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**Does the Hong Kong Native English Teacher Scheme have an effect on learner's intelligibility of 'Standard' accents?**

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## **Abstract**

The present study investigates the effect of the Hong Kong Native English Teacher Scheme on learner's intelligibility of 'Standard' accents. 120 participants from six classes studying for Associate Degrees were given a language learning history questionnaire and an intelligibility test where they were required to listen to and orthographically transcribe speakers from America, England, Hong Kong and Australia. It was found that in spite of being taught by a Native English Teacher there was no positive correlation in intelligibility of the 'Standard' participants had been taught. Furthermore the Hong Kong Chinese speaker of English was for all classes the most intelligible, pointing to a "matched interlanguage speech intelligibility benefit" (Bent and Bradlow, 2003).

## **Chapter 1: Introduction**

This study seeks to uncover whether students who have been taught by a Native English teacher in Hong Kong have improved intelligibility of the 'Standard' they were taught over and above other 'Standards' and Hong Kong Chinese English.

The notion of intelligibility is of interest to the author and awareness of the issue came to light in his first teaching post in South Korea. The principle of the school requested that he spoke with an American accent as this was what the students were used to and could therefore understand best. Shifting from a British accent to an American one was tough at best, and was not adhered to by the author. The students came to accept the new 'Standard' offered to them after a short period, which demonstrated that intelligibility improved after familiarity had been gained.

In the present study a two pronged approach has been used in order to investigate whether familiarity with a native 'Standard' has improved participants' intelligibility of that 'Standard'. Participants were given a language learning history questionnaire to discover whether they had been taught by a NET and from where that NET was from. Secondly an intelligibility test was devised to see how well participants could score on utterances spoken by American, English, Hong Kong Chinese and Australian speakers. Correlations were sought between participant's language learning history and the intelligibility test to see whether familiarity based on exposure to a particular accent had an effect on the overall scores. In addition participant's feelings regarding particular accents – ease of understanding and accent goals were investigated in an attempt to understand underlying patterns and to underpin the main topic of intelligibility.

This paper is divided into seven chapters. The first chapter is an introduction to the topic.

Chapter two is the literature review which investigates studies of intelligibility and introduces themes closely related to the present study. The Native English Teaching Scheme is also described in order to give the reader the necessary background to the research. Key concepts are defined and explained.

Chapter three presents the research questions used in the present study.

Chapter four explains the methodology used in this study and describes the participants, the instruments used to collect data, information about the four speakers used in the intelligibility test and finally administering of the test.

Chapters five and six give an analysis of the data and reports the findings uncovered by the language learning history questionnaire and intelligibility tests. Descriptive and inferential analysis is used to present this information to the reader.

Chapter seven discusses the results uncovered by the statistical analysis and also describes other factors that were uncovered in order to give the reader the opportunity to see how participants perceived particular 'Standard' accents and if, at all there was any effect on intelligibility.

Chapter eight offers a conclusion to the study and gives some suggestions on improving the efficacy of the pedagogical approach of the NET scheme which could have a benefit to learners' intelligibility of 'Standard' accents in the Hong Kong context.

## **Chapter 2 Literature Review**

This chapter will begin by defining key terms in the research questions in order to give the reader a foregrounding on the themes central to the current study.

Previous studies and accounts of intelligibility of 'Standard' and nonnative accents will be examined in this literature review to determine the applicability of the research questions defined in section 3 below. Prior research on intelligibility of accents in relation to familiarity with the speaker will be reported so as to further contextualize the present study.

This chapter will also explore the merits of the Hong Kong Native English Teacher Scheme (hereafter known as the NET scheme) and inform the reader of the key tenets of the scheme as determined by the Hong Kong Education and Manpower Bureau (EMB). In addition a description of English teachers in Hong Kong schools will be given.

### **2.1 Accent**

Accent as defined by the Oxford English Dictionary is:

“a way of pronouncing a language, associated with a country, area, or social class”

Huckvale (2004) gives this introduction to his website on accent research:

“A speaker's accent marks him or her as a member of a group. These groups have been defined by geographical areas, by socio-economic class, by ethnicity, or for second language speakers, by the identity of the speaker's first language.”

Carter and Nunan (2001, p.218) describe it on similar terms as a social and/or regional variety of a language which differs from others in pronunciation. McMahon (2002, p.92) is also in accord describing “...accent, in phonological terms [as] an idealised system which speakers of that variety share.”

Stevens (1985, p.457) defines accent more precisely as referring “to pronunciation, to the sounds, rhythm and intonation of the language”

## **2.2 Accent and dialect**

Accent and dialect are not to be confused as the same thing. Accent relates to a variety of language which differs from another variety of language in terms of pronunciation whereas dialect differs from others not only in pronunciation but also in vocabulary, grammar and word order (Roach, 2000, p.2). Furthermore dialect differs from the standard literary language of the culture in which it exists; the Cockney dialect, for example, of East London, England being an often cited example. So though accent and dialect may be considered “skin and blisters” (‘sisters’ in the Cockney dialect), they are in fact different.

It is beyond the scope of this study to test intelligibility of English dialects on Cantonese speakers of English, rather to see if the ‘Standard’ accents of English which the participants in this study may or may not have been exposed to and thus gained some familiarity with in the classroom have had any effect on intelligibility ratings. As a result, the focus of this study is on the intelligibility of the General

American Accent (GA), the Australian accent (AE) and Received Pronunciation (RP). In addition participants will be tested on their intelligibility of a “Clear Chinese” speaker of English (CCE).

### **2.3 Intelligibility and Comprehension of accents of English**

The difficulty in defining intelligibility is described by Kachru (1982, 48) where the reader is drawn to the multitude of variables at work in intelligibility, not least the parameters which should be used to establish intelligibility between regional and national varieties and those with an exclusively international role. Kachru asks many questions of the term, the most pertinent related to the present study being:

“Who is the judge for determining intelligibility in various varieties of English – the users of the varieties themselves, or the idealized native speakers?” (*ibid*). In the present study, the participants will be the judge of which variety of English they find to be the most intelligible.

Other research into intelligibility has attempted to look at the variety of variables at work.

Intelligibility is described by Kent (1992:9) as ‘the *sine qua non* of spoken English’ and as such mentions there would be a serious effect on communication if speech is produced in a way that affects intelligibility.

Derwing and Munro ( 1997) and Munro and Derwing (1995,1999; in Munro *et al*, 2006:112) distinguish intelligibility from comprehensibility in L2 speech thus:

“*Intelligibility* [is] the extent to which a speaker’s utterance is actually understood [and] *comprehensibility*...refers to the listener’s estimation of difficulty in understanding an utterance...”

Included in this explanation is a third dimension; that of *accentedness* described as “the degree to which the pronunciation of an utterance sounds different from an expected production pattern” (*ibid*). The three factors determine very different aspects of how one could consider L2 speech, though as Munro *et al* go on to describe, tasks where listeners are required to evaluate both how strongly accented an utterance is and how difficult is to understand give reliable results on equal-interval rating scales (Brennan & Brennan, 1981; Burda, Scherz, Hageman & Edwards, 2003; Derwing & Munro, 1997; Thompson, 1991; cited in Munro *et al* 2006).

Although explicit in the above definition is the L2 speech factor, one could make the argument that the three factors described equally apply to intelligibility and comprehensibility of Native English speech.

#### 2.4 Studies of Intelligibility

In Brown’s (1968) study, intelligibility is not separated from comprehensibility by the same succinct definitions as above, rather the terms ‘intercomprehensibility’ and ‘comprehensible’ are used by the author. The relationship between accent and comprehension is the focus of Brown’s study, where the ‘intercomprehensibility’ of three accents commonly used on a university campus in Ghana was studied. There, 45 listeners who were speakers of Twi and Ewe were asked to rate RP and Ghanaian speakers with Twi and Ewe as their mother tongue. It was found that “a reader from their own L1 is rather more comprehensible than anyone else” (*ibid*: 188).

Further studies in the same vein include that by Wilcox (1978) who investigated the effect of accent on listening comprehension. 320 students at a university in Singapore were asked to complete a cloze test based on a recording of four texts recorded in four English accents, namely GA, RP, ‘Standard’ Australian and ‘educated’

Singaporean- Malaysian. In all but one case the average score for the local English accent prevailed and Wilcox concluded that this 'educated' local accent was the accent best understood by the ESL/EFL learner, although as Wilcox acknowledged, the results were somewhat contaminated by the rate of delivery of the Malaysian speaker who had the slowest delivery rate of the four speakers. This *may* have resulted in higher comprehension.

The degree of intelligibility between native and non-native varieties of educated English was further studied by Smith and Rafiqzad (1979). Eight recordings of speakers from Asian countries were obtained in addition to one recording of a GA graduate native speaker. These recordings were sent to eleven Asian countries with the proviso that at least thirty educated people were to listen to each tape and complete a cloze test, listening comprehension questionnaire and personal data sheet. Smith and Rafiqzad's expectations that the native speaker sample *and* that of their fellow countrymen would be more intelligible than that of speakers from one of the other countries did not tally with their findings. The opposite was true – the native speaker was always found to be least intelligible which led them to conclude that "since native speaker phonology does not appear to be more intelligible than nonnative phonology, there seems to be no reason to insist that the performance target in the English classroom be a native speaker" (*ibid.*: 57).

Ortmeyer and Boyle (1985) studied 228 Hong Kong subjects in a comprehension exercise of four speech samples, two Native speakers (American and British) and two Hong Kong Chinese speakers of English (one who spoke 'clear' English, the other 'unclear' English). Two test measures were involved – a dictation test and a listening comprehension exercise with multiple choice questions. The authors were looking for what they called a 'model accent advantage' where it was felt that the subjects

would have better results with the accent that they had been exposed to most. The results for the dictation test, however, showed that results were 'significantly' higher for both Native speakers than for the Hong Kong Chinese speakers. One may posit that the inclusion of an 'unclear' native speaker of English may well have produced different results. Nevertheless their study portrays that there seems to be no advantage to support a mutual intelligibility of accent in that particular instance.

Bent and Bradlow (2003) put forward the claim that there is a "matched interlanguage speech intelligibility benefit" where a non-native listener finds intelligibility of a highly proficient non-native speaker from the same L1 background "equal to the intelligibility of the native talker" (*ibid*:.1607). Though this benefit is supported in their study (the highly proficiency non native 'talker' was rated higher than the native 'talker'), this did not extend to low proficiency talkers. However, intelligibility ratings given by non-native listeners to low proficiency speakers who shared their L1 were higher than the ratings given to those who did not share their L1. This perhaps exemplifies the difficulty that low proficiency speakers often have in communicating in an L2 when they do not share the same L1.

Munro *et al* (2006) scrutinize the mutual intelligibility of L2 speech in light of the influence of a variety of factors, such as the properties of the speech itself, and L1 background of the listener. They feel that these factors *might* have been at work in their study. 48 non-native speaker participants from four L1 backgrounds (Cantonese, Japanese, Polish and Spanish) were rated by 40 listeners (10 native 'listeners' and 10 'listeners' whose L1 was Cantonese, Japanese and Mandarin respectively). They found that there were moderately high correlations between groups in intelligibility ratings whether or not the listener shared an L1 background, or was non-native or not. Furthermore it was reported that "all four groups of listeners agreed the majority of the time about which of the 48 speakers were most and least intelligible."

(*ibid.*:126). Their findings pointed to the properties of the speech itself being a determiner in how L2 speech is perceived despite the listener groups coming from such a range of countries.

Gass and Varonis (1984) show that listeners' intelligibility of non-native English speech varies to a great degree based upon their familiarity with the non native speaker. ESL teachers, for example, found non-native speakers more intelligible than so called naïve listeners who had less contact or experience with these speakers. It has been noted by the author of the present study that this has often been the case in the ESL classroom and a two way effect is often in operation; particularly when the teacher has taken over a class of students who were taught previously by a teacher who used a different Standard English. The familiarity effect can have negative effects on intelligibility of the new model of English presented to the students.

The following section describes the Hong Kong Native English Teacher (NET) scheme which was introduced by the Hong Kong government to improve language standards of the local students. This study will seek to determine, in part, whether the native variety most familiar to learners due to the influence of a NET in their language classroom has had an effect on intelligibility of that same variety to which participants have been exposed to most.

### 2.5 The Hong Kong Native English Teacher (NET) Scheme.

In 1997 in his first policy speech, Tung Chee Hwa, the new Chief Executive of the newly established Hong Kong Special Administrative Region (HKSAR) outlined his desire to recruit seven hundred NETs in order "to make an immediate impact on improving the English language standards of our students" (HKSAR 1997). It was felt

that in order for Hong Kong to have the competitive and economic edge over its Chinese sister cities of Macau, Shenzhen and Shanghai, that “trilingualism and biliteracy” be upheld as is reflected in the seven key learning goals of the basic education system.

NETs were introduced to Hong Kong secondary schools in 1997, and both NETs and English Language Teaching Assistants (ELTAs) have been a feature in Hong Kong primary schools since 2002. A NET is allocated to two primary schools if they operate six classes or more and schools without a NET are offered a cash grant by the Education and Manpower Bureau (EMB) to employ the services of an ELTA. Since 2004/4 all primary schools in Hong Kong have had access to a NET on a sharing basis (EMB).

## 2.6 Role of the NET

According to the overview of the NET scheme on the EMB website, the scheme aims to support and strengthen English language learning by “providing an authentic environment for children to learn English and develop their confidence in using spoken English for communication”. NETs are also required to develop “innovative learning and teaching methods, materials, curricular and activities to suit the needs of local students.” Therefore the NET is not only employed as a teacher, but to deal with “the perceived low standard of English among local Hong Kong teachers, raise the quality of English teaching in schools and improve students’ English proficiency.” (Herbert & Wu, 2009).

The aim of the NET scheme therefore, although inexplicit, was to change the face of the Hong Kong work place from monolingual Cantonese speaking to a socio-linguistic climate that was bilingual and bicultural, matching the vision of the HKSAR

government of Hong Kong as an “international financial centre and entrepot” (Lai 1999, cited in Herbert and Wu, *ibid*).

A feature of this would be the assumption of the author of this study that the NET scheme has positive benefits for Hong Kong students in relation to intelligibility and familiarity with a Native variety of English. Does the ‘model accent advantage’ (Ortmeyer and Boyle, 1985) exist for Hong Kong students based on comprehension of a particular Native English accent that they have been exposed to most; will their intelligibility of that English be higher as a result of this contact? It appears that the EMB hope that the use of NETs in Hong Kong schools will increase students’ intelligibility and familiarity with Native Englishes, one of many facets that would add to an improved socio-linguistic climate in the city.

### 2.7 English Teachers in Hong Kong Schools

Despite the role of the NET in providing a standard model of English to Hong Kong students, the efficacy of the scheme has come under some criticism, not least from NETs themselves where they consider themselves “tokenesque” in that they may teach over fifteen different classes in one week, “spreading themselves thin” (personal communication with five anonymous NETs, February – May 2009). Therefore the model of English that their local English teacher speaks serves as the main source of input the learners receive in the classroom on many occasions.

Most local English teachers the author has encountered ‘speak English with a “localized” accent of some kind, what might be called a “Hong Kong” accent’ (Bolton & Kwok, 1990, p.150). Since most English teachers in the Hong Kong context are Cantonese, local English could be seen to be ‘Cantonized’ in pronunciation

(McArthur, 2003) as the main accent model that students come into contact with is the localized one.

### Chapter 3. Research Questions

Based on the above literature review this study hopes to answer the following questions: Does familiarity with a particular native variety of English increase intelligibility of that variety for non-native speakers? What effect does familiarity with a particular variety of English in the classroom have on intelligibility? Is there evidence that can be discovered in the Hong Kong context that shows learners find speech produced by a native variety of English which they have had some familiarity with more intelligible than other varieties, including the local variety? Is native speech necessarily the more intelligible to the L2 listener?

These questions will be researched using the following three questions and the hope is that this research will uncover answers that give some insight into intelligibility of accent in the Hong Kong context:

- 1) Does the presence or absence of a NET in a student's formal education have an effect on intelligibility of Native Varieties of English?
- 2) Does the presence of a NET with a particular native accent in a student's formal education have a positive bearing on intelligibility of the same accent?
- 3) Does the English ability of the participants have an effect on intelligibility scores?

## Chapter 4. Methodology

The following sections (4.1-4.5) will describe how data was collected for the present study.

### 4.1 Participants

The 120 participants are students currently enrolled on an Associate Degree programme at a self financed private Institute of Continuing Education in Hong Kong. Students have typically achieved lower scores in their HKCEE examination (which is completed at the end of Form 5 at secondary school) not giving them the opportunity to advance to finish their 'A'-Levels. The Associate Degree (AD) is seen as an alternative route back into the University system proper in Hong Kong. Typically these students have found themselves unemployable due to their poor HKCEE results and often return to education via the AD route, giving them the oft quoted umbrella term of "second chance learners".

Upon enrolment in the Institute, a standardised placement test (The Oxford™ Quick Placement Test) is administered in order to group the students according to their overall ability in English. The test gives administrators the opportunity to see which scale on the Council of Europe's Common European Framework of Reference (CEFR) the students are in. For the purposes of this study it was thought pertinent to

analyse intelligibility of participants from a broad spectrum of abilities in English. As such, six classes were chosen. These are detailed in table 1 below:

Class code	Number	CEF LEVEL (approximate)
BC2A	1	B2
BC2B	2	B2
BC1	3	B1
BC2	4	B1
BC3A	5	A2
BC3B	6	A2

*Table 1: Participants' class code and approximate ability in English as determined by the C.E.F.R*

The participants were chosen as the author of the present study is currently employed at the institute so that considerations of asking for permission and intrusion on the participant's education would be kept to a minimum. Participants were enrolled in their AD programme in September 2008, so at the time of this study have been in the institution for 6 months. It should be noted that participants are taught all their AD subject content in English largely by local teachers who use English as the medium of instruction. The author, who is a native speaker from England, instructs participants in English for Academic purposes (EAP) and an Australian lecturer teaches the participants business studies.

## 4.2 The Instrument

The instrument used to gather data for the present study was in three parts; a Language Learning History Questionnaire, followed by the intelligibility test and finally a judgment test which was administered one week after parts one and two to determine where the participants thought each of the speakers listened to in the intelligibility test was from. Please refer to appendix one for an example of the instrument.

The information in the next section, "Participant Profiles" was extracted from the Language Learning History questionnaire which was administered to the participants in their regular class time by the author of the present study. As well as basic background information to profile the participants, the questionnaire sought to determine various aspects of the participants' language learning history. Questions asked were to determine whether or not participants had a NET teacher or not, and furthermore for how many years and from which country that NET was from. Participants were asked to answer these questions for both Primary and Secondary schooling.

Participants were also asked about their belief of which variety of English was easiest to understand and to give their answer to the question "When you speak English, which accent would you like to sound like?" The author was attempting to elicit themes from participants about their feelings related to particular accents. In addition these two questions were deemed of interest in order to tally actual scores of intelligibility by the participants and their opinions on which accents were the most intelligible. The author was seeking to see if there were correlations between the themes.

Part two of the instrument was the Intelligibility Test. Participants were asked to listen to four different varieties of English and to orthographically transcribe what they had heard. Following each utterance, the participants were asked to judge the ease of understanding of the speaker (on a Likert Scale of 5 descriptors from “Very Easy – Very Difficult”) and a value judgment related to how much the participant liked that particular speaker’s accent (on a Likert Scale of 5 descriptors from “Strongly Agree – Strongly Disagree”).

Part three of the instrument required participants to indicate which country they thought each speaker was from, and five choices were given: England, Australia, New Zealand, America and other; the latter participants were asked to state where they perceived the speaker to originate from.

#### 4.3 The Four Speakers (i)

The four speakers were chosen by the author as it was felt they represented ‘good’ examples of the Native and Nonnative varieties of English which the participants may have been exposed to in the Hong Kong context. The speakers were from America, England, Hong Kong and Australia respectively. It was felt that these varieties would reflect a good cross section of the types of accents the participants may have been exposed to in their English language learning contexts in Hong Kong.

Each of the speakers was female as the author wished to eliminate the gender variable in the present study. All speakers were recorded on separate occasions and asked to read through once the same pre-selected text which was chosen from the BBC World English Site (see appendix three for the text in full) This text was chosen as it was deemed that the language was ‘reduced’ in some form as it was primarily for L2 speakers of English listening to the text on the BBC’s English learning site.

Furthermore, and although a subjective observation, the author did not wish the participants to be challenged by the vocabulary in the text which was thought to be of a standard that they would have been exposed to at some point in their English language learning. The lexical content was deemed to be appropriate for learners at the AD level and it was felt that in their six months in the institution, participants would have had enough exposure to language at this level for the content not to be problematic in terms of comprehension.

The speakers were instructed to speak at a normal speed and were recorded using a Samsung YV-150 digital voice recorder. The recordings were later transformed to MP3 files and stored on a PC. Each speaker was recorded in a quiet room with as little background noise as possible. After the four recordings were completed, the author selected from the recordings a sentence of similar length that was representative (though this is subjective) of the accent that would form the part of the intelligibility test. The four sentences were then sequenced using Adobe Audition™ with a ten second gap between each utterance. The four sentences chosen and details of each are described in table 2, below, and the recording can be found in appendix two.

Speaker	The Sentence	Sentence Length
GA	There has also been a huge rise in the number of mothers who work.	14 words
RP	There has also been a sharp increase in the number of single mothers, particularly among teenagers.	16 words
CCE	For women, it is now much easier to have a career and a good salary.	14 words

AE	As for children themselves, some argue that modern children grow up to be more independent.	15 words
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Table 2: Details of the four sentences used as the intelligibility test.

#### 4.4 The Four Speakers (ii)

The four speakers are all known by the author of the present study. They were chosen to reflect ‘good’ examples of their particular accents. All speakers were recorded on separate occasions and are not known to each other. The author also administered an *ad hoc* interview to each speaker to ascertain their particular backgrounds so as to ensure that they were suitable candidates for the intelligibility test. A description of each of the speakers follows.

##### 4.4a Speaker 1: General American Speaker

Speaker 1, (hereafter referred to as GA) was chosen by the author to reflect an example for the intelligibility test of General American English. She has been teaching ESL and EFL since 1994 and has been an educator in Hong Kong since 2005. She was born in San Francisco, America. It was determined that she was used to speaking to large groups and would therefore be a good example to use for the intelligibility test.

In the GA’s own opinion students say she has an easy accent to understand, though she speaks too fast according to her French friend (March 16<sup>th</sup>, 2009, personal communication). The GA is educated to Masters Level.

#### 4.4b Speaker 2: RP Speaker

Speaker 2 (hereafter referred to as RP) was chosen by the author to reflect an example for the intelligibility test of Received Pronunciation. She was born in West Kirby, on the Wirral Peninsula, England. She has been teaching ESL and EFL for over forty years and in her own words “has no particular regional accent.” (20<sup>th</sup> March, 2009 personal communication). She has worked for most of her teaching career with The British Council and was once asked to be in a pronunciation video produced by them for Hong Kong learners where she modeled Received Pronunciation. It was determined by the author that the RP was used to speaking in front of large groups. The RP is educated to Masters Level.

#### 4.4c Speaker 3: Clear Chinese English Speaker

Speaker 3 (hereafter referred to as CCE) was chosen by the author to reflect an example for the intelligibility test of Clear Chinese English. The CCE was born and raised in Hong Kong and she reflects “that both parents speak English fairly well” (23<sup>rd</sup> March 2009, personal communication). The CCE attended a secondary school in Hong Kong where English was the Medium of Instruction (MOI) for all subjects except for Chinese. She was taught by NET teachers from England and from America. She also spent two years in Canada where she completed a Secondary School Diploma before returning to Hong Kong where she completed her first degree and then Masters Degree. The CCE has been teaching for eight years and it was ascertained that she was used to speaking in front of large groups.

#### 4.4.d Speaker 4: Australian English Speaker

Speaker 4 (hereafter referred to as AE) was chosen by the author to reflect an example for the intelligibility test of Australian English. She was born in Melbourne, Australia. AE has been teaching ESL and EFL for fourteen years, eleven of them in Hong Kong. She mentions “local students rarely misunderstand my accent and often comment on how clear [a speaker] I am.” (March 29<sup>th</sup>, 2009, personal communication) AE is currently studying for her PhD in ESL with a local Hong Kong university.

#### 4.5 Administering the test

The test was administered in the normal class time that the author has with the participants. Participants are taught by the author and are known to him. The test was administered after the participants had had a short break in the class. This was to ensure that the participants were awake and refreshed. The participants were asked to read the statement at the beginning of the questionnaire so as to draw their attention to the ethical standards as required in a study of this kind. All students gave their consent to take part in the study.

The participants were asked to fill in the Part One of the instrument “Language Learning History” and the author monitored quietly, answering questions when raised and methodically checking that each section had been completed. When the participants had completed Part One of the instrument, the author explained the task in Part two, which was to listen to four speakers and to orthographically transcribe what they had heard. Instructions were given twice in order to clear up any doubt in the participants’ minds as to what was required of them. No context of the content of the listening (intelligibility) test was given. This was to ensure that the

participants would not 'tune in to' the context and arrive at meaning. The four sentences were played through Bose Speakers connected to a Denon Amplifier, which in turn was connected to the PC; standard equipment in all classrooms in the participants' institution. Participants were asked to remain quiet throughout the test and not to discuss, or refer to other participants' transcriptions so that contamination would be kept to a minimum.

The participants undertook the first task, listening to and transcribing the GA and then completed the two questions following the transcription exercise. When the author was sure the first task was completed, the second task, listening to and transcribing the RP was administered. The same routine was followed for the CCE and the AE. There was approximately 20 seconds between each Speaker, the author pausing the MP3 as it was felt that the 10 second gap between each speaker was not entirely sufficient for participants to fulfill the transcription task and answer the two questions that followed.

Parts One and Two of the instrument took about 20 minutes for each class. The following week, all four speakers were played to the participants again and they were asked to complete the question "Which country do you think the speaker is from?" and given a choice of England, Australia, New Zealand, America and Other.

The author did not wish to ask these questions in the same session as Parts One and Two of the instrument as he felt there would be some contamination of results, with participants returning to the intelligibility test and adding more words, thus giving a false impression of increased intelligibility, and as a consequence, skewing the results.

## Chapter 5 Data Analysis

Data collected from the instrument was analysed using the SPSS software. Much of the data from the Language Learning History part of the instrument was analysed using descriptive means to discover mean groupings, standard deviations and ranges in scores. For research question 1) an Independent T-test was used and for questions 2) and 3) One-Way ANOVAs were used to uncover any significance in the data sets.

## Chapter 6 Results

The following sections will present the results uncovered from the instrument.

### 6.1 Age of the Participants.

The mean age of participants is 20 years of age and the minimum age is 17, the maximum 27. Of the 120 participants in the study, 66 participants or 55% of the total were male and 54 participants or 45 % of the total was female.

### 6.2 Birthplace

Of the 120 participants, 90 participants or 75% of the total were born in Hong Kong, 25 participants or 20.8% of the total were born in Mainland China, and 5 participants or 4.2 % of the total were born in other countries namely Pakistan, Nepal and The Philippines.

### 6.3 Mother Tongue

Of the 120 participants, 105 or 87.5% of the total described Cantonese as their

mother tongue. 8 participants or 6.7 % of the total described Putonghua as their mother tongue and 7 participants or 5.8% of the total described other as their mother tongue, namely Urdu, Nepalese, and Tagalog.

#### 6.4 Languages Spoken

90 of the participants or 75% of the total can speak Cantonese, Putonghua and English, to some degree. 15 participants or 12.5% of the total can only speak Cantonese and Putonghua. 5 participants or 4.2% of the total can speak an “Other” language only. 4 participants or 3.3 % of the total can speak Cantonese only. Please note that this is a very subjective descriptor as participants were not required to define how well they could speak any of the languages listed.

#### 6.5 Years of Formal English

The mean amount of years of ‘Formal English’ (defined by English taught in a school setting) for the participants is 15. This does not take into account how many hours students were taught per week, or by whom, for example a NET or a local teacher. Furthermore the author did not explore whether the participants had been educated in a school where English was the medium of Instruction (MOI).

#### 6.6 NET at Primary School

Of the 120 participants, 51 of the participants or 43.5% of the total were taught by a NET at primary school. 69 of the participants or 57.5% of the total were not taught by a NET at primary school.

### 6.7 Origin of Primary NET

The origin of the NET at primary school for the 51 participants who were taught by a NET at Primary school in Hong Kong is displayed in table 3, below:

Origin of NET		Frequency	Percent	Valid Percent
Valid	England	24	20.0	47.1
	Australia	16	13.3	31.4
	New Zealand	1	.8	2.0
	America	6	5.0	11.8
	Other	4	3.3	7.8
	Total	51	42.5	100.0
Missing	System	69	57.5	
Total		120	100.0	

*Table 3: Origin of NET teacher at Primary level for 51 participants.*

It can be seen from table 3 above that 24 of the participants or 47.1% of the valid total were taught by a NET from England. 16 participants or 13.3% of the valid total were taught by a NET from Australia. 6 of the participants or 5% of the valid total were taught by a NET from America and 4 of the participants or 3.3% of the valid total were taught by a NET from an “other” country.

#### 6.8 Time taught by Primary Net

Of the 51 participants who were taught by a NET at primary school, 9 of the participants or 17.6 percentage of the valid total were taught by a NET from England for a period of one to two years. The total cumulative percentage of participants taught by a NET from England over any time period was 47.1%

11 of the participants, or 21.6% of the valid total were taught by a NET from Australia for the same period of time. The total cumulative percentage of participants taught by a NET from Australia over any time period was 31.3%

Please note the time in years does not infer the frequency that the participants were taught for by the NET over the period described. Figure 1, below displays the number of participants (count) against the time in years taught by a particular NET

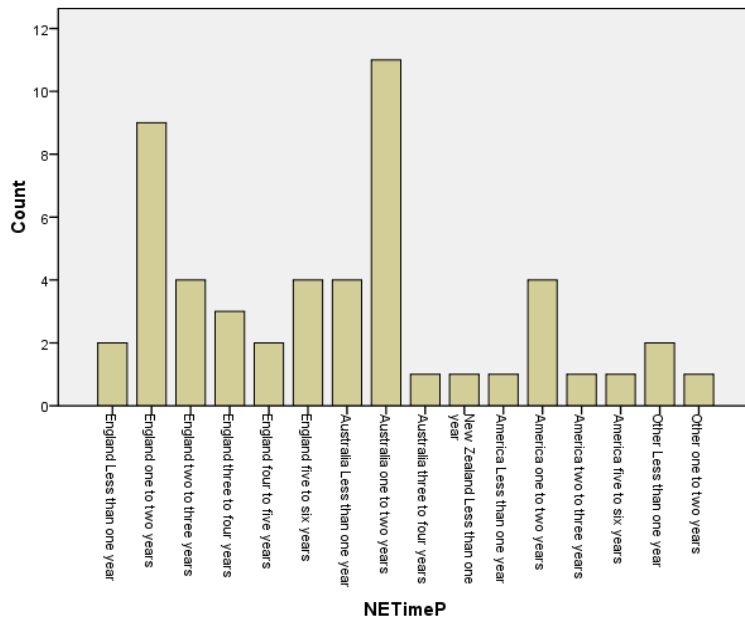


Figure 1: A graph to show the frequency of participants taught by NET at Primary school for a particular length of time.

### 6.9 NET at Secondary School

Of the 120 participants, 102 participants or 85% of the total were taught by a NET at secondary school and 18 of the participants or 15% of the total were not taught by a NET at secondary school.

### 6.10 Origin of the Secondary NET

The origin of the NET at Secondary school for the 102 participants who were taught by a NET at Secondary school in Hong Kong is displayed in table 4, below:

		Frequency	Percent	Valid Percent
Valid	England	35	29.2	34.3
	Australia	43	35.8	42.2
	New Zealand	10	8.3	9.8
	America	7	5.8	6.9
	Other	7	5.8	6.9
	Total	102	85.0	100.0
Missing	System	18	15.0	
Total		120	100.0	

*Table 4: Origin of NET teacher at Secondary level for 102 participants.*

In can be seen from table 4, above that of the 102 participants who were taught by a NET at secondary school, 43 participants or 35.8% of the valid total were taught by a NET from Australia. 35 participants or 29.2% of the valid total were taught by a NET from England. 10 participants or 8.3% of the valid total were taught by a NET from New Zealand. 7 participants or 5.8% of the valid total were taught by a NET from America. 7 participants or 5.8% of the valid total were taught by a NET from an “other” country of origin.

#### 6.11 Time taught by Secondary Net

Of the 102 participants taught by a NET at secondary school, 15 of the participants or 14.7% of the valid total were taught by a NET from England for one to two years. The

total cumulative percentage of participants taught by a NET from England over the time periods was 39.2%.

13 of the participants or 12.7% of the valid total were taught by a NET from Australia. The total cumulative percentage of participants taught by a NET from Australia over the time periods was 38.2%.

Please note the time in years does not infer the frequency that the participants were taught for by the NET over the period described. Figure 2, below displays the number of participants (count) against the time in years taught by a particular NET (defined as NETTimeS):

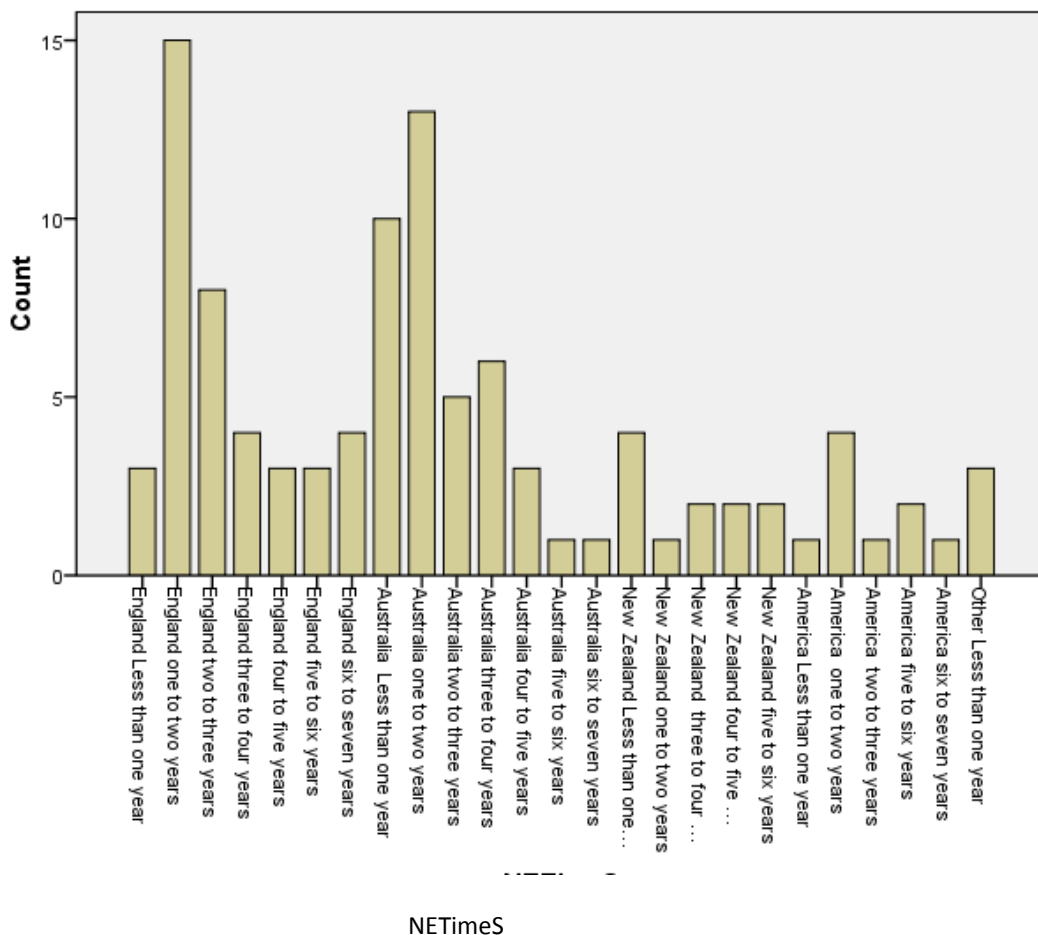


Figure 2: A graph to show the frequency of participants taught by a NET at Secondary school for a particular length of time.

**6.12 Native speaker ease**

119 participants or 99.2% of the total responded to the question “What variety of English is easiest to understand?” 56 of the participants or 47.1% of the valid total named British English as the easiest to understand. 41 participants or 34.5 % of the valid total named American English easiest to understand. 17 participants or 14.3% of the valid total named Australian English as easiest to understand. These figures are displayed in table 5, below:

Native Variety		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	British English	56	46.7	47.1	47.1
	Australian English	17	14.2	14.3	61.3
	New Zealand English	1	.8	.8	62.2
	American English	41	34.2	34.5	96.6
	Other	4	3.3	3.4	100.0
	Total	119	99.2	100.0	
Missing		1	.8		
Total		120	100.0		

*Table 5: Response of Participants to the question: “Which Native Variety of English is easiest to Understand?”*

These results will be correlated with the participants’ intelligibility scores to see if, in actual fact, their belief that a particular variety of English is easiest to understand

matches intelligibility scores for that variety.

### **6.13 Native Speaker Accent Goals**

119 participants or 99.2% of 120 participants responded to the question “When you speak English which accent would you like to sound like?”

59 of the participants or 49.6% of the valid total named British English as their accent goal. 39 participants or 32.8% of the valid total named American English as their accent goal. 12 participants or 10.1% of the valid total named Australian English as their accent goal. 12 participants or 10.1% of the valid total named Australian English as their accent goal. 8 participants or 6.7 % of the valid total named “other” as their valid accent goal. These figures are displayed in table six below:

	Accent Goal	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	British English	59	49.2	49.6	49.6
	Australian English	12	10.0	10.1	59.7
	New Zealand English	1	.8	.8	60.5
	American English	39	32.5	32.8	93.3
	Other	8	6.7	6.7	100.0
	Total	119	99.2	100.0	
Missing		1	.8		
Total		120	100.0		

Table 6: Response of participants to the question: “When you speak English, which accent would you like to sound like?”

6.14 Reasons given for “Easiest accent to Understand”

88 of the participants or 73.9% of the total gave a reason for their why they thought a particular variety of Native English was easiest to understand. Their total responses were tabled and can be found in appendix three.

For the ease of reading and to create a summary from which further inferences can be made in the discussion section below, the author has collapsed these attributes “according to their semantic affinity” (after Li, 2009, 88). These have been detailed in table 7 below. Not all participants gave a response appropriate to the research questions of the present study and these have been omitted in order to focus on the notions of ease of understanding. Therefore only 63 participants’ responses are detailed below. Numbers in the relevant columns denote participant IDs. Full responses can be found in appendix four.

<b>Attributes of variety that determine ease of understanding</b>	<b>British English</b>	<b>Australian English</b>	<b>American English</b>
<b>Pronunciation is clear/sounds nice/pure/easy to understand/use</b>	2,8,22,25,28,29,31,50,51,53,54,58,59,66,69,80,81,85,95,97,104,105,107,108,117,118 (n=26)	12,57,94 (n=3)	21,23,24,60,61,62,75,87,88,98,99,100,103,109,120 (n=15)
<b>Used in the Hong</b>	3,6,33,79		

<b>Kong Education system</b>	(n=4)		
<b>My teacher is/came from there</b>	11,19,67,74,110 (n=5)	77 (n=1)	34,35,37,38,64 (n=5)
<b>Most common form in media (TV/movies/radio) in Hong Kong</b>			10,13,76 (n=3)

*Table 7: Attributes of Native Varieties as detailed by participants related to ease of understanding.*

As with table 5 in section 6.12, these results will be correlated with the participants' intelligibility scores of Native varieties only, to see if, in actual fact, their belief that a particular variety of English is easiest to understand matches intelligibility scores for that variety.

This will be displayed in the discussion section after the results for the intelligibility tests have been presented.

### 6.15 The Intelligibility Test

As has been noted in the literature review, dictation tasks have long been used to examine verbal intelligibility (Bent and Bradlow, 2003; Derwing and Munro, 1997; Munro Derwing, and Morton, 2006). Listeners are asked to orthographically transcribe what they have heard, whether this is a single word or utterance. The number of words correctly transcribed determines the intelligibility of the speaker and enables the researcher to index this effectively.

The author of the present study has used the same technique just described and the participants were required to transcribe four different varieties of English, which were the four sentences extracted from the same text, read by four speakers as

detailed in sections 4.3 and 4.4, above.

#### 6.16 Participants' Familiarity with Dictation Exercises in English

The participants were asked whether they were familiar with dictation exercises in English. This was to ascertain whether or not this would be a potential variable in terms of participants' ability to complete the intelligibility test. It was felt that for the success of the intelligibility test, participants needed to feel "at home" with this type of listening exercise and that it would not intimidate them which may have produced results which may not have truly reflected their intelligibility of the accents. It was found that of the 120 participants, 117 or 97.5% of the total replied "Yes" to the question "Are you familiar with dictation exercises in English?" 3 participants or 2.5% of the valid total replied "No". Although a subjective question on the part of this research as the author did not delve deeper into "How often /what type /when" questions to further quantify the responses, it was felt that the total "Yes" responses (97.5%) were sufficient to gather results and to proceed with further analysis.

#### 6.17 Results for the GA Intelligibility Test

Participants were asked to orthographically transcribe the GA speaker. Participants were required to correctly spell each word they transcribed. The sentence was "*There has also been a huge rise in the number of mothers who work*". There are 14 words in the sentence.

Of the 120 participants, 22 participants or 18.3% of the valid total were unable to transcribe any words. 33 participants or 27.5% of the valid total successfully

transcribed one word, or 7% of the total words. 29 participants or 24.2% of the valid total successfully transcribed two words, or 14% of the total words. Only 1 participant managed to transcribe 8 of the words which equates to 57% of the total words. The mean score was 2 and the range was 8. The results are displayed in table 8, below:

Word count for GA	Frequency	Percent	Valid Percent	Cumulative Percent
Valid No word	22	18.3	18.3	18.3
One word	33	27.5	27.5	45.8
Two words	29	24.2	24.2	70.0
Three words	11	9.2	9.2	79.2
Four words	14	11.7	11.7	90.8
Five words	8	6.7	6.7	97.5
Six words	1	.8	.8	98.3
Seven words	1	.8	.8	99.2
Eight words	1	.8	.8	100.0
Total	120	100.0	100.0	

Table 8: GA Intelligibility scores.

### 6.18 Results for the RP Intelligibility Test

Participants were asked to orthographically transcribe the RP speaker. Participants were required to correctly spell each word they transcribed. The sentence was

*“There has also been a sharp increase in the number of single mothers, particularly among teenagers”* There are 16 words in the sentence.

Of the 120 participants, 19 participants or 15.8% were unable to transcribe any of the words. 23 participants or 19.2% of the total were able to transcribe one word which equates to 6.25% of the total number of words. 29 participants or 24.2% of the total were able to transcribe two words which equates to 12.5% of the total number of words. 19 participants or 15.8% of the total were able to transcribe three words which equates to 18.75% of the total words. 12 participants or 10% of the total were able to transcribe four words which equates to 25% of the words. 8 participants or 6.7% of the total were able to transcribe 5 words which equates to 31.25% of the total words. There were 2 participants or 1.7% of the total who were able to transcribe eleven words (the highest count) which equates to 68.75% of the total words. The mean score was 3 and the range was 8. The results are displayed in table 9, below:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No word	19	15.8	15.8	15.8
	One word	23	19.2	19.2	35.0
	Two words	29	24.2	24.2	59.2
	Three words	19	15.8	15.8	75.0
	Four words	12	10.0	10.0	85.0
	Five words	8	6.7	6.7	91.7
	Six words	3	2.5	2.5	94.2
	Seven words	1	.8	.8	95.0
	Eight words	2	1.7	1.7	96.7
	Nine words	1	.8	.8	97.5

Ten words	1	.8	.8	98.3
Eleven words	2	1.7	1.7	100.0
Total	120	100.0	100.0	

Table 9: RP Intelligibility Scores

### 6.19 Results for the CCE Intelligibility Test

Participants were asked to orthographically transcribe the CCE Speaker. Participants were required to correctly spell each word they transcribed. The sentence was “*For women, it is now much easier to have a career and good salary*”. There are 14 words in the sentence.

13 of the participants or 10.8% of the total were unable to transcribe any words.

14 of the participants or 11.7% of the total were able to transcribe two words. 15 of the participants or 12.5% of the total were able to transcribe four words. 17 participants or 14.2% of the total were able to transcribe five words. There was one participant who was able to transcribe all fourteen of the words successfully which is 100% of the total words in the total. The mean score was 5 and the range was 14.

The total results are displayed in table 10, below:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No word	13	10.8	10.8	10.8
	One word	7	5.8	5.8	16.7
	Two words	14	11.7	11.7	28.3
	Three words	9	7.5	7.5	35.8
	Four words	15	12.5	12.5	48.3
	Five words	17	14.2	14.2	62.5

Six words	12	10.0	10.0	72.5
Seven words	9	7.5	7.5	80.0
Eight words	7	5.8	5.8	85.8
Nine words	8	6.7	6.7	92.5
Ten words	2	1.7	1.7	94.2
Eleven words	3	2.5	2.5	96.7
Twelve words	1	.8	.8	97.5
Thirteen words	2	1.7	1.7	99.2
Fourteen words	1	.8	.8	100.0
Total	120	100.0	100.0	

Table 10: CCE Intelligibility Scores

### 6.20 Results for the AE Intelligibility Test

Participants were asked to orthographically transcribe the AE speaker. Participants were required to correctly spell each word they transcribed. The sentence was “*As for children themselves, some argue that modern children grow up to be more independent*” There are 15 words in the sentence. 5 of the participants or 4.2% of the total were unable to transcribe any words. 20, 24 and 23 of the participants were able to transcribe one, two and three words successfully (or 16.7%, 20% and 19.2% respectively). 18 of the participants, or 15 % of the total were able to transcribe four words. 3 participants or 2.5% of the total were able to transcribe ten words successfully (the highest score). The mean was 3 and the range was 10. The total results are displayed in table 11, below:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No word	5	4.2	4.2	4.2
	One word	20	16.7	16.7	20.8
	Two words	24	20.0	20.0	40.8
	Three words	23	19.2	19.2	60.0
	Four words	18	15.0	15.0	75.0
	Five words	12	10.0	10.0	85.0
	Six words	11	9.2	9.2	94.2
	Seven words	2	1.7	1.7	95.8
	Eight words	1	.8	.8	96.7
	Nine words	1	.8	.8	97.5
	Ten words	3	2.5	2.5	100.0

*Table 11: AE Intelligibility Scores*

### 6.21 Graphical Representation of Intelligibility Scores:

Below, in figure three, is a graphical representation of the above reported scores. It should be noted that this is provided to the reader for purely representative purposes and that further statistical analysis will be provided in section six below to see whether the differences within groups are in fact of statistical significance.

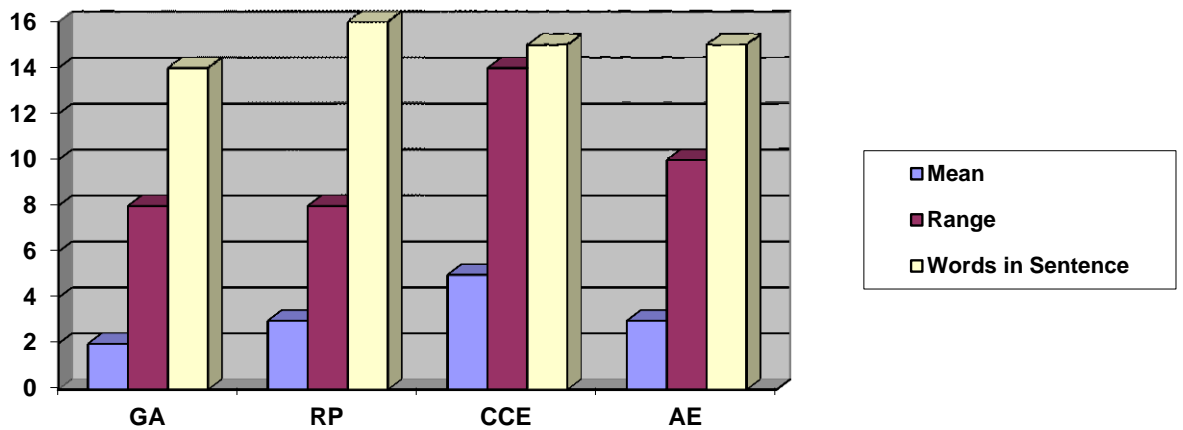


Figure 3: A graph depicting the Mean Score, Range of scores and total words in each sentence for the four intelligibility tests (GA, RP, CCE & AE)

## **6.22 Graphical Representation of Mean Intelligibility Scores Per Class**

Below, in figure 4, is a graphical representation of mean scores for each class as described in section 4.1. It can be seen that for all six classes the CCE represented the highest mean score.

The AE mean score was second highest in all but one class (class 3)

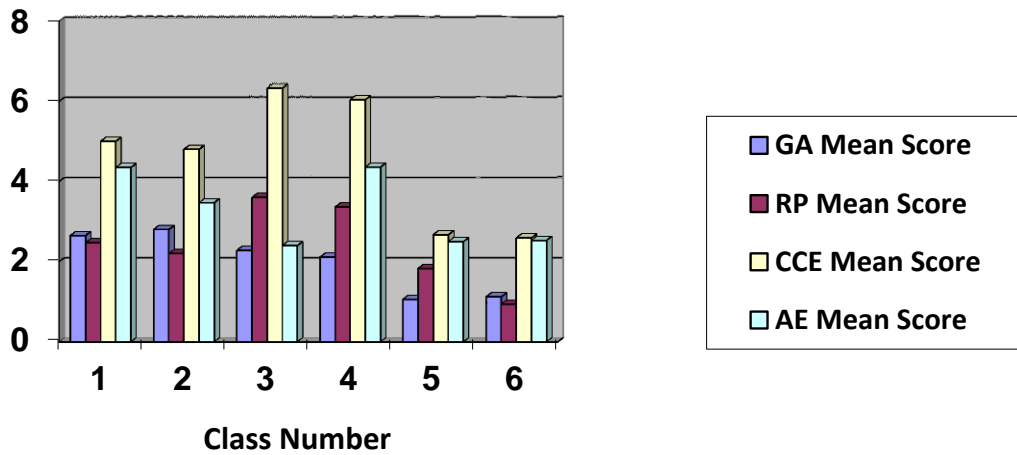


Figure 4: A graph to show Mean intelligibility scores for each class.

**6.23 Examples of Orthographic Transcriptions.**

For indicative purposes, table 12, below displays examples of the orthographic transcriptions. An example is displayed from each of the six classes of the transcriptions of each of the four varieties of English. The first student ID from each class is used as an example.

<b>Class number/ Student ID</b>	There has also been a huge rise in the number of mothers who work. (14 Words) GA	There has also been a sharp increase in the number of single mothers, particularly among teenagers. (16 Words) RP	For women it is now much easier to have a career and a good salary. (15 words) CCE	As for children themselves, some argue that modern children grow up to be more independent. (15 words) AE
<b>Class 1</b> 1.	There a here dry to the mother work	There lots of the of the mother and their nam is teenagers.	For women, it's not much easier to get much salary.	After chirden grow some of the children are more independent.
<b>Class 2</b> 18.	Ben here dry in mother's work	Shopping mother the predictciouly the teenager	For women now much is easily	Of children themselfe, more children they be
<b>Class 3</b> 33.	I mother world	Is shopping sample mother tain	It is not a good salary	After the children result, children mother
<b>Class 4</b> 58.	A huge ride mothers at work	Single mothers, particularly in teenagers	Don't worry, it is now much easier to hung up the salary	After children, some mother argue that children independent
<b>Class 5</b> 86.	I hear my mother of words	Number sigle mother	For women it is very easy have salary	I have the children
<b>Class 6</b> 104.	Mother's work	We have to be teenager	Don't worry. Much easier	Children got to be

Table 12: Examples of orthographic transcriptions for each variety of English.

As can be seen from the above table there is a range in what the participants have recognized as the intended word. Appendix five displays all participant responses.

A short discussion of these results will be offered in the discussion section 7.3, below.

## **6.24 Speaker Origin**

Participants were asked to judge where they thought each of the speakers was from. They were given a choice of five options; England, Australia, New Zealand, America and Other. Although a disguised test in that the Chinese English option was not given on the scale, it was hoped that participants might use the “Other...*please state where*” option if they felt they had recognized the speaker to be using a variety of English not stated in the choices. The results are described below:

## **6.25 GA Speaker Origin**

Participants were asked to judge where the GA speaker came from. Of the 120 participants, 41 of the participants or 34.2% of the total correctly judged that the speaker came from America which was the highest score overall. 31 participants or 25.8% of the total judged the GA speaker to come from Australia. 25 participants or 20.8% of the total judged the GA speaker to come from New Zealand and 22 participants or 18.3% of the total judged the GA speaker to come from England. The results are displayed in table 13, below:

GA SPEAKER	Frequency	Percent	Valid Percent	Cumulative Percent
Valid England	22	18.3	18.3	18.3
Australia	31	25.8	25.8	44.2
New Zealand	25	20.8	20.8	65.0
America	41	34.2	34.2	99.2
Other	1	.8	.8	100.0
Total	120	100.0	100.0	

Table 13: Participants' response to the question "Where is this speaker from?"

### **6.26 RP Speaker Origin**

The participants were asked to judge where they thought the RP speaker came from. Of the 120 participants, 32 participants or 26.7% of the total judged the RP speaker to come from England. 35 participants or 29.2% of the total judged the RP speaker to come from Australia, which was the highest score. 23 participants or 19.2% of the total judged the RP speaker to come from New Zealand and 28 participants or 23.2 % of the total judged the RP speaker to come from America. The results are displayed in table 14, below:

RP Speaker	Frequency	Percent	Valid Percent	Cumulative Percent
Valid England	32	26.7	26.7	26.7
Australia	35	29.2	29.2	55.8
New Zealand	23	19.2	19.2	75.0
America	28	23.3	23.3	98.3
Other	2	1.7	1.7	100.0
Total	120	100.0	100.0	

*Table 14: Participants' response to the question "Where is this speaker from?"*

### **6.27 CCE Speaker Origin**

The participants were asked to judge where they thought the CCE speaker came from.

Of the 120 participants, 35 or 29.2% of the total judged the CCE speaker to come from England. 31 of the participants or 25.8% of the total judged the CCE speaker to come from Australia. 29 of the participants or 24.2% of the total judged the CCE speaker to come from New Zealand and 18 of the participants or 15 % of the total judged the CCE speaker to come from America. 7 of the participants judged the speaker to come from other countries. Hong Kong or China was not given as an option, and neither did the participants give this as an “Other” country. The results are displayed in table 15, below:

CCE SPEAKER	Frequency	Percent	Valid Percent	Cumulative Percent
Valid England	35	29.2	29.2	29.2
Australia	31	25.8	25.8	55.0
New Zealand	29	24.2	24.2	79.2
America	18	15.0	15.0	94.2
Other	7	5.8	5.8	100.0
Total	120	100.0	100.0	

Table 15: Participants’ response to the question “Where is this speaker from?”

### **6.28 AE Speaker Origin**

The participants were asked to judge where the AE speaker came from. Of the 120 participants, 39 of the participants or 32.5% of the total judged the AE speaker to come from England. 16 of the participants or 13.3% of the total judged the AE

speaker to come from Australia. 24 of the participants or 20% of the total judged the AE speaker to come from New Zealand and 40 of the participants or 33.3% of the total judged the speaker to come from America which was the highest score. The results are displayed in table 16, below:

AE SPEAKER		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	England	39	32.5	32.5	32.5
	Australia	16	13.3	13.3	45.8
	New Zealand	24	20.0	20.0	65.8
	America	40	33.3	33.3	99.2
	Other	1	.8	.8	100.0
	Total	120	100.0	100.0	

Table 16: Participants' response to the question "Where is this speaker from?"

### 6.29 Independent Samples T-Test to Study Effect of Presence of NET on Intelligibility

In order to answer the first research question in section 3; "Does the presence or absence of a NET in a student's formal education have an effect on intelligibility of Native Varieties of English?", an independent T-Test was conducted to ascertain whether the factor of being taught by a NET at any time in the participants' formal learning had any significant bearing on their overall intelligibility scores (GA, RP, CCE learning had any significant bearing on their overall intelligibility scores (GA, RP, CCE and AE). The results are displayed in tables 17 and 18 below:

NET Yes or No	N	Mean	Std. Deviation	Std. Error Mean
Total Intelligibility scores for all Presence of NET speaker accents	104	12.71	7.234	.709
Absence of NET	16	12.81	5.089	1.272

*Table 17 (Above): Group Statistics for Independent Samples T-Test*

*(continued below)*

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Total	Equal variances assumed	1.301	.256	-.054	118	.957	-.101	1.879	-3.822	3.620
Intelligibility scores for all speaker accents	Equal variances not assumed			-.069	25.417	.945	-.101	1.457	-3.098	2.896

Table 18(Above): Independent Samples T-Test for Intelligibility Scores and Presence/Absence of NET.

An independent samples t-test was conducted to compare the total intelligibility scores for participants who were taught by a NET at any time in their formal education and those who were not. There were no significant difference in scores for those participants who had the presence of a NET (M=12.71, SD= 7.234) and those with the absence of a NET [M= 12.81, SD=5.089; t (118) = .256, p<.05.] Furthermore the magnitude of the difference in the means was very small (eta squared = .00002).

6.30 One- Way ANOVA to explore whether the Variety of NET Impacts on the Intelligibility of that Variety.

In order to answer the second research question in section 3; “Does the presence of a NET with a particular native accent in a student’s formal education have a positive bearing on intelligibility of the same accent?”, a one-way between-groups analysis of

variance (ANOVA) was conducted to explore the impact of a variety of NET (GA, RP, CCE and AE) on levels of intelligibility of that particular NET as measured by the intelligibility tests. Subjects were divided into five groups according to which origin their NET was predominantly from (calculated by combining participants' responses to where their NET originated from at Primary and Secondary formal education) and these were England, Australia, New Zealand, America and Other. There was no statistically significant difference at the  $p < .05$  level for the six groups [ $F(5, 114) = ns$ ]. The SPSS output of these statistics can be found in appendix five.

#### 6.31 One-Way ANOVA to explore whether participants' overall ability in English impacted on Intelligibility Scores

In order to answer the third research question in section 3; "Does the English ability of the participants have an effect on intelligibility scores?", a one-way between-groups analysis of variance (ANOVA) was conducted to explore whether participants' overall ability in English, as measured by their six classes (Class 1: BC2AH, Class 2: BC2BH, Class 3: BC1M, Class 4: BC2M, Class 5: BC3A and Class 6: BC3B) had an effect on intelligibility scores as measured by the intelligibility test. There was a statistically significant difference at the  $p < .05$  level in intelligibility scores for the six classes [ $F(5, 120) = 6.46, p = .000$ ]. The effect size, calculated using eta squared, was 0.22, which according to Cohen (1988) is a large effect size. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for Class 1 ( $M = 14.47, SD = 3.125$ ) was significantly different from both Class 5 ( $M = 8.28, SD = 4.056$ ) and Class 6 ( $M = 7.29, SD = 3.82$ ). Furthermore the mean score for Class 3 ( $M = 14.6, SD = 7.182$ ) was significantly different from Class 5 ( $M = 8.28, SD = 4.056$ ) and Class 6 ( $M = 7.29, SD = 3.82$ ). Finally, the mean score for Class 4 ( $M = 15.86, SD = 6.181$ ) was significantly

different from Class 5 (M=8.28, SD=4.056) and Class 6 (M= 7.29, SD=3.82). Class 2 did not significantly differ from Classes 1, 3, 4, 5 and 6. The SPSS output for these statistics can be found in appendix six.

### Chapter 7 Discussion.

This study has sought to discover whether the presence or absence of a NET has had an effect on participants' intelligibility of native 'Standards'.

It has also attempted to see whether participants who were taught by a NET from a particular country found that accent more intelligible than other 'Standard' accents as a result of familiarity with that accent. Furthermore the language ability of the participants was investigated to see whether this determined an improved intelligibility of accent.

#### 7.1 Research Question 1.

The first research question was: "Does the presence or absence of a NET in a student's formal education have an effect on intelligibility of Native Varieties of English?" The author felt this would yield a positive result in favour of the presence of a NET improving intelligibility of Native varieties of English. Quite the opposite was uncovered as is displayed in section 6.29, above. It was found that there was no significant difference in intelligibility scores whether or not the participants were taught by a NET. The presence or absence of a NET at any time in the participants formal education, had no bearing on their intelligibility of accents. It appears then,

that in this particular context the participants' intelligibility scores were not significantly different whether or not they were taught by a NET. Why could this be the case? As mentioned in the results section, this study did not take into account a number of factors which may have had a bearing on this particular research question. This includes the actual time taught by a NET at primary and secondary level – as described in section 6.8, the majority of participants were taught by a NET for a period of one to two years. This is also true of the actual time taught by a NET at secondary school – again the majority of participants were taught for a period of the same time. There was no quantifiable/qualitative data sought by the author to define what input participants had in their lessons with the NET, and if, as stated in section 2.7, NETs are “spreading themselves thin” in their teaching contexts, then we could presume that familiarity of their particular accent for the participants, is, at best low. Furthermore, as the NET is *usually* employed to support language learning in their teaching contexts as opposed to teaching the same one class every day for the whole academic year, it would appear that participants' familiarity with a particular variety of English points more favorably towards local “Cantonized” English than a Native ‘Standard’. This could be due to participants having more exposure to the local variety as a model than the Native variety which is offered as an example of a ‘Standard’. Therefore the ‘Standard’ variety offered by the NET has a ‘tokenesque’ bearing on familiarity of accent at best. This tallies with Brown's (1968) study where it was found that participants found readers who shared their L1 more intelligible. Furthermore, Wilcox (1978) found that the ‘educated’ local accent was best understood by participants who shared that speakers' L1 and most pertinently Smith and Rafiqzad (1979,p. 57) argued that native speaker phonology is no more intelligible than nonnative phonology and as such there were no grounds to “insist that the performance target in the English classroom ... be a native speaker.” The

limitations of this particular research question therefore are manifold. To look deeper into the issue of whether the presence or absence of a NET had a bearing on intelligibility of native accents, this study would have had to investigate what the definition of 'presence' meant in this context. If as has been mentioned, the participants were taught by a NET for a very limited timeframe then we could generalise and say that this would have little if any effect on their intelligibility of that accent. Eggington (1997, p315) describes that communication problems are compounded in the Hong Kong system as schools wanted to give as many students as possible access to the native speaker, even if it were for one hour per week. This would make it very difficult for students to get much of an intelligibility benefit from the NET and would have little if any effect on model accent advantage and intelligibility.

Furthermore, the focus of this study was on participants' language learning history from the perspective of their primary and secondary learning. We saw in section 6.1 that the mean age of the participants was 20 years of age. That means that for the majority, their exposure to a NET, if at all would have been at least two years prior to this study. In that two years without exposure to English a participant may have lost the ability to recognise a particular accent and this may well have had an effect on intelligibility. In section 6.5 we saw that the mean amount of formal English in years for the participants was fifteen. This study did not investigate how many hours the participants were taught in each week, or by whom, for example a NET or a local teacher. If this study had looked at this factor on a micro scale, it may have yielded a deeper analysis of the effect of the NET on intelligibility.

This study also did not take into account the participants' current learning context where they are taught by English and Australian instructors as well as local

Cantonese instructors (who are encouraged to use English as the MOI). This could well have had a bearing on intelligibility and in hindsight the study could have focused on the current learning context of the participants, which may well have borne more pertinent results.

## 7.2 Research Question 2.

The second research question was “Does the presence of a NET with a particular native accent in a student’s formal education have a positive bearing on intelligibility of the same accent?” The author felt that positive results would be derived from this particular question, and it was felt that if a participant had been taught by a NET from England, for example, then familiarity with that accent would improve intelligibility scores of that same accent. It was felt that the participant would achieve higher intelligibility scores over and above other accents as a result of this familiarity. However, as we have seen in section 6.30 there was no statistical significance unearthed that pointed in favour of the author’s hypothesis. If we look at the descriptive statistics from the intelligibility test we can see some interesting patterns. Coupled with questions asked in the first part of the instrument which asked participants to state their preferences for particular accents and ease of understanding, it appears that despite particular accents having a certain prestige, there is little evidence in this study that points to British English, for example, being the more intelligible as a result. For each of the intelligibility tests and for each class the CCE scored the highest. This could point to the “matched interlanguage speech intelligibility benefit” (Bent and Bradlow, 2003). In spite of 47% of the participants claiming that British English was the easiest to understand, only once did RP score highest of the native varieties by mean intelligibility which was in class 3(see figure 4). If we look at table 7, which displays participants ideas about ease of understanding,

the overwhelming responses point to British English being the easiest to understand as the pronunciation is deemed to be clear, or “sounds nice”. 26 participants determined that British English was easier for them to understand compared to only 3 who chose Australian English and 15 who chose American English. If we look at section 6.13, where participants were asked about their accent goals, British and American English scored 49% and 33% of the total responses respectively. This tallies with the answers given to the “ease of understanding” question, detailed in table 5. Kirkpatrick and Xu Xi (2002, p15) describe that “twenty years ago, British English was considered the prestige accent in China and the model that most students wanted to imitate. Today American English is the variety that the majority of students want to learn”. In this study, though the participants saw British English as the favoured model, American English came a close second in their responses. As we have also seen in sections 6.24 to 6.28 which described where participants judged the speakers to be from, it was only the AE speaker who was rated correctly by the most amount of participants, which could point to a variety of factors. If we look at the vast majority of televised media in Hong Kong, the predominant variety of English is American English, and indeed this includes most films shown at the cinema. This study could have looked at the TV watching habits of the participants and investigated whether the effect of particular accents listened to caused intelligibility of that accent to improve.

In all instances except for class 3, AE was the highest intelligibility score of native varieties. This could point to the frequency of participants taught by a NET from Australia at secondary school – 35 %, which was the highest count, although as mentioned in section 7.1 above, quantifying this effectively was not a part of the present study.

Was the instrument at fault? Could the factor of the AE intelligibility test being the last of the four utterances reflect participants “warming” to the task? Although participants were given a “count in” to the intelligibility test by the author, the notion of listening to speakers who were not immediately familiar to them could well have had a factor on results, and despite 97.5% of the participants claiming they were familiar with dictation exercises in English, as stated in section 6.16, there was no objective measure of the type of dictation participants had been exposed to. After enquiry with some of the participants it was found that much of the dictation they had done in their secondary schools was where their local English teacher had read a passage to them. Familiarity, therefore, with their teacher’s voice in that context should be higher than of those used in the present study.

In order to remove the factor of participants listening to the intelligibility tests in the same order, the utterances should have been played in a different order to different classes. This could well have had an effect on the AE overall scores and may well have given a more balanced set of results for the ‘Standard’ accents used.

A further weakness of this present study is that participants were not given the opportunity to express their opinions about the local Cantonese English. It would certainly have been interesting to compare ideas about the prestige of Native Standards with the local.

### 7.3 Research Question 3.

The third research question was “Does the English ability of the participants have an effect on intelligibility scores?” As noted in section 6.31 Classes 1,3 and 4 scored

significantly better results on the intelligibility test than classes 5 and 6. The anomaly was class 2 where results for the intelligibility test did not significantly differ from the other 5 classes. This was somewhat of a surprise as the English ability of class 2 is on a par with class 1, so it was felt that participants in this class would have done better. The general pattern points to participants with a better English ability scoring higher on the intelligibility tests. This would appear to be an obvious assumption, and yet still the issue of class 2 lingers. What factors could have been at play for class 2 not to do as well as class 1? On closer analysis of the days on which the participants took the intelligibility test it should be noted here that class 2 was taught on a Friday afternoon, essentially the last class before the weekend. Participants had already been taught six three hour classes in the preceding days and may well have been fatigued, with half an eye on the weekend. The other classes were given the intelligibility test on morning sessions, earlier in the week, where they may have been fresher and as a result found the intelligibility test less problematic.

As we saw in section 4.1, the participants fall into three groupings by ability according to the CEFR. If we look at the CEFR listening descriptors patterns emerge that correlate to participants with higher ability being able to be more competent listeners in English. At the CEFR B2 level which is the level of classes 1 and 2, the descriptor states that learners “Can understand the main ideas of complex text on both concrete and abstract topics, including technical discussions in his/her field of specialisation.” Although the topic chosen by the author “The Modern Family” was not particularly specialist or indeed abstract, participants at this level still struggled to complete the test well as defined by the mean scores for the tests.

At the CEFR B1 level which is the level of classes 3 and 4, the descriptor states that learners “Can understand the main points of clear standard input on familiar matters

regularly encountered in work, school, leisure...” Again the author felt that the content of the intelligibility test fit within the parameters of this descriptor, but as with classes 1 and 2, participants struggled with the intelligibility test.

At the CEFR A2 level which is the level of classes 5 and 6, the descriptor states that learners “Can understand sentences and frequently used expressions related to areas of most immediate relevance (e.g. very basic personal and family information, shopping, local geography, employment)”. It was perhaps to be expected, based on this descriptor that the participants from classes 5 and 6 did not do as well overall on the intelligibility test than participants from the other classes.

Also of interest here is what the participants were able to orthographically transcribe. As described in section 6.23 we saw that participants’ transcriptions were varied to say the least. We have, for instance, participants realising the GA speaker’s utterance “There has also been a huge rise in the number of mothers who work” as:

- i) There a here dry to the mother work
- ii) Ben here dry in mother’s work
- iii) I mother world
- iv) A huge ride mothers at work
- v) I hear my mothers of words
- vi) Mother’s work

As can be seen from the above, not one of the examples comes close to the utterance. In example iv) above, the participant has confused “huge rise” as “huge ride”. As we have seen, the participants were not given any context preceding the intelligibility test, and as such were not able to activate their schemata. This may have created problems for the participants – particularly with the first utterance. Participants may well have done better on the last utterance as the preceding three

utterances had enabled them to focus in on the themes.

## Chapter 8. Conclusion

As we have seen in the present study, increased intelligibility of Native standards based on familiarity determined by the origin of a participant's NET was not a factor. The overriding picture was that the Chinese speaker was the most intelligible, which points to participants having more familiarity with this non-native variety. We have seen that there are two important factors that are important in intelligibility – the listener's familiarity with the accent and their ability to use contextual clues. ( after Kenworthy 1987, p 14). That the participants were on the whole Hong Kong citizens whose L1 was Cantonese, it should be no surprise that shared features of pronunciation increased the intelligibility of the Chinese speaker of English. This suggests that participants have had much more opportunity to listen to English spoken by Chinese speakers than by native speakers of English. The “matched interlanguage speech intelligibility benefit” (Bent and Bradlow, 2003) appears to be reflected by this study.

The implication then is that the NET scheme therefore does not necessarily improve participant's intelligibility of native 'Standards'. As Eggington (1997, p 315) points out, many NETs feel they are “human tape recorders or babysitters with entertaining games” which hardly points to much pedagogical value to the learners. It would be more appropriate for the NETs to be given a more focused role in their teaching contexts where the full gamut of their skills is utilised – giving them familiarity with their classes, and learners familiarity with their teacher which would no doubt help somewhat with intelligibility of accents.

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Appendix One

**L2 Language History Questionnaire**

*Dear Participant,*

*I am conducting this questionnaire in order to understand the history of your English language learning. Please answer the following questions to the best of your knowledge.*

*Please read the following information carefully:*

- 1. This questionnaire will be used by William as part of his MA TESOL research**
- 2. All results will be kept in the strictest confidence.**
- 3. You will not be identified by name in any part of this research.**
- 4. If you do not wish to participate in this questionnaire you may withdraw at any time.**
- 5. If you require any results or have any questions as to the outcome of this research you may contact me at any time.**

*Please sign below if you agree to the above:*

Participant: \_\_\_\_\_ Class  
Number \_\_\_\_\_

William Hann: \_\_\_\_\_

*Many thanks for your time!*

*William*

**PART A**

1. Age (in years):

\_\_\_\_\_

2. Gender (circle one):    Male / Female

3. Birthplace:

\_\_\_\_\_

4. First Language:

---

5. Language(s) I can speak:

- Cantonese
- Putonghua
- English
- Others (Please

specify)\_\_\_\_\_

6. How long have you learned English for?

---

7. Were you taught by a Native English Teacher (N.E.T.) at *primary* school?

---

8. If you answered **yes** to question 7, which country was the N.E.T. from? (You can give more than one answer)

- England
- Australia
- New Zealand
- America
- Other (please

specify)\_\_\_\_\_

9. In the table below, please tick the box which best matches how long you were taught by the N.E.T. at **primary** school. *You can fill in more than one row if you had different N.E.T.s*

Years N.E.T. Country	Less than one year	One to two years	Two to Three years	Three to four years	Four to five years	Five to six years
England						
Australia						
New Zealand						
America						
Other						

10. Were you taught by a N.E.T. at *secondary* school?

---

11. If you answered **yes** to question 9, which country was the N.E.T. from? (You can tick more than one answer)

- England
  - Australia
  - New Zealand
  - America
  - Other (please specify)
-

12. In the table below, please tick the box which best matches how long you were taught by the N.E.T. at **secondary** school. *You can fill in more than one row if you had different N.E.T.s*

Years N.E.T. Country	Less than one year	One to two years	Two to Three years	Three to four years	Four to five years	Five to six years	Six to seven years
England							
Australia							
New Zealand							
America							
Other							

13. What native variety of English is easiest to understand?

- British English
- Australian English
- New Zealand English
- American English
- Other (please

specify) \_\_\_\_\_

14. When you speak English, which accent would you like to sound like?

- British English
- Australian English

- New Zealand English

- American English

- Other (please

specify)\_\_\_\_\_

15. Is there any reason for this? Please write your reason/s below:

---

---

16. How often do you do dictation exercises in your English classes?

---

---

### Part B Instructions

*You are going to hear 4 speakers reading a short extract from a passage. Please write down what you hear in the space provided. There will be a short pause between each speaker. You will hear the passage once only. After each speaker, please think about the questions: How easy is the speaker to understand? Do you like the sound of this accent?*

#### **Speaker One:**

*Please write what you hear in the space below.*

---

---

---

---

---

**17. How easy was speaker one to understand? (Please circle one answer)**

1. Very easy
2. Quite easy
3. Neither easy or difficult

4. Quite difficult

5. Very difficult

**18. "I liked the sound of this speaker's accent" (Please circle one answer)**

1. Strongly agree

2. Agree

3. Neither agree nor disagree

4. Disagree

5. Strongly disagree

**Speaker Two:**

*Please write what you hear in the space below.*

---

---

---

---

---

**19. How easy was speaker two to understand? (Please circle one answer)**

1. Very easy

2. Quite easy

3. Neither easy or difficult

4. Quite difficult

5. Very difficult

**20. "I liked the sound of this speaker's accent" (Please circle one answer)**

1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly disagree

**Speaker Three:**

*Please write what you hear in the space below.*

---

---

---

---

---

**21. How easy was speaker three to understand? (Please circle one answer)**

1. Very easy
2. Quite easy
3. Neither easy or difficult
4. Quite difficult
5. Very difficult

**22. "I liked the sound of this speaker's accent" (Please circle one answer)**

1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly disagree

**Speaker Four:**

*Please write what you hear in the space below.*

---

---

---

---

---

**23. How easy was speaker four to understand? (Please circle one answer)**

1. Very easy
2. Quite easy
3. Neither easy or difficult
4. Quite difficult
5. Very difficult

**24. "I liked the sound of this speaker's accent" (Please circle one answer)**

1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly disagree

Part Three

*Listen to the speakers. Where do you think they are from? (Please tick one choice)*

Speaker 1

- England
- Australia
- New Zealand
- America
- Other (Please specify)

Speaker 2

- England
- Australia
- New Zealand

- America
- Other (Please specify)

Speaker 3

- England
- Australia
- New Zealand
- America
- Other (Please specify)

Speaker 4

- England
- Australia
- New Zealand
- America
- Other (Please specify)

**That is the end of the questionnaire, thank you very much for your time and effort.**

**Appendix Two: Recording used in Intelligibility Test**

## **Appendix Three: The Script**

### The Modern Family

Father leaves for work in the morning after breakfast. The two children take the bus to school, and mother stays home cooking and cleaning until father and the kids return home in the evening. This is the traditional picture of a happy family living in Britain. But is it true today?

The answer is no! The past 20 years have seen enormous changes in the lives and structure of families in Britain.

The biggest change has been caused by divorce. As many as 2 out of 3 marriages now end in divorce, leading to a situation where many children live with one parent and only see the other at weekends or holidays.

There has also been a huge rise in the number of women with children who work. The large rise in divorces has meant many women need to work to support themselves and their children. Even where there is no divorce, many families need both parents to work in order to survive. This has caused an increase in childcare facilities, though it is very expensive and can be difficult to find in many areas.

In addition, women are no longer happy to stay at home raising children, and many have careers earning as much or even more than men, the traditional breadwinner.

There has also been a sharp increase in the number of single mothers, particularly among teenagers. Some people have blamed this increase for the rise in crime. They feel the lack of a male role model has damaged these children in society.

However, these changes have not had a totally negative effect. For women, it is now much easier to have a career and good salary. Although it is difficult to be a working mother, it has become normal and is no longer seen as a bad thing for the children.

As for children themselves, some argue that modern children grow up more independent and mature than in the past. From an early age they have to go to childminders or nurseries, and so are used to dealing with strangers and mixing with other children.

Source: The Modern Family (2006) BBC World English (Online)

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Appendix Four: Reasons for given by participants for ease of understanding:

Student Number	British English	Australian English	American English	Other
1		Sounds more native		
2	Pronunciation is very clear			
3	Because HK education system uses BE in English learning			
4			Have lots of fun	
5	/	/	/	/
6	Style taught in Primary and Secondary School			
7			It's more popular	
8	Easier to understand			
9				*Canadian English: Easier to understand, not too fast, pronunciation is clear.
10			Always watch American TV shows	
11	My teacher is from there			
12		It's easy to listen to		
13			I hear AE on TV nearly every day; news reports, drama, even movies	
14	/	/	/	/
15	/	/	/	/
16	/	/	/	/
17	Connected to culture			
18				* Chinese English Not much change needed [in me] to

				practice
19	Because this is the standard used to teach me			
20			Sounds cool, more flexible	
21			Sounds the easiest	
22	It is easiest to speak and use			
23			Easier to speak simple words	
24			AE is easier to learn its accent and I feel more comfortable to hear it clearly	
25	Easier to listen to and easy to understand			
26	The sound has more rhythm and fluency			
27	/	/	/	/
28	Because I always listen to BE and my English teacher speaks this at school			
29	Because it is the most pure			
30	/	/	/	/
31	Most clear			
32			No reason, just like	
33	Because HK uses BE			
34			I visited US, so it is more familiar	
35			AE is more professional	
36			Influenced by Primary and Secondary teachers	
37			AE is what I [have] heard the most	
38			Because my English	

			teacher had an AE accent	
39				*Scottish English Because preferred in media
40				*Chinese English My habit to listen
41	/	/	/	/
42	/	/	/	/
43	/	/	/	/
44	/	/	/	/
45	/	/	/	/
46	/	/	/	/
47	Lived in UK for several years			
48	Sounds cool			
49	/	/	/	/
50	Because I mostly chat with British [people]			
51	Speaking a long time			
52	Clear[est] to hear			
53	Clear			
54	More easy to hear, personally I love the rhythm and also the way to pronounce.			
55	/	/	/	/
56	In secondary school the teacher asked me to speak again and again			
57		Easy to understand		
58	BE sounds nice. Elegant and original			
59	I love the /t/ and /d/ sounds which are very strong			
60			It's easier for foreigner's	

			to understand	
61			Because they are easier to understand and more familiar	
62			AE accent is comparably easier to understand	
63	/	/	/	/
64			I have been taught by teachers with AE tongue	
65	/	/	/	/
66	Sounds good and gentle			
67	My NET was from Britain			
68			Funny	
69	Because it sounds formal			
70	/	/	/	/
71	/	/	/	/
72	/	/	/	/
73	/	/	The tone like good	
74	Until Secondary school I also speak and learn in English			
75			It is more relaxed to listen to AE accent	
76			Because I always listen to AE programs	
77		Easy to understand because I have learned English from AusE NET for many years		
78	/	/	/	/
79	Because HK education is affected by Britain since it is the colony of Britain			

	before			
80	More comfortable and casual			
81	It is because it is the most beautiful among all types if English and sounds most professional			
82	/	/	/	/
83	/	/	/	/
84	/	/	/	/
85	Just think that English is foundation from Britain			
86				* Chinese English Because I come from HK
87			AE is easier	
88			I thing AE is easier to understand	
89	/	/	/	/
90	/	/	/	/
91	/	/	/	/
92	/	/	/	/
93	/	/	/	/
94		They are very nice when we are talking English		
95	Because I always think they speak clear English			
96		I like it		
97	BE is the best to listen to			
98			Easy to understand	
99			Easier to understand	
100			Easy to listen to	
101				*Chinese English

				My English is not good
102	/	/	/	/
103			So slow so word is clearer	
104	Sounds good			
105	I like the sound – so softly			
106	Sounds cool			
107	Easy to listen			
108	Easy to understand			
109	I think BE is easier to listen and is cool			
110	It is because I learned BE when I was young.			
111	/	/	/	/
112	/	/	/	/
113	/	/	/	/
114		international		
115	/	/	/	/
116	/	/	/	/
117	Maybe speak BE is high class			
118	I think BE is no problem			
119			Most casual	
120			Easy to understand	

/ denotes no response.

**Appendix 5: Orthographic Realisations.**

Student Number	There has also been a huge rise in the number of mothers who work.  (14 Words)  GA	There has also been a sharp increase in the number of single mothers, particularly among teenagers.  (16 Words)  RP	For women it is now much easier to have a career and a good salary.  (15 words)  Local Clear	As for children themselves, some argue that modern children grow up to be more independent.  (15 words)  AE
Class 1	There a here dry to the mother work	There lots of the of the mother and their nam is teenagers.	For women, it's not much easier to get much salary.	After chirden grow some of the children are more independent.
2	You mother to work	There are teenager	For women it is easy to clean	After children, some argue that chlden more indepentent
3	Do you know about how difficult for mothers to work?	Particular teenagers	For women, it is now more easier salary.	After children were growed, some argument with children and parents about independent
4	Mother to go to work	There are teenages	Saleries	After ch argument some children grow up indipendent
5	The moth of the	There have also	For women there	I have a children

	bank the huge drive her mother to work	single mother but teenager	are not much clear and almondy	himself more dependent
6	He drives his mother to work	She is a single mother, like a teenager	The woman is easier to have a good	After children themselves, some modern children grow up to be
7	The bank mother should work	Where's the mother among teenagers	The woman is now much more easier to have salary	After children on sold, children grow up after become more independent
8	He right Mother to work	The shopping marker to the teenager	For a woman, it is easier for salary	After children himself, more mobile children depend.
9	A huge drive of his mother to work	The shopping of single mother of the teenagers	For women, it is not easy to find a good job and high salary	After children grow, some mothers more independent
10	None of the man the huge drives is or what	There are the some amounts but particularly in teenagers	In my opinion it is much more easier to have much more salary	After children in jail some children are gonna to be more independent.
11	The robber bank the huge drive the mother who work	There has a in all mother particular in all teenagers	That woman who was senior and higher salary	After two, some argue that children need more

				independent.
12	It is hard what mother her work	Teenage	For woman it is a	As children result, some
13	There are a lot of huge drive of mother lots of work	There are lost of single mothers ,it is not for the teenagers	For women and now in a museum to have a Korean celebry	After children to adult, they are more independent
14	The robber remember her mother's work	Number single the teenage	For women it's the clearly salary	Asked children themselves some argue more independent
15	Dr. Dan he drives his mother to work	There are many of special among to teenagers.	Do worry, career salary	As a children themself, why children need to be more independen
16.	A huge drive mother's work	There a few shopping mor but mother	For women it is not easier to work in saliri	After children
17.	The rube man a heel drive for her mother's work	There have been in a shopping center teenagers.	For women it is easy to put Korea salary.	As the children themselves some argument more than children
<b>Class 2</b>	Ben here dry in mother's work	Shopping mother the predictciouly the teenager	For women now much is easily	Of children themself, more children they be
18.				

19	Your doctor	Shopping	For women it is curea salary	After children self
20	A huge rise in the number of mothers who work	There has also been a sharp increase in single mother. Particularly in teenage mothers	For women it is now much easier to have a good career and much salary	Some argued that modern children grow up to be more independent.
21	There's A huge drive other to work	There's Single mother particularly are teenager	For women it's much easier to ...and have a good salary.	A...modern children are grown up to be more independent
22	She bug the other	About teenagers	For women, have a good salary	Of course a children is more independent
23	Huge mother who work	There are quiet espesilly teenages	For women the have expected salary	After children more children grow more independence.
24.	The doctors band a huge drive for a mother should work	There is single mother teenagers	The women are much easier to have and much salary	After some argument say that no they are more independent.
25.	The drive...to work	Single mother, his mother	Now	All children
26.	Their doctor man has a huge their	Sing mothers particularly	It's Korea easier to have a salary	After grown, some children become

	mothers to work			more independent
27.	Mother should work	Mother teenagers	Easy family	Children more in the pe
28.	He drives number mother to work	Seeking about teenagers	Women I would give you good salary	Hi children more interpened.
29	There not non of mother he driven	Teenagers	For women it is now ly and	I modern are more indenpent
30.	The doctor man he drive the mother his work	They have single mother about the teenager	Those woman want more salary	When a children grow, they have been independence.
31.	He diver and the mother to work	They are shopping when they are th	<no words>	Have two children they sure
32.	To watch	Shopping	<no words>	often
<b>Class 3</b> 33.	I mother world	Is shopping sample mother tain	It is not a good salary	After the children result, children mother
34.	There is a huge drive mother of word	There is single mother particularly teenages	Hire kaea good sarilary	There children so mothers indepained
35.	Huge driver between mothers	The particlar most in single mothers and also the teenagers	It's more easier to get the career and salary	Mother's children are more independent
36.	A huge rise in of now of mothers to	There are a large number of mothers	For now, it is not easy to have a	As children there are some children are

	work	in work particularly among teenagers	good career and salary	more independent
37.	A huge number of mothers	There are also single mothers particularly the teenagers	Women are much easier to get high salary	And their children are growth more independent
38.	There are a lot of man meet a huge ride on the mothers on the road	There are also some shopping spree in the particularly for the teenagers	Don't worry, it's not much easier to Victoria and to have a good salary	Of the children themselves, there are children playing in the playground and of...
39.	Huge ride in the number	There is also have been increase in the number of female shoppers particularly among teenage members	For women, now it is more easier to have a career and good salary	After modern agree
40.	I hear by other to work	Mother teenager	For women, now it's good for and salary	I have a children
41.	A huge join of many mothers of work	Shopping of simply mother most of teenagers	Now is much easier	At the children themselves
42.	<no words>	Also have shopping model teenagers	Women are much easiler salary	Children indepentan
43.	Bank	Shopping, mother,	For women it is	Children it is more

		teenagers	easier for to good salary	independent
44.	For my mind, he drick to mine	To shop, there have the mind for teenagers	Don't worry, now have some careah and semior	As the children resulf
45.	Mother sudden work	Single mother teenagers shopping	Good salary	children
46.	Did you drive mother to work?	There is number of shopping robbers particularly in teenagers	For women, is not easy to search carrer and salary	About children growth, more like independent
47.	They write about huge number of mothers to work	There have also been shopping around mothers. Particularly for teenage mothers.	For womens, it is now important in their career to have a good salary	independent
48.	A huge drive	Has also increase the number of single mothers, and now become teenagers	For women and it's now much easier for good salary	After children them self....blah blah blah...independent
49.	The huge drive	A shopping	It is much easier in food	As studest said "
50.	No matter you work	Numbers, particular in teenagers	Much easier to do than salary	As the children grow up it will be more independent

51.	Need the one matter	Shoping with the single mother more over the teenages	Do women now is easy one to and salary	As children are grow up indepent
52.	<no words>	We have visit mibborn shop particar teenage	It is not easily to get the good salary	As is the modern chan, I is more inerpan
53.	<no words>	Shopping, single morth, teenagers	It is now much to get a carrer and high salary	I have a children
54.	Mother's work	I thought I've been a single mother. Particularly for tennager	Don't worry, as now you have career and good salary	Every children of those got independent
55.	Mother's work	Single mother particularly in teenagers	For women eaisr to have good salary	At the there will me more children independant
56.	Hurge mother to work	There have a shopping as single mothers as well as tennage	Now women is easy to have a career and good salary	Children were faith the parents have indepteter
57.	A huge driver mother's mother's work	There have been a single mothers and a number of teenagers.	For women now is much easiler to have good career and salary	For children there are some argue that they are more indepatened.
<b>Class 4</b>	A huge ride mothers	Single mothers,	Don't worry, it is	After children, some

58.	at work	particularly in teenagers	now much easier to hung up the salary	mother argue that children independent
59.	<no words>	There are number of single mothers particular of the teenage	Women easier to have a good career and high salary	After children more dependent
60.	A huge ? of a no. of mother should work	When? Mother, particularly teenagers	For women, it is easier? Of good?	Mecidnal? Independent? More children should be
61.	a huge drive of a number	There are special single mother especially teenager	For women it much easier to have salary	As the children felt they are much
62.	A huge drive to work	A shopping mall around pick among teenagers	It's now much easier to have a career and a good salary	As the children grow some agree more children are growing up more intelligent
63.	<no words>	<no words>	Don't worry it is now much easier to rise your salary	Some of the children are getting more independent
64.	<no words>	Shopping single mothers particularly amount teenagers	To have a good career and a good salary	Children itself they are more independent
65.	<no words>	Problem of single mothers particularly	Don't worry it is now...salary	After children are some argue that

		about a teenager		why don't children are
66.	No matter huge vine of number of women	There have also be a nos of single mothers, but also be a mount of teenagers	No womens and now have t environment a salary	After children fell some other children are more made of
67.	Huge rise of the no of mothers to work	The has been a sharp increase in single mothers particularly in teenagers	For women now it is now quite easier to have a good salary	As the children themselves, some argue the children are more independent in grown up
68.	Write down the words	The over shopping teenager	Don't worry! Isit the sarlary	Children childre more in the
69.	Huge number of the world	Also shopping single mother particularly teenager	The women now much easiler to career higher salary	After children modern children more independent or not
70.	Mothers to work	The shopping mothers teenagers	It is now much easylier to the salary	As the children the children is more independent
71.	mother	They have been their mother but teenagers	And it is now easiler to create salary	Of the children grow there are indepentant
72.	In Australia, my	Particular in	Old women is the	After children grow

	mother should go to work	teenagers	easier to get high salary	up they will be more independent to learn up
73.	I don't know it had been start	There have a shopping center for teenager	For women it is easier to get a good salary	Some children want to get more independent
74.	Another work	I like to go shopping with teenager	Man and woman there is earlier can get good salary	Some argue children independent
75.	Huge drive mother	Take numbers particularly about teenagers	Now women it is easier to salary	After children argue that there even more independent
76.	In human right. It trys in to mother's world	They be the single mother, but they all about teenagers	For women it's easier to have and the salery	As the children in twelve
77.	I'll feel tried it doesn't matter to work	The shopping mother teenagers	No women it had easier to salary	I have children some of the children indentpendand
78.	Mother work	Where are we going to shoping, mother, term landgr	Don't worry! We are not serous	As the children, more chridren went to be...
79.	<no words>	There are also some of the single mother particular in	It is now much easier to have this salary	When they grow up. I think more children can be independent

		teenagers		
80.	Mothers to work	Shopping single mother possibly teenager	For women it's not much easier to have high salary	As the result some of the modern children are more independent
81.	A huge drive for a mother to work	Shopping single mothers particularly among teenagers	It's now much easier to have a career and a higher salary	As some argue that modern children have got to be more independent
82.	A huge mother can work	Most shopping centre parti teenage	It now easier to find a career and good slary	After the children some of the
83.	mothers	They also be a shoppig a teenagers	Women how much is your salary	Some of to be more indepentant
84.	A huge number of drivers should work	The single number of particular the teenagers	The worker much easier to earn much higher salary	For these children some argue that the independence
85.	A huge drive of a mother it was...	Particularly adult mothers to a teenage mother	It is much easier to employee	As a children
<b>Class 5</b> 86	I hear my mother of words	Number sigle mother	For women it is very easy have salary	I have the children

87.	Mother to work	There are single mother teenager	Woman	Children more children to be independence
88.	Number of mother	Shopping of number of mother of the teenagers	Don't worry, it is now much more easier to the career of the salary	After 2, the child is now more independent
89.	There right mother that you work	numbers of single mother of teenage	For an now it is much easier to earn money	As the children as grown much mother
90.	As her he drives a from work as h	There are no partuicary thin mother	How would you hear the in this career	I've choose, how would you
91.	There are many things to write	There are many single mother piticply teenage	It is now much easier to	Some children would be not to be more independent
92.	He divers my mother to work	Single mother teenagers	Women...salary	More independent
93.	Talk about diver mother to work	What was be single mother your mother is a teenagers	Women is a Koran to marry	Of children result, more children
94.	His mother to work	What was his mother, the teachers teenagers.	Don't worry! It is not salary	At the children told, the mother

95.	Mother's work	Single mother teenage	care	To be more independence
96.	<no words>	Where teenagers	Do worry, it is	As the children their self
97.	Mother to work	Shopping is single mother it is are teenage	It is now must is	Children, some are children have more independence
98.	Have drive a mother work	Single mother teenagers	Don't worry, now is just too much	I have the children the children more independent
99.	There mother she want	Number single mother teenagers	It is how much salary	As the children why the children grow up more
100.	Should work	There have over shopping teenagers	Don't worry it have to easier to	As the children feel some children are
101.	Mothers watch	Number if single mother	Parent salad	Student more
102.	work	Been number, it's about teenagers	Don't worry	Every student
103.	Round mother should work	Single mother teenagers	<no words>	Some children more independence
<b>Class 6</b> 104.	Mother's work	We have to be teenager	Don't worry. Much easier	Children got to be
105.	Mother she work	I have been shopping mall teenagers	Don't worried	Children more independent

106.	Drive mother to work	Partially teenagers	Now it's much easier to have a good/higher salary	As the children told children being independent
107.	He drive world	I want to go shopping mother	Don't worry now we have easy to	To more indepeat
108.	drive	Sing mother	Don't worry	Some to be more
109.	You mother work	There sinage mother teenager	Easier the salary	After the children
110.	I hear mother to work	I am single mother teengeer	It is much easier to	Children is more independence
111.	Mother work	I think the teenage	Don't worry, it sound from	children
112.	Mother should work	Shopping marking of teeange	For woen how many salary	Children more inderpand
113.	A huge drive of my mother to	salary	Salary	Some other children may grow up
114.	No a I will diver for mother to work	Shopping with mother but pen teenage	Nowadays now much easy ot korea in the	To the children so of the children
115.	Mothers words for my best I heard my	Er..I like shopping in center especially for teenager	For women it's not...	For truth. Assignment I truth myself more independence
116.	He drives when he	Singal mother	It's now much	As the children

	goes to work	teenager	more easy to koera	result it is more independent
117.	mother	Teenager, single mother	It is salary	As childred glow up will be more independen
118.	Did you try it in your work?	Single mother teen agent	talaren	More children who work the...
119.	Do you wonder why? A huge driver is walking to under the road	There also have shopping margin in the espeialy for the teanages	Don't worry, there is much easier to get a job with better salary	After children fell some children are more easier to grow
120.	...if you drive my mother to work...	...number of single mother...teenagers	...don't worry...not much easier...sarlary	After children twelve...children more independent.

**Appendix Six: One Way Anova for Second Research Question**

**Report**

NetYN		USA	UK	Local	Aus
Yes	Mean	2.00	2.62	4.77	3.27
	N	104	104	104	104
	Std. Deviation	1.712	2.374	3.257	2.119
No	Mean	2.06	2.25	5.00	3.50
	N	16	16	16	16
	Std. Deviation	1.526	1.571	2.221	2.309
Total	Mean	2.01	2.57	4.80	3.30
	N	120	120	120	120
	Std. Deviation	1.683	2.282	3.132	2.137

**ANOVA Table**

			Sum of Squares	df	Mean Square	F	Sig.
USA * NetYN	Between Groups	(Combined)	.054	1	.054	.019	.891
	Within Groups		336.938	118	2.855		
	Total		336.992	119			
UK * NetYN	Between Groups	(Combined)	1.851	1	1.851	.354	.553
	Within Groups		617.615	118	5.234		
	Total		619.467	119			
Local * NetYN	Between Groups	(Combined)	.738	1	.738	.075	.785
	Within Groups		1166.462	118	9.885		
	Total		1167.200	119			
Aus * NetYN	Between	(Combined)	.738	1	.738	.161	.689

Groups	Within	542.462	118	4.597		
	Groups					
	Total	543.200	119			

Appendix Seven: One way Anova for Research Question three

ONEWAY Total1234 BY ClassNo

/STATISTICS DESCRIPTIVES HOMOGENEITY BROWNFORSYTHE WELCH

/PLOT MEANS

/MISSING ANALYSIS

/POSTHOC=TUKEY ALPHA(0.05).

**Oneway**

**Notes**

Output Created	2009-06-26T12:56:46.778
Comments	

Input	Data	C:\Documents and Settings\William Hann\Desktop\Stats\Analysis\Accent means\Accent Means.sav
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	Split File	<none>
	N of Rows in Working Data File	120
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each analysis are based on cases with no missing data for any variable in the analysis.
Syntax		<pre> ONEWAY Total1234 BY ClassNo   /STATISTICS DESCRIPTIVES   HOMOGENEITY BROWNFORSYTHE   WELCH   /PLOT MEANS   /MISSING ANALYSIS   /POSTHOC= TUKEY ALPHA(0.05). </pre>
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	Elapsed Time	0:00:00.792

[DataSet1] C:\Documents and Settings\William Hann\Desktop\Stats\Analysis\Accent means\Accent Means.sav

### Descriptives

Total Intelligibility scores for all speaker accents

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
					BC2A High Group	17		
BC2B High Group	15	13.27	10.566	2.728	7.42	19.12	0	42
BC 1Middle Group	25	14.60	7.182	1.436	11.64	17.56	6	31
BC2 Middle Group	28	15.86	6.181	1.168	13.46	18.25	7	38
BC3A Low Group	18	8.28	4.056	.956	6.26	10.29	2	17
BC3B Low Group	17	7.29	3.820	.927	5.33	9.26	2	16
Total	120	12.72	6.968	.636	11.47	13.98	0	42

### Test of Homogeneity of Variances

Total Intelligibility scores for all speaker accents

Levene Statistic	df1	df2	Sig.
3.810	5	114	.003

### ANOVA

Total Intelligibility scores for all speaker accents

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1276.187	5	255.237	6.464	.000
Within Groups	4501.738	114	39.489		
Total	5777.925	119			

**Robust Tests of Equality of Means**

Total Intelligibility scores for all speaker accents

	Statistic <sup>a</sup>	df1	df2	Sig.
Welch	12.491	5	49.885	.000
Brown-Forsythe	6.296	5	50.816	.000

a. Asymptotically F distributed.

**Post Hoc Tests**

**Multiple Comparisons**

Total Intelligibility scores for all speaker

accents

Tukey HSD

(I) Class Number of Student	(J) Class Number of Student	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
BC2A High Group	BC2B High Group	1.204	2.226	.994	-5.25	7.66
	BC 1Middle Group	-.129	1.975	1.000	-5.86	5.60
	BC2 Middle Group	-1.387	1.932	.979	-6.99	4.21
	BC3A Low Group	6.193*	2.125	.048	.03	12.35
	BC3B Low Group	7.176*	2.155	.015	.93	13.42
BC2B High Group	BC2A High Group	-1.204	2.226	.994	-7.66	5.25
	BC 1Middle Group	-1.333	2.052	.987	-7.28	4.62

	BC2 Middle Group	-2.590	2.011	.791	-8.42	3.24
	BC3A Low Group	4.989	2.197	.215	-1.38	11.36
	BC3B Low Group	5.973	2.226	.087	-.48	12.43
BC 1Middle Group	BC2A High Group	.129	1.975	1.000	-5.60	5.86
	BC2B High Group	1.333	2.052	.987	-4.62	7.28
	BC2 Middle Group	-1.257	1.729	.978	-6.27	3.76
	BC3A Low Group	6.322 <sup>+</sup>	1.943	.018	.69	11.95
	BC3B Low Group	7.306 <sup>+</sup>	1.975	.004	1.58	13.03
BC2 Middle Group	BC2A High Group	1.387	1.932	.979	-4.21	6.99
	BC2B High Group	2.590	2.011	.791	-3.24	8.42
	BC 1Middle Group	1.257	1.729	.978	-3.76	6.27
	BC3A Low Group	7.579 <sup>+</sup>	1.898	.002	2.08	13.08
	BC3B Low Group	8.563 <sup>+</sup>	1.932	.000	2.96	14.16
BC3A Low Group	BC2A High Group	-6.193 <sup>+</sup>	2.125	.048	-12.35	-.03
	BC2B High Group	-4.989	2.197	.215	-11.36	1.38
	BC 1Middle Group	-6.322 <sup>+</sup>	1.943	.018	-11.95	-.69
	BC2 Middle Group	-7.579 <sup>+</sup>	1.898	.002	-13.08	-2.08

	BC3B Low Group	.984	2.125	.997	-5.18	7.14
BC3B Low Group	BC2A High Group	-7.176*	2.155	.015	-13.42	-9.93
	BC2B High Group	-5.973	2.226	.087	-12.43	.48
	BC 1Middle Group	-7.306*	1.975	.004	-13.03	-1.58
	BC2 Middle Group	-8.563*	1.932	.000	-14.16	-2.96
	BC3A Low Group	-.984	2.125	.997	-7.14	5.18

\*. The mean difference is significant at the 0.05 level.

#### Homogeneous Subsets

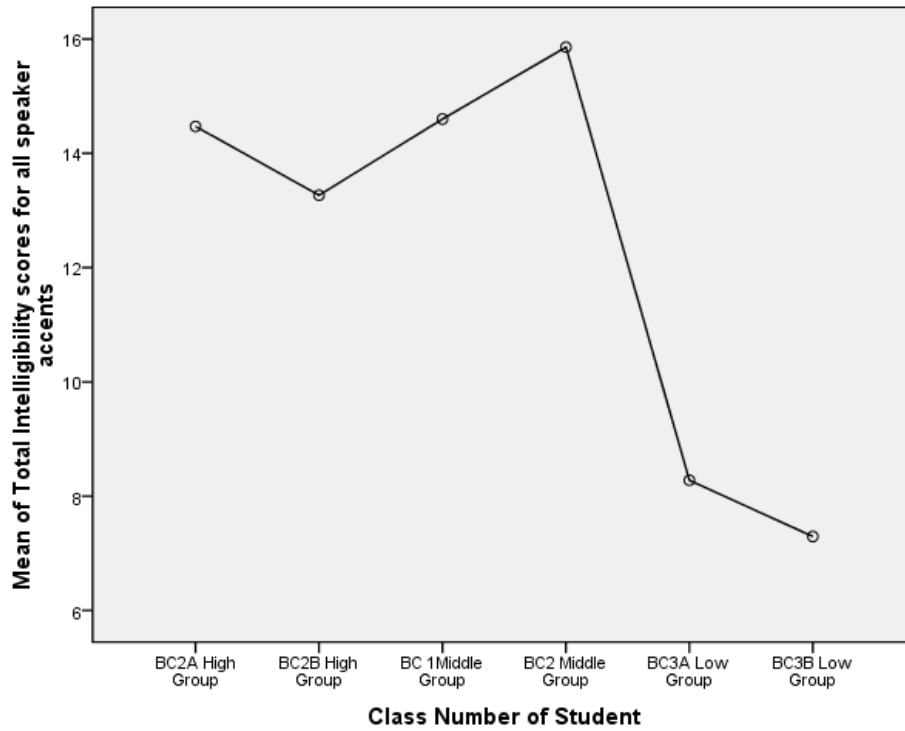
#### Total Intelligibility scores for all speaker accents

Tukey HSD

Class Number of Student	N	Subset for alpha = 0.05		
		1	2	3
BC3B Low Group	17	7.29		
BC3A Low Group	18	8.28	8.28	
BC2B High Group	15		13.27	13.27
BC2A High Group	17			14.47
BC 1Middle Group	25			14.60
BC2 Middle Group	28			15.86
Sig.		.997	.149	.800

Means for groups in homogeneous subsets are displayed.

#### Means Plots



#### Notes

Output Created	2009-06-26T12:59:18.296
Comments	
Input	Data
	C:\Documents and Settings\William Hann\Desktop\Stats\Analysis\Accent means\Accent Means.sav
	Active Dataset
	DataSet1
	Filter
	<none>
	Weight
	<none>
	Split File
	<none>
	N of Rows in Working
	Data File
	120
Missing Value Handling	Definition of Missing
	User-defined missing values are treated as missing.

Syntax	Cases Used	<p>Statistics for each analysis are based on cases with no missing data for any variable in the analysis.</p>
		<p>ONEWAY Total124 BY ClassNo          /STATISTICS DESCRIPTIVES          HOMOGENEITY          BROWNFORSYTHE WELCH          /PLOT MEANS          /MISSING ANALYSIS          /POSTHOC=TUKEY          ALPHA(0.05).</p>
Resources	Processor Time	0:00:00.420
	Elapsed Time	0:00:00.662

