variation.)

Random factors:

Participant; Item

5.1.1 Descriptive statistics for perception data

To begin the analysis of the perception data, a bar chart was plotted to analyse the proportion of correct answers of the following contrasts: r/l, ɪ/ iː, p/b, t/d, s/t, ɔ/o, and the identification of nuclear stress, a suprasegmental feature, by group. Figure 1 shows that all the consonant contrasts apart from l/r were discriminated at ceiling, therefore the data were subset to exclude p/b, s/t and t/d from following graphs and analyses.

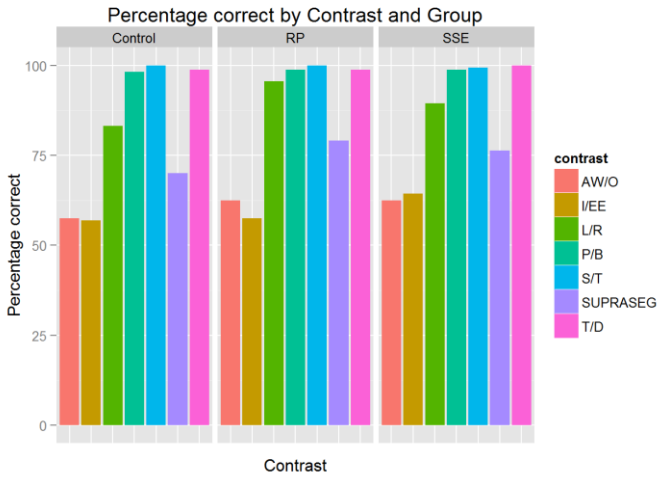

Figure 1: Percentage correct by contrast and group

Figure 2 shows the data patterns according to three elements: contrast, test (be it diagnostic or evaluative), and group (i.e. whether the groups followed a syllabus with an RP or an SSE pronunciation model). This figure gives an overall impression of which students showed improvement on which contrasts.

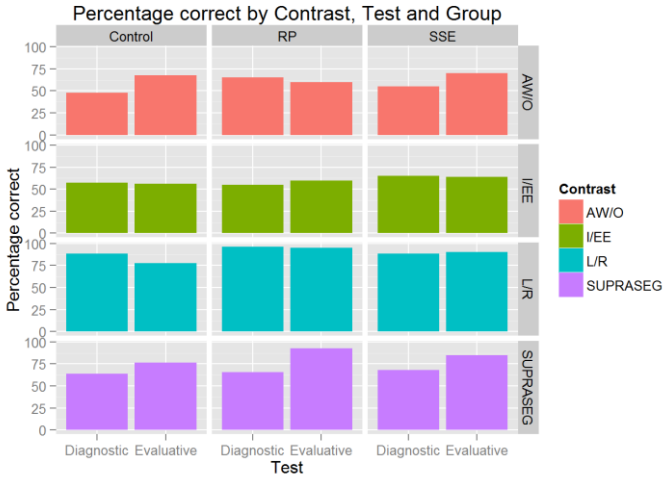

Figure 2: Percentage correct by contrast, test and group

Over the course of 5 weeks between the diagnostic and evaluative tests, it can be seen that the Control group, RP group and SSE group showed improvement over their recognition of the suprasegmental feature of nuclear stress with an increase of +13%, +30% and +14% respectively. These increases were larger than most of those that were found for the segmental features. Regarding the ɔ/o contrast, while both the control group and SSE group showed an increase in perceptual accuracy of +12 and +15 % respectively, the RP group experienced a decrease of -5%. Recall that this contrast was not included in the 5-week syllabus, and was instead included simply as an additional control to assess students' perceptive uptake on features not explicitly taught.

Moving on to the contrasts that were included in the ten hours of pronunciation instruction, first of all, regarding the ɪ/ iː contrast, once again results were inconsistent, but showed little change on the whole. While a slight drop of -1% is apparent in the control group, the RP group improved by +5% and the SSE group experienced a slight drop of just over -1%. Secondly, the consonant contrast l/r did not achieve consistent results across all participant groups. In the control group, accuracy decreased by -11%; dipped marginally by just under -1% in the RP group, and increased slightly in the SSE group, by just over +1%.

The next step taken was to assess students' ability to perceive items according to the accent in which they were spoken (SSE or RP). Figure 3 plots perceptual accuracy by item accent and group. It demonstrates that in the evaluative test, no matter the group, all participants scored higher on items pronounced in an RP accent than an SSE accent. The controls, RP group and SSE group achieved 71%, 79% and 75% respectively on RP items. In comparison, they achieved 64%, 69% and 72% respectively on SSE items.

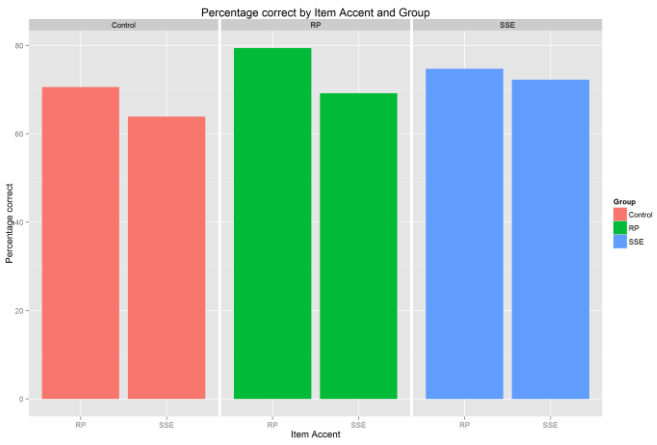

Figure 3: Percentage of correct responses by Item accent and Group.

Following this, in order to establish whether the accuracy of perception of items spoken in RP and SSE accent was affected by the training, Figure 4 shows the percentage of correct answers by item accent in tests A and B. While in the diagnostic test, the percentage of items correctly perceived in RP and SSE accents was relatively similar at 69% and 66% respectively, in the evaluative assessment there was a larger gap between percentage correct answers at 80% and 70%. The advantage for stimuli spoken in an RP accent seems to have strengthened after training.

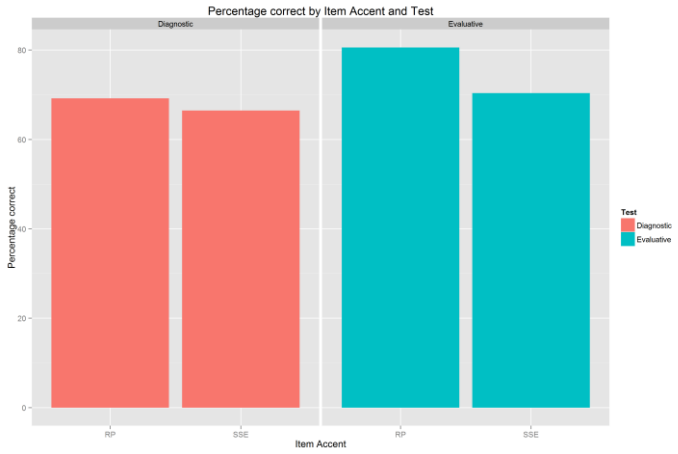

Figure 4: Percentage correct by accent and test

Finally, all three factors, item accent, test, and group, were assessed in order to establish whether the different groups of students' ability to perceive the items spoken in an RP or an SSE accent improved between the diagnostic and evaluative tests. As can be seen in Figure 5, by the final week of tuition, increasing numbers of both the RP and SSE groups were perceiving the items correctly, and in both accents.

Interestingly, for test items pronounced by an RP speaker, there were increases of +6% in the RP group and just under +14% among the SSEs, despite the latter group's exclusive tuition using an SSE accent. With regards to the SSE spoken items within the tests, again both groups improved, but in particular the RP group, despite their 10 hours of RP exclusive tuition. Their number of correct responses increased by +8% compared to the SSE group who achieved just under +4%. For the control group, students perceived an increased number of RP accented test items correctly at +13% in the evaluative compared to the diagnostic test, but showed a slight reduction in correct perception of items spoken with an SSE accent: -1%.

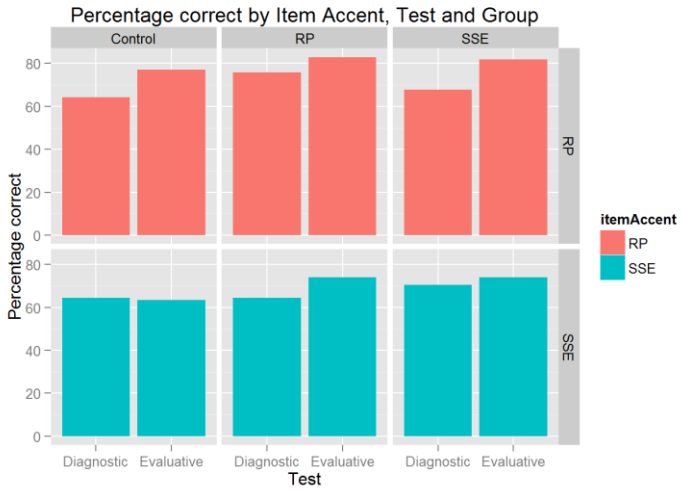

Figure 5: Percentage correct by item accent, group and test

5.1.2 Modelling of perception data

As described in 4.8, in order to test the significance of the observed patterns in the data set, statistical modelling was conducted. First, a simple model was constructed containing only random effects for participant and item. To this, predictors were successively added and tests carried out to check if each new predictor improved the model fit. The main effects and interactions will be detailed below: first, those that were tested but did *not* significantly improve model fit, and then those that did. Main effects that did not significantly contribute to the model fit were not retained in the model, these included: the months spent studying English prior to joining the course, the student's most recent IELTS listening mark, gender ($p<0.1$), the test version that participants sat as a diagnostic ($p=0.11$), and the accent in which a particular item was spoken (i.e. SSE or RP; $p=0.14$). In addition, the interactions among predictors captured in figures 1-4 were tested, and once again, interactions not improving the model fit were not retained in the model.

Several predictors in the data did yield statistically significant results. First of all, the predictor *Test* significantly improved the model fit (Chisq (1) = 16.599 $p<0.0001$), i.e. participants performed better overall on the evaluative than the diagnostic test. The predictor *Contrast* also improved model fit (Chisq (3) = 39.683, $p<0.0001$. Additionally, an effect of the predictor *Group* was observed (Chisq (2) = 5.9489, $p=0.05108$), that is the group participants joined, be it the RP group, which performed the best out of the three, the SSE group or the control group.

Significant interactions were also observed for *Group* x *Contrast* (Chisq (6) = 12.037, p = 0.06116), *Group* x *Test* x *Contrast* (Chisq (11) = 41.326, p<0.0001) and *Test* x *Item accent* (Chisq (2) = 11.919, p=0.002581).

In order to gain a deeper understanding of these interactions, and in particular, to understand the results that the SSE, RP and control groups achieved for each of the contrasts, re-levelling of the model was carried out. It was hoped that this would identify which contrasts improved among which participant groups. This testing revealed that only one segmental contrast, ɔ/ɔ, showed significant improvement from the diagnostic to evaluative test, for the control group (diagnostic vs. evaluative: p = 0.000341) and the SSE group (p = 0.00760), but not for the participants of the RP group (p = 0.960577). This result is surprising because ɔ/ɔ was the one contrast that was not taught (as outlined on page 28). For the other segmental contrasts, despite numerically greater improvement being shown by the RP group on the ɪ/ iː contrasts and the SSE group on l/r, these were not found to be statistically significant.

Regarding the suprasegmental section of the perception tests, the results revealed that while all groups improved significantly, the RP group achieved the greatest amount of improvement (p < 0.0001), in comparison with the SSE group (0.000165) and control group (0.001202).

Re-levelling was also used to explore the interaction of item *Accent* x *Test*: that, is, to determine how item accent (whether the speaker of the item had an RP or an SSE accent) affected listeners' performance at both the diagnostic and evaluative test (Figure 4). It was found that in the diagnostic test when comparing the RP item score with the SSE item score there was no significant difference between them (p = 0.598). However, this was not the case in the evaluative test, where the SSE item score was significantly worse than that of RP items (p = 0.001546).

5.1.3 Summary of perception data

What can be seen from the data overall is that while numerical increases and decreases occur in the perceptual testing after 5 weeks of tuition, as can be seen in figures 1 – 4, the modelling reveals that not all of these changes are significant. With regards to segmental contrasts, the only sounds experiencing significant differences was the un-taught ɔ/O, and this increase was not consistent across all groups, with only SSE and Control group participants achieving such a change in score. The other feature which did achieve a statistically significant result was that of the suprasegmental feature of nuclear stress, in which all groups improved, in particular the RP group. It can also be seen that items spoken in an RP accent tended to have an advantage, over SSE items, with bigger increases in percentage correct in all three groups, and this seems to strengthen as the test goes on.

5.2 Production

As the analysis of the perception data demonstrated that the consonant contrasts p/b, s/t and t/d were discriminated at ceiling, it was decided that the exploration of the production data should focus solely on features which had yielded significant results in prior analyses: l/r, ɪ/ iː, placement of nuclear stress, plus the added feature of consonant clusters.

Prior to the commencement of any statistical testing, the recordings of participants' production output, the pre prepared dialogue, were assessed both by ear, and in cases where output was less distinguishable, using the software PRAAT. This method was chosen due to this study's intention to look at several different features in participants' productive output, but with more focus on communicative success, rather than just phonetic realisation. All pre-selected phonological features were then awarded a score assessing their production from 0-2. 0 was awarded for the incorrect pronunciation of a feature or a complete lack of it, e.g. saying 'led' instead of 'red', 1 was awarded for an utterance which might cause misunderstanding if said in isolation, but when in context is minimally intelligible, e.g. if a student produced a vowel that was ambiguous, or less peripheral than / iː/ but not as central as /ɪ/, and 2 was awarded for an intelligible pronunciation of the pre-selected features. This method of assessment was chosen due to the fact that it was a simple scale to apply for a non-expert phonetician involved in the rating, but also because it reflected the variety of sounds which the students could have produced in response to the test instrument; while categorising students' productive output as

either right or wrong is more simple to code and analyse, it is not realistic to expect each participant to fall neatly into one of the two categories.

Although the course used two native speaking pronunciation models, an additional reason to assess the students in this way using the aforementioned grading scale and its focus on intelligibility rather than successful native-like production, was simply because it adhered to the increasing amount of literature suggesting that replication of native speakers is an unrealistic and unnecessary objective. However, despite the intention behind this decision and the choice to recognise minimal intelligibility with a score of 1, when it came to analysing participants' production data, the grading scale brought challenges. Unlike the perception data which was coded in a simple binary format, the scale of 0, 1, 2 prevented logistic regression being used. However, upon closer examination of the data in its raw form, it was seen that most participants were achieving either 0 or 2, with mainly the ɪ/ iː contrast producing scores of 1. As such, a decision was made to code scores as either correct or incorrect, with the few scores of 1 being re-categorised as 0.

5.2.1 Descriptive statistics for production data

As with the perception data, a two-step process was followed in order to analyse participants' production output in both the diagnostic and evaluative test. To begin with, a variety of scatter plots and bar charts were used to assess any overall correlation between the data and variables. These included prior pronunciation training, average lessons attended, gender, age, months studying English and feelings participants had about the model they were randomly assigned. Following this, in order to gain an overall perspective of participants' production scores over the 5 weeks of the study, bar charts were plotted, the first of which was designed to assess the percentage of correctly produced individual contrasts: l/r and ɪ/ iː, consonant clusters, and suprasegmental feature, i.e. the placement of nuclear stress.

As can be seen, in Figure 6, the highest scoring feature in each group is the l/r contrast, with the control group achieving an average of 85% across the two tests, the RP group 95.5% and the SSE group 89%. Following this, scores for the Control group and the SSE group follow a similar pattern, with consonant clusters achieving a score of 81% across both cohorts. Next, the suprasegmental feature of nuclear stress was where participants achieved 76.5% and 70.5% correct respectively. Finally, the segmental contrast ɪ/iː was where students achieved the lowest percentage of correct responses, with 61.5% in the control group and 66.5% in the SSE group.

The order of percentage correct was slightly different for the RP group however, in order, from the most accurately produced feature to the least, participants scored as follows: 95.5% for l/r, 78% for nuclear stress, 75% for consonant clusters and 65% for the ɪ/ iː contrast. As such, at this stage in the overall score of percentage correct, the RP group are achieving slightly more than the Control or SSE group participants in all features, except for consonant clusters. The features of l/r and ɪ/iː are consistent across all groups.

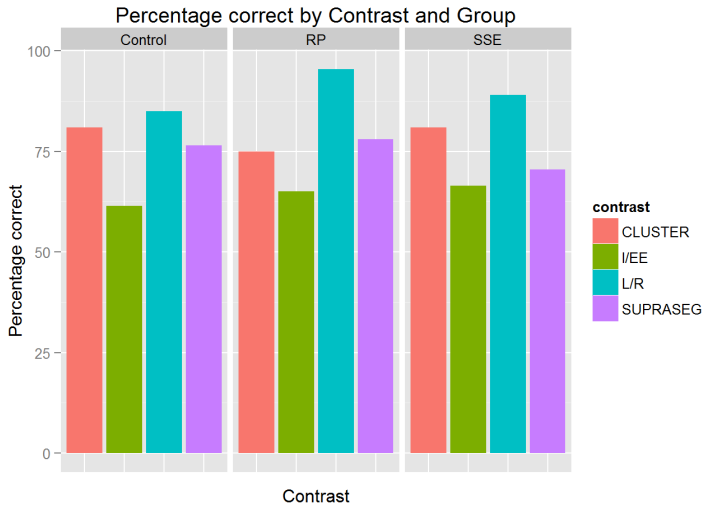

Figure 6: Percentage of correctly produced features by contrast and group, averaged across the diagnostic and evaluative tests.

The next stage in this process, once again mirroring the steps taken in the perception analysis, was to assess the overall scores not just by contrast and group, but also by test, enabling any progress made over the course of 5 weeks to be observable via comparison of the Diagnostic and Evaluative results. Figure 7 reveals that once again the RP group are achieving slightly higher scores in both contrasts, consonant clusters and nuclear stress over both tests. The highest scoring feature, the l/r/ contrast increased slightly by +2%, the suprasegmental score increased by +5%, consonant clusters by +11%, and the ɪ/iː contrast by 8%.

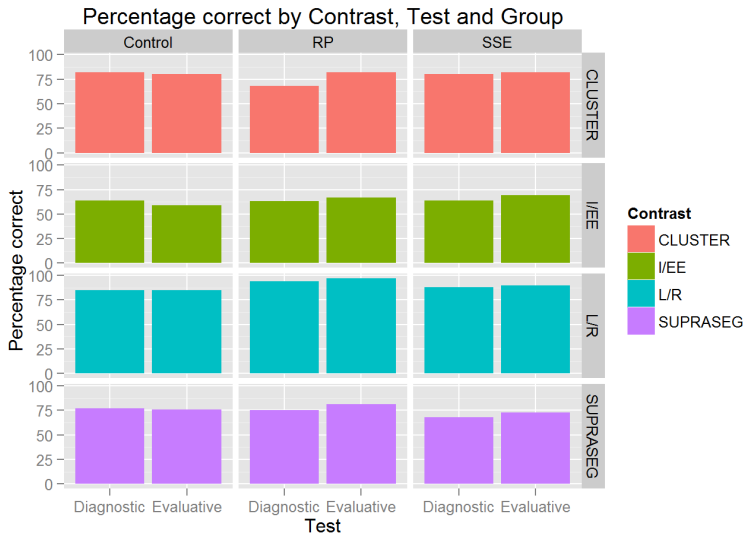

Figure 7: Percentage correct by contrast, test and group

The SSE group made very slight improvements over the course of 5 weeks in each of the assessed categories, but did not make quite as much progress as that of the RP group. Overall, the data show that the l/r contrast increases marginally by +4%, consonant clusters by +2%, suprasegmentals by +8%, and the ɪ/iː contrast by +8%.

Unlike the RP and SSE group participants, over the course of 5 weeks, control group participants who received no explicit pronunciation instruction, either made no improvements, or achieved a slightly lower overall score. The l/r contrast remained constant at 82% correct, also unchanged was the suprasegmental feature of nuclear stress at 75% correct. However, the percentage of correctly produced consonant clusters decreased minimally by -2%. Similarly, the correctly produced contrast I/i: contrast also decreased by -3%.

5.2.2 Modelling of production data:

In order to assess statistical significance in the production data, logistic mixed-effects methods modelling was again undertaken. The steps taken in this process began with the construction of a simple model containing just random effects for subject and item, and one by one adding predictors, and making model comparisons in order to discern which of the predictors improved the model fit. Those that improved model fit included length of time studying English, contrast, and test taken. Predictors that did not significantly contribute to the model fit were removed one by one, these included: most recent IELTS listening and speaking mark, and group, be it

RP, SSE or control. The main effects and interactions from these tests will now be detailed below.

Several predictors in the data did yield results which were observed to be statistically significant. First of all, length of time studying English improved the model fit. Test also marginally improved the model fit (Chisq (1) = 2.7605, p = 0.09662), and Contrast was also marginally significant (Chisq (3) = 7.0845, p = 0.06925). As such, the best model contained both test and contrast, but again, both were only marginally significant. While attempts were made to also assess test x group, the model failed to converge. Overall, a slight improvement can be seen in the predictors from diagnostic to evaluative, as seen in Figure 7.

Since the interaction of test x group was involved in the core predictions of the study, a new modelling approach was taken to enable the testing of it. The variable 'length of time' was left out, which enabled a model to be fitted including test and group. The test yielded the following: while group does not improve the model fit, the interaction of Test x Group does marginally (Chisq (2) = 5.0309, p = 0.08083). A marginally significant result was again observed for contrasts (Chisq (3) = 7.073, p = 0.06959). The marginal interaction of test x group signifies that when length of time studying English is removed, there was a significant improvement for the RP group from Diagnostic to Evaluative (p=0.02049). The SSE group did not improve significantly, but there was a potential trend (p=0.14085). No observable improvement was made in the Control group (p=0.43).

5.2.3 Summary of production data

While figures 5 and 6 hint at an upward trend in overall percentage of correct answers from Diagnostic to Evaluative test, when statistically analysed this was not the case for all groups. While potential trends seemed to emerge in the SSE participants' data, nothing significant was observed. However, the findings of the RP group do reveal a statistically significant improvement between the Diagnostic and Evaluative tests. In contrast, no improvement was made by the control group.

6. Discussion

The purpose of this study was to investigate the pronunciation model which best supported international students' perception and production of English while in a regional setting. Its objectives were to run two concurrent pronunciation courses, with participants in each group being exposed to either a pre-recorded RP pronunciation model or a pre-recorded SSE model. Given that the regional setting in question was the University of Strathclyde in Glasgow, it was expected that students would more frequently encounter the latter rather than the former accent. As such, it was hypothesised that congruence between local linguistic environment and pronunciation model had the potential to positively affect students ability to perceive the phonological features being taught on the course, and therefore, in accordance with SLA theory, go on to produce them more intelligibly. This chapter will now interpret the findings with regards to the above objectives.

6.1 Perception

6.1.1 Perception of Segmental Contrasts

The first of this study's aims focused solely on the question 'which pronunciation model best supports international students' perception of English while studying in a regional environment?'. Despite significant positive perception results emerging from numerous other pronunciation studies (Champagne-Muzar, Schneiderman, & Bourdages. 1993; Munro & Derwing, 2008; Saalfeld, 2012), and the numerical improvements observed in the raw test data hinting that a positive outcome might be observed, the 10 hours of explicit tuition did not engender statistically significant results. That is, although scores did improve going from the Diagnostic to the Evaluative test overall, these were not statistically significant, other than in the sounds inserted as a control, the tested but untaught: ɔ/O, perception which improved significantly in the Control and SSE groups.

There are several possible explanations as to why such a result occurred. First of all, a lack of perceptual improvement after an explicit course of study is not an entirely unique phenomenon. The term 'backsliding', referring to students whose scores regress rather than progress, is often mentioned in reference to studies where participants' scores decrease despite intensive tuition, and as such, these students remain stuck, unable to improve long fossilised structures and

sounds (Nakuma, 1998). In the case of the RP, SSE and Control group, only one segmental contrast in each group, ɪ/iː in the former group and ɔ/o in the two latter, improved numerically, and only the latter were significant. The remaining contrasts either decreased or remained unchanged. As such, fossilisation could be a potential reason behind many of the participants being unable to progress to the extent predicted.

Studies in the 1980s by Yule, Hoffman and Damico (1987) also found evidence of inexplicable backsliding and lack of progress in students after a period of explicit tuition. In order to determine if such a lack of progress was an unavoidable consequence of pronunciation tuition, and therefore likely to reoccur, the researchers conducted phoneme discrimination tests using contextualised minimal pair sentences on approximately 100 intermediate level ESL students after a 7 week course of pronunciation instruction. Once again it was found that some students were scoring lower in the post-course tests compared to the pre-course test. Such evidence led the researchers to theorise that while scores were not increasing, students were still reaching a pivotal developmental stage where their awareness was raised and they were able to identify their mistakes through self-monitoring, despite not yet being able to correct them. The researchers hypothesised that upon developing self-monitoring, the students who originally made no progress or whose scores decreased, would, in time, go on to improve (Yule, Hoffman and Damico, 1987).

Pronunciation courses which have had successful outcomes for perception and production include that of Munro & Derwing (2008). However, their explicit instruction of 10 English vowels with Vietnamese factory workers in Canada totalled 17 hours over the course of several months. As such, it could be theorised that a 10-hour pronunciation course over 5 weeks is simply insufficient time for all students to develop past Yule et al's self-monitoring stage, and go on to achieve higher statistically significant scores, particularly in those who have ingrained pronunciation fossilisation.

An additional potential explanation for lack of significant progress in perception between diagnostic and evaluative testing could be offered by Best's Perceptual Assimilation Model (PAM) (1995). The PAM states that perception errors can be derived from listeners unconsciously 'matching' new L2 sounds using their own L1 categories (Derwing & Munro, 2015). Therefore, instead of perceiving or producing a brand new L2 sound which does not exist in their own language, learners instead opt for the closest matching sound from their mother tongue inventory. Given that this study's East and South East Asian participants were

Chinese, Korean or Thai speakers, it is likely that perception of the contrasts ɪ/iː and l/r were the most troubling features for some, or at least with the latter contrasts, most troubling initially. In Chinese Mandarin and Cantonese speakers this could be due to an absence of both segmental contrasts (Swan & Smith, 2001). Korean speakers can also have similar problems with l/r distinctions due to both being represented by a single letter. What is more, in South Korea the distinction between long and short vowels is recognised as becoming increasingly rare, and heard mainly in older speakers (Kim-Renaud, 2012), thus perhaps making the ɪ/iː contrast more challenging for some (ibid). In Thai, while these contrasts do exist, in English they are often dropped for an acoustically closer approximation, which for /l/ is frequently the /n/ phoneme (ibid). /r/ often proves challenging too, and despite its occurrence in Thai, it is often mispronounced as /l/ (ibid). As can be seen from the perception data, given than none of the taught segmental contrasts showed significant increases in scores after 5 weeks, the PAM could be another potential explanation for this lack of improvement. Students simply matched new sounds to the closest relative within their own mother tongue.

Given the inclusion of one if not both of the ɔ/o vowels in the inventories of Cantonese (Zee, 1999), Mandarin (Lee & Zee, 2003), Korean (Lee, 1999) and Thai (Tingsabadh, Kalaya & Abramson, 1993), the potential for Best's explanation seems increasingly plausible, with the majority of participants, that is, both the SSE and Control groups, improving on these scores over the course of 5 weeks. Whilst no explicit tuition of this contrast took place, it could be that the participants in these groups were learning implicitly. Implicit learning is defined as the 'non episodic learning of complex information in an incidental manner, without awareness of what has been learned' (Seger, 1994, p163). Given that all of the study's participants were enrolled and completing 21 hours per week of intensive pre-sessional classes at the same time as the explicit pronunciation course, there was certainly opportunity for implicit learning to have taken place and for them to have become accustomed to the pronunciation of the ɔ/o vowels in Scottish English.

Another interesting finding of the perception tests was that of the higher scores of RP accented items. In both the diagnostic and evaluative tests, the RP items are achieving more correct responses than the SSE items, with RP scores making a marked improvement after 5 weeks. Despite initially predicting that the study's participants will be exposed to more SSE than RP, and thus, become more accustomed to it, having examined the results, it now seems plausible that despite living and studying in a country where Scottish Standard English is more likely to

be encountered, their exposure to that accent has in fact, remained low. Instead, it is highly likely that the majority of participants' communication is with other L2 speakers, such as those sharing their student accommodation and pre-sessional lessons. In terms of classroom contact, the teachers on the 2016 pre-sessional course had a mixture of L1 and L2 accents, and the listening elements of the syllabus followed contained RP, GA or L2 accents, a feature of most international publications. Therefore, it seems that outside of the SSE pronunciation classroom, exposure to Scottish English, even when within Scotland, is likely to be low, at least in the early stages of the year abroad. This contrasts with a likely familiarity with RP, which could have existed from participants' earliest English studies, due to its prevalence in coursebooks and learning materials around the world, not to mention its presence in global media also.

The effects of hearing an unfamiliar accent was explored in research by Adank and McQueen (2007) in a study in the Netherlands. The researchers tested the effects of a familiar accent compared with an unfamiliar one on Dutch participants' ability to complete an animacy task. Despite 20 minutes of exposure to the unfamiliar accent in question, during testing participants still took longer to identify animate items from inanimate ones when pronounced by the unfamiliar accent model, compared to when pronounced by a familiar model. As the researchers conclude, it appears that 'accent affects speed of word comprehension.' (ibid, p1928). Therefore, it seems possible that even those enrolled in the SSE pronunciation class could have been affected by lack of overall exposure and familiarity with SSE in comparison to RP.

6.1.2 Perception of Suprasegmentals:

A positive result that did occur over the course of the 5-week training period was the statistically significant increase in perception of the suprasegmental feature Nuclear stress across all groups, and in particular, the RP group. Specifically, participants improved in their ability to identify the location of nuclear stress in sentences within a dialogue. Once again, it can be theorised that the improvement in the control group who received no explicit instruction, was due to implicit learning that was occurring. Over the 5 weeks, they were immersed in a native speaking country, and exposed to 21 hours of weekly class time, therefore it is certainly possible that these factors led to the Control group's increasing perception of Nuclear stress. It could also explain why they improved, but not to the same degree as that of the SSE and RP group who did receive explicit tuition.

While both the RP and SSE groups improved in their perception of Nuclear stress, the RP group improved more. This could be due to the fact that the SSE group were instructed in this feature using the local Glasgow standard, which contains a fall then a rise pitch change on the final content word, and not a rise then fall pitch change, as seen in RP and other standard accents. As mentioned in chapter 4.2.3, the materials used to introduce Nuclear stress to the participants contained a visual representation of this pitch change, Gilbert's Pronunciation Pyramid (2012). While in the RP group, the pyramid was printed in its standard format, with the peak aligning with the peak vowel in a stressed content word, in the SSE group the pyramid was inverted, highlighting to participants what was likely to be a novel feature. As with the perception of segmentals, it can also be theorised that a lack of familiarity with this pitch change could have led to its slightly smaller increase in its perception over the 5 weeks.

With regards to the fact that all participants improved more on perception of suprasegmental features than segmental, it is possible that this was due to the intrinsic acoustic salience of stress, that is, that stressed syllables are simply clearer and easier to hear than others. Once introduced, exposed through practice, and reviewed spontaneously throughout the 5 weeks, participants could have found it easier to perceive when it reoccurred, than that of some of the segmental contrasts. What is more, from monitoring participants as they worked, the materials seemed to present stress in a way that was simple and easy to understand. Two features which seemed to be particularly useful included instruction as to the typical class of a stressed word, i.e. normally verbs, adjectives, adverbs or nouns. It is possible that this became a strategy participants used to confirm their decision about the perception of stress. Additionally, the tasks and visual representations of pitch change in this lesson seemed to be particularly effective and engaging, and some students began spontaneously gesturing in time with the pitch change of the pronunciation model they heard, raising their hands higher or lower in time with the stress patterns. As such, as an awareness raising exercise, it seemed to present stress in a simple but effective way.

6.2 Production

6.2.1 Production of segmental contrasts and suprasegmentals

The second objective investigated in this study was to answer the question 'which pronunciation model best supports international students' production of English while studying in a regional environment'. It was hypothesised that congruence between the local linguistic environment and that of the pronunciation model used in class could better support students' perceptual uptake, and in turn, positively influence their production. That is, it was expected that the SSE group would improve most because their input was congruent with the local linguistic environment. However, the results gathered over the 5 weeks of tuition demonstrate divergence between the three groups, and this is reflected in a marginally significant interaction between test and group. While the Control group's raw scores demonstrated a decrease in intelligible production of the pre-selected phonological features, a potential positive trend was seen in the raw scores of the SSE participants. Different still was the results of the RP group who made statistically significant improvements in production by week 5. However, as a caveat, this significant effect was only found when students' months of learning English was not included in the analysis. It is possible therefore that the group difference is driven by differences in the group membership, with the RP group containing a higher proportion of learners who due to their amount of previous study, were better able to benefit from the content of the course. Nevertheless, since the study was looking for general patterns, the following paragraphs will now attempt to discern possible reasons for the group differences in both segmental and suprasegmental production.

In accordance with literature linking explicit pronunciation tuition with increases in production of segmentals and suprasegmentals, such as that of Saito & Lyster (2012) and Munro & Derwing (2008) the RP group did make significant improvements in their production. However, it is not possible to state unequivocally where those improvements appeared, that is, upon which contrast or features, due to the statistical model failing to converge when multi-way interactions with contrast and group were included.

Another factor which could have affected productive outcomes positively or negatively, is that of participant attitude towards their randomly assigned pronunciation model. While this study did take into consideration participants' feelings towards different pronunciation models, it was not measured in lesson 1 when students first discovered which pronunciation model they had been assigned, RP or SSE. Instead, it was initially measured in the pre-course questionnaire,

which participants completed before the course began. The final question in the document asks: 'Which model should students learn at the University of Strathclyde in Glasgow?' before offering them a range of options, such as Received Pronunciation, Scottish Standard English, an L2 accent, and General American, with space to justify their answers. However, in lesson 1, it became evident that student attitude had the potential be more influential than previously thought; this was due the vocal responses of students upon being told which pronunciation model they would be taught. Many in the RP group audibly exclaimed 'Yes!' and there were smiles and positive responses around the room. On the other hand, there was visible and audible disappointment in the SSE group and several students asked if they could be re-assigned to the RP group. Due to this reaction, a question was inserted into the post-course questionnaire, asking participants, retrospectively, to rate their reactions upon learning which pronunciation model they would be taught. However, the data that emerged from this retrospective question was not found to be statistically significant.

As such, with no measurement made of participant attitude in lesson 1 upon learning of their group's pronunciation model, it is impossible to report beyond anecdotal evidence or with absolute certainty if they had positive or negative feelings towards the model they were assigned, and whether those reporting negative associations performed worse than those with positive associations. Regardless of this, however, attitude has been known to play a role in students' productive output. In accordance with the experience of Yule, Hoffman and Damico in their 1987 study, Kennedy and Trofimovich (2010) noted the role of student attitude on overall pronunciation improvement in their own research conducted in a university setting. The study followed a group of 10 English language students who received 13 weeks of tuition with a panel of listeners rating their diagnostic and evaluative recordings. No significant differences were identified in the participants' productive outputs, but pronunciation journals they had been instructed to keep in order to reflect on their experiences on the course demonstrated that those whose attitude to pronunciation instruction was more positive, viewing lessons as a vehicle to higher learning, received higher scores. Participants whose journals simply reflected on the mechanics of pronunciation, as something to be learned segment by segment, received lower scores.

Studies such as that of Dalton-Puffer, Kaltenboeck, & Smit, (1997) also reveal learners with well-developed preferences for and associations with certain types of English pronunciation model. Their study measured attitudes of 132 German speaking students upon exposure to a pre-recorded monologue spoken by a range of speakers: three with native speaker accents (RP

and GA) and 2 with non-native accents. The students rated the native speaker accents more positively than those of the non-natives, with the researchers hypothesising that students favoured the accents they were most familiar with, either from exposure during school tuition, or from stays in countries where they heard particular forms of native speaker English being spoken. As stated by Holmes (2001, p343) 'people develop attitudes towards languages which reflect their views about those who speak the languages, and the contexts and functions with which they are associated'. It therefore seems that the potential for the participants in the current study to have had pre-developed feelings, attitudes or attachments towards RP or SSE accents cannot be ruled out. If attitude had been influential, it is possible that it could have had a positive or negative effect on the RP or SSE group.

A final attempt to account for the lack of significant progress in the SSE or Control group could be explained by learner motivation. Recruitment of volunteer participants for this study occurred during the first 2 days of their pre-sessional course, and within one week of their arrival in Scotland. Hughes, Trudgill and Watt (1979) state that for many students it is at this time that they experience feelings of shock, and 'are often dismayed, to discover how little they understand of the English they hear.' The writers go on, enumerating details of why this might be the case citing listing speed and manner of native speaker speech, which is vastly different to what is learned at home. Such a scenario could lead to students who are highly motivated to improve their pronunciation upon arrival, but later, once settled socially and in their respective classes, may feel less enthusiastic about attending to their pronunciation needs. What is more, given that all participants' student visa status were conditional, they were under significant pressure to pass their pre-sessional course, and thus the assignments from their weekly 21 hours was likely seen as more important, with pronunciation improvement becoming less of a priority.

Upon returning to the central research question in this study, which pronunciation model best supports international students perception and production of English when in a regional environment?, the results seem to suggest that while over 5 weeks SSE can be used as a successful pronunciation model when teaching perception and production of suprasegmental items, and of certain segmental contrasts, student attitude and familiarity with it could limit overall success in the short term. Over a longer course, or for students with more exposure, or more enthusiasm to study SSE, it is possible that better results could be achieved.

Alternatively, based on the results, RP could be a successful pronunciation model to use for teaching production of segmental or suprasegmental features, although as mentioned previously, the results do not state which of these features it is most suitable for. It could also be confidently administered as a model to teach perception of suprasegmental features, and segmental features to a lesser degree.

Given that the overall results do not show one model as being significantly better than the other in all aspects of perception and production of English, some teachers may remain unconvinced about either's suitability. If we were to remove accent as a target and instead focus on the most important features of intelligibility, as with the Lingua Franca Core, would students achieve more? It is possible, however, in terms of segmental perception and production, rather than simply selecting items due to their High Functional Load, in accordance with the LFC and as was done in this test, a more rational step for classroom use might be to use a needs analysis procedure. While this would not be suitable for testing and analysing pre-selected features, for general instruction it would enable teachers to establish what needs to be covered, rather than was is most prescribed. While Functional Load Theory accurately predicted difficulties in l/r and ɪ/ iː, the remaining segmentals appeared to be less challenging for participants on this course, and time could have been better spent on alternative pronunciation features which were more challenging for them.

6.3 Limitations

There were several factors which had an impact on the running of the 5-week study and its diagnostic and evaluative testing procedures. As seems common with classroom-based research, some of these were out of my control, appearing spontaneously either prior or throughout the duration of the course.

Time was one of the biggest limitations affecting this research. Having to prepare and run the course during the very busy summer pre-sessional programme so as to control for participants level of English, (everyone beginning in June must meet the same IELTS score) meant that appropriate classrooms were scarce, as was equipment such as laptops needed to run the audio. My own duties increase exponentially at this time of year also, which also left little room to react to any changing or unexpected circumstances, such as tests running on later than expected.

The testing procedure measuring both perception and production was extremely time consuming. The control group participants' diagnostic test was besieged by technical delays, which is likely the reason only half came back to complete the evaluative test. A colleague who was a qualified Cambridge speaking examiner was able to help in the recording of production interviews to reduce the time taken, but it was still a difficult practical exercise in balancing classroom availability, student availability and patience, and technological reliability. While it may have been easier to run the study at a different time of year, the likelihood of finding enough participants, all of the same level, who were willing to commit to a 5-week programme, is unlikely.

In hindsight, the perception test document was not as comprehensive as it could have been. As seen on page 29, it mainly included items which contained the target sound in the word initial position. It was only when marking it that I realised how disproportionate these were compared to words with the target sound post-vocalically in medial or final position. It is possible that this made perception of the test items easier, especially those beginning with p/b, t/d, and t/s, and ultimately, this may have influenced the high scores students achieved, leading to their subsequent removal during statistical analysis. In any future replication of this study, a perception test containing words with sounds in initial, medial and final position would be a necessity.

Another feature which could have made a difference to the students' overall uptake, this time in the lesson materials for those within the SSE group, was a more explicit focus on vowel quality in the ɪ/iː vowels and how they differ between SSE and RP. This was not included during lessons, and its absence could have been partly responsible for the lack of improvement in these vowels within the SSE group.

The number of participants was also a constant worry. Although originally there were 21 control group participants, and 16 in both the SSE and RP classes, by week 5 this had reduced to 10 in each. While I was still able to statistically assess the results of those 30 and see some trends and significant results appearing, with a greater number of students, results could have been significantly clearer, with a more detailed picture concerning pronunciation models emerging.

In previous pronunciation classes, male students have sometimes objected to a lack of male pronunciation models, as such, it was always planned to have both male and female models of

both accents recorded and used throughout the study. However, due to limitations in time, and problems in locating a male RP speaker, this was eventually abandoned, and instead two female speakers were recorded. In future, this would be something I would like to be able to implement.

Finally, as mentioned previously, one limitation which appeared only when lesson 1 was underway was accounting for the effect of attitude. It would have been interesting to discover if students' attitudes upon being told their assigned pronunciation model had an effect on their likelihood to score higher marks. In any future studies, this would be an interesting additional test to run.

7. Conclusion

The purpose of this study was to ascertain which pronunciation model, from a choice of two, RP or SSE, best supported international students' production and perception of English while studying in a regional environment, such as Scotland. Given the increasing numbers of students choosing to study in Scotland, it was a pertinent question to investigate, and one which has revealed interesting results.

It was hypothesised that participants in the SSE group would improve due to increased congruence between their new linguistic environment of Scotland, and the pronunciation model used in class. However, upon reflection, the results seem to demonstrate that while the participants were studying English in Scotland, this does not necessarily mean they were spending enough time immersed in it to become sufficiently familiar with its sounds, and for their attitude towards it to change. By the end of the course, participants had only been in Glasgow for 6 weeks, and the SSE group had only received tuition in SSE for 10 hours. For students to become more accustomed to this new model, and for changes in attitude towards it to occur, a longer period of exposure would likely be necessary.

With regards to RP, it was also expected that a model sometimes described as 'phantom' (Daniels, 1995) in regional speaking locations such as Glasgow, would be less supportive to students' perception and production. However, a statistically significant score has demonstrated that familiarity and attitude towards RP may exert a stronger influence upon students than was predicted before the study began.

While the Lingua Franca Core influenced much of this study's inclusion of segmental and suprasegmental features, perhaps its most relevant recommendation is that a target accent should not be forced upon students, and that ultimately they should have a choice as to what they learn, with teachers guiding and supporting them as they work towards meeting their linguistic goals. In this study, students were randomly assigned a class and a pronunciation model, and though some asked, they were unable to swap to a different group, such as from the SSE to the RP group. This appeared to worry some students, and make others visibly happy. Such an experience raises the question about whether it is right to be imposing and adhering rigidly to just one pronunciation model. Or, as with the variation in circumstance and speaker L2 students may encounter, should teachers be offering more flexible choices. For instance, through the use of a needs analysis, teachers can target the most problematic features. In addition, teaching with a variety of pre-recorded pronunciation models, instead of one, enables students to choose which they would like to hear, and thus allows for comparison and discussion of different phonemic qualities, which could ultimately lead to greater awareness of the phonological diversity which exists within the English language and within their new linguistic environment.

Going forward from this research, my recommendations based on the data accrued are twofold. First and foremost, that more class time be spent on the instruction and practice of suprasegmental features, particularly stress. As the results demonstrate, explicit tuition appears to positively affect both perception and production, possible due to the salience of such features making it easier for students to perceive, and thus improve upon. Secondly, that instead of teaching a model accent and range of prescriptive features, time should be taken to identify students' strengths and weaknesses in English pronunciation, and from that a flexible syllabus can be created. However, such an undertaking can require large amounts of time and preparation which not all teaching staff have. As such, in lieu of that, pre-recorded pronunciation activities, using a variety of accent models, may be a suitable alternative.

It is hoped that while this study has not provided conclusive data proving that one model is better than the other in all aspects of pronunciation, it has highlighted that every pronunciation model, be it RP or SSE, has features that will be harder for some and easier for others, both in terms of perception and production. In this study's setting, a university in Glasgow, neither SSE nor RP seems to be the perfect fit for all aspects of pronunciation instruction. Individual student experiences, backgrounds, and motivations all seem to contribute to overall success.

As such, for the future, more consideration of our learners' needs in the pronunciation classroom can only make for a more beneficial, and more productive learning experience.

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Appendix A

Test A

Ex1: Listen to the sentences and circle or underline the word ***in bold*** that you hear.

Example:
Did you see that ***fight/kite***?
How did you ***use/ lose*** it?

1. Did you see that ***leaf/ reef***
2. I'd like a **bid**/ ***bead***
3. Did she say ***pie/ bye***?
4. How do you spell ***tie/ die***?
5. Is it a ***sin/ tin***?
6. Did you **saw/ sew** it?
7. What does ***fawned/ fond*** mean?

8. Take the first ***right/ light***.
9. Did you ***live/ leave*** there?
10. I need a ***pin/ bin***.
11. I meant to say ***ten/ den***.
12. She said ***sell/tell*** it.
13. How do you spell **sure/ show**.
14. How do you spell ***awed/ odd***?

15. Is there a ***lake/ rake*** in the park.
16. Was it a big ***ship/ sheep***?
17. A ***bull/ pull*** on the rope.
18. ***Dip/ tip*** it in the water.
19. Pay for your ***sub/ tub***.
20. I'm sure she said **raw/ row**.
21. It's very ***long/ wrong***.
22. It will ***heat/ hit*** him in the morning.

23. It makes a good ***pet/ bet***.
24. Bring me a coffee and a ***tart/ dart***.
25. Did you ***tip /sip*** it?
26. It was the best **caught/ coat** today.
27. How do you say ***taught/ tot***?

28. This ***race/ lace*** is ruined.
29. She didn't ***feel/ fill*** it.
30. I saw the ***peach/ beach***.
31. He said ***'tig/dig'***.
32. ***Tell/ sell*** her some advice.
33. Don't touch that **fawn/ phone**.

34. Can you ***lead/ read***?
35. He ***leaves/ lives*** for London.
36. My dog loves a ***pat/ bat***.
37. Here's the ***till/Dill***
38. It's a little ***tower/ sour***.
39. I want a big **lawn/ loan**.
40. I don't know the word ***raw/ rot***.

41. Can you say ***rot/ lot***?
42. I want ***bins/ beans***.
43. What does ***ping/ bing*** mean?
44. I don't have the ***time/ dime***.
45. Did you say ***sweet/ tweet***?
46. How do you pronounce **drawn/ drone**.

47. Is that a ***rhyme/ lime***?
48. How many ***gins/jeans***?
49. Bring me the ***pill/ bill***.
50. There's a ***tent/dent*** in it.
51. I think it's a ***sun/ ton***.
52. Does **bought/ boat** have an 'a' in it?

Ex2: In this exercise, in each sentence there is one word that is stressed (pronounced louder and stronger) more than the others. Underline the most stressed word you hear.

Example:
What do you think?

I'm from Spain.

A: Do you think food in Scotland is expensive?

B: Not really.

A: Well, I think it's expensive.

B: That's because you eat in restaurants.

A: Where do you eat?

B: At home.

A: You must like to cook.

B: Actually, I never cook.

A: So what do you eat?

B: Usually just cheese.

A: That's awful.

Test B

Listen to the sentences and circle or underline the word ***in bold*** that you hear.

Example:
Did you see that ***fight/kite***?
How did you ***use/ lose*** it?

1. Is that ***red/ lead***?
2. Did you ***live/ leave*** there.
3. Is that ***pine/ brine***?
4. What a ***tin/ din***!
5. I can see the ***sail/ tail***.
6. The ***flaw/ flow*** changes the music.
7. Did she mean ***caught/ cot***?

8. I think it's ***light/ right***.
9. It's the most popular ***pick/ peak.***
10. Is that a ***pike/ bike***?
11. There's the ***tail/ dale***.
12. ***Sip/tip*** it slowly.
13. There's a ***nought/ note*** there.

14. The spare key is under the ***lock/ rock***.
15. Her ***leap/ lip*** was bad.
16. Sit and enjoy the ***beer/ pier***.
17. That's not a ***toe/doe***.
18. The ***tack/ sack*** is made of leather.
19. Is the ***form/ foam*** alright?
20. Actually I said ***nought/ not***.
21. The driver said 'it's a big ***road/ load'***.

22. It will ***hit/ heat*** him in the morning.
23. The ***pole/ bowl*** doesn't go there
24. It's just a ***tot/ dot***.
25. Can you smell the ***tea/ sea***?
26. Did you have a little ***fall/ foal***?

27. Was the essay ***long/ wrong***?
28. The ***Dean/ din*** of the church.
29. There's a ***bin/ pin*** over there.
30. I saw her ***tear/ deer***.
31. Is there good ***surf/ turf*** there?
32. How do you spell ***ought/ oat***?
33. The reviews said it was ***awful/ offal***.

34. She said she has ***lice/ rice***!
35. I didn't like the ***feet/ fit***.
36. Did you say ***pig/ big***?
37. Can you give me the ***Dime/time***?
38. Did you say ***tail/ sail***?
39. It's ***law/ low*** here.

40. Can you be the ***reader/ leader***?
41. Who is ***kin/ keen***?
42. I hate ***pugs/ bugs***.
43. The goldfish ***tie/ die***.
44. I ***sold/ told*** it already.
45. Don't ***chalk/ choke*** on it.
46. What ***chord/ cod*** did you say it was?

47. There's a ***rump/ lump*** of beef here.
48. How do you spell ***sin/seen***?
49. I think she meant ***peat/ beat***.

50. That’s a nice ***teal/deal***.
51. Because I said ***so/ toe***.
52. The ***talk/ tone*** was strange last night.

Ex2: In this exercise in each sentence there is one word that is stressed (pronounced louder and stronger) more than the others. Underline the most stressed word you hear.

Example:
What do you think?

I'm from Spain.

A: Do you like to travel?

B: Yes, I love to travel!

A: Did you travel last year?

B: Yes, we went to Australia.

A: Did you like it?

B: It was fantastic.

A: What did you like the most?

B: Without a doubt, the weather!

A: Was it boiling?

B: Well yes, but I love the sun!

A: Lucky you!

Appendix B

Production test script

Two university students meet.

A: Excuse me, where's the library?

B: It's on the corner of Pin Street and Mill road

A: Sorry, did you say Mill road or Meal road?

B: No, not Meal, Mill road. It's right there, straight ahead of you.

A: Thanks, I need to buy some books for my classes.

B: Oh, then you need the book shop, you can't buy books in the library. You can only borrow them.

A: Oh, I must have confused the words. They are different in my language.

B: Me too, I get mixed up with Spanish words that sound like English language words, but have different meanings.

A: Are you studying Spanish?

B: No, but Spanish is my first language. I study Russian literature.

A: Russian Literature? Right, that must be difficult. I'm studying English now, but in September I will study law.

B: Really? My brother studied law here.

A. Did he pass his law degree?

B: No, he didn't pass, he quit.

A: That's a shame. What does he do now?

B: Well, he has changed course twice since then. First he did statistics; he hated that. Now he's studying music. He loves it, but it's not cheap!

A: Sure, statistics is hard. But that's great he's now picked music. Does he perform live?

B: Not yet, but he plans to some day.

A: Well I wish him luck. And to you too. It was nice to meet you.

B: Thanks, good luck to you and nice to meet you too. Bye.

(Adapted from Gilbert, J. (2012). Clear Speech 4th Edition.)

Appendix C

Pre Course questionnaire

1. When did you arrive in Glasgow? _____
2. How old are you? _____
3. Are you male or female? _____
4. What is your nationality? _____
5. What is your first language (mother tongue)? _____
6. Do you speak any other languages? If yes, which?

   _____
7. How long have you been studying English? Years: _____ Months: _____
8. What were the results of your most recent IELTS exam? Please include overall score and individual skill results.

   Overall: _____

   Reading: _____

   Writing: _____

   Listening: _____

   Speaking: _____

9. What pronunciation training have you done in the past?
   Circle <u>all</u> of the options you have tried:

   a) I have taken specific pronunciation classes

   b) I have used the internet to watch videos on pronunciation

   c) I have completed pronunciation exercises from books or online

   d) I have copied films and television to improve my pronunciation

   e) I have done nothing specifically to help my pronunciation

10. Why did you choose to participate in this study?
Circle <u>all</u> the options that relate to you:

a) Sometimes people have difficulty understanding my spoken English
b) In the past a teacher or other person has told me I should improve my pronunciation
c) I want to develop a native speaker accent
d) I'm interested in pronunciation and want to learn more
e) Other (please detail why below):

_____

_____.

11. In your opinion, which type of English accent should students learn to pronounce while studying at the University of Strathclyde?

a) Received Pronunciation (also called BBC English/ The Queen's English/ Standard British)
b) Standard Scottish English (the formal, educated form of English in Scotland)
c) General American English
d) The English spoken by Non-native speakers who have achieved a very high level of English, or who are bilingual
e) All of the above
f) None of the above

Please give a reason for your answer below:

_____

_____

_____

_____

_____

Appendix D:

End of Course Questionnaire: RP group

Attendance on course: Please tick the boxes of the lessons you attended.

Lesson 1:	**Lesson 2:**	**Lesson 3:**	**Lesson 4:**	**Lesson 5:**
• /l/ /r/ /p/ /b/	• Stress	• / t/ /d/ /s/ • Consonant Clusters	• / ɪ / / i: / • Vowel length	• Review of weeks 1 -4 • consonant clusters

Please tick the correct box:

	Yes	No	A little knowledge
Before coming to Glasgow, did you know the accent would be different from the Standard British/ BBC English accent?			
If you answered Yes, how did you know?			

	Yes	No
Before coming to Glasgow, did you prepare or do any research into Scottish Standard English?		
If yes, what did you do?		

	Excited	Happy	Curious	Neutral	Anxious	Upset	Sad
How did you feel when you were told this course would use Standard British English, not Scottish Standard English?							
If you answered anxious, upset or sad, why?							

Please tick the appropriate box below to indicate your opinion of this programme.

	Excellent	Good	Average	Poor
Rate your knowledge level of Standard British English pronunciation before attending this course				
Rate your knowledge of Standard British English pronunciation on finishing the course				
Please rate the course content (of lessons 1-5)				
Please rate the course materials (booklets, worksheets etc.)				

	Yes	No	Partially
Was the course what you expected?			
Why?			

	Yes	No	Partially
Did you find the course difficult?			
If you answered Yes or Partially, what parts were difficult?			

What do you think were the most useful parts of the course? Why?	
What do you think were the most useful parts of the course? Why?	

	What were the main things that you learned on this course? Please list a minimum of 2 examples.

End of Course Questionnaire: SSE group

Attendance on Course: Please tick the boxes of the lessons you attended.

Lesson 1:	**Lesson 2:**	**Lesson 3:**	**Lesson 4:**	**Lesson 5**
• /l/ /r/ /p/ /b/	• Stress	• / t/ /d/ /s/ • Consonant clusters	• ɪ/ iː / • Vowel length	• Review of weeks 1 -4 • consonant clusters

Please tick the correct box:

	Yes	No	A little knowledge
Before coming to Glasgow, did you know the accent would be different from the Standard British/ BBC English accent?			

If yes, how did you know?	

	Yes	No
Before coming to Glasgow, did you prepare or do any research into Scottish Standard English?		
If yes, what did you do?		

	Excited	Happy	Curious	Neutral	Anxious	Upset	Sad
How did you feel when you were told this course would use Scottish Standard English and not British Standard English?							
If you answered anxious, upset or sad, why?							

Please tick the appropriate box below to indicate your opinion

	Excellent	Good	Average	Poor
Rate your knowledge level of Scottish Standard English pronunciation before attending this course				
Rate your knowledge of Scottish Standard English pronunciation on finishing the course				
Please rate the course content (of lessons 1-5)				
Please rate the course materials (booklets, worksheets etc.)				

	Yes	No	Partially
Was the course what you expected?			
Why?			

	Yes	No	Partially
Did you find the course difficult?			
If you answered Yes or Partially, what parts were difficult?			
What do you think were the most useful parts of the course? Why?			
What do you think were the least useful parts of the course? Why?			

	What were the main things that you learned on this course? Please list a minimum of 2 examples.

Appendix E

The table below lists the contents of the 5 weeks of lesson materials contained within this appendix. Any lessons marked in blue will have identical contents in both the RP and SSE group, therefore a duplicate will not be provided. However, any lessons where contents diverge will be marked in pink, and all materials will be provided.

Week	RP Group	SSE Group
1	/p/ /b/ /r/ /l/ workbook	/p/ /b/ /r/ /l/ workbook
2	Nuclear Stress	Nuclear Stress
3	• /t/ /d/ /s/ workbook	• /t/ /d/ /s/ workbook
3	• Initial consonant clusters	• Initial consonant clusters
4	• ɪ/i: workbook	• ɪ/i: workbook
4	• RP vowel length	• SSE vowel length
5	• Final Consonant clusters • Review of weeks 1 -5	• Final Consonant clusters • Review of weeks 1 -5