A Study of the Correlation between a Speaker's Appearance and People's Perception of Their Accent

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Table of Content

Appendices

List of Tables

List of Figures

Abstract

There is a plethora of research focusing on accent discrimination and its effect on migrants, but few research projects discuss the correlation between accents and stereotypical perceptions. Audiences have different emotional reactions toward the same content when it is delivered by different patterns and volumes. Sociolinguistic research shows that accent as a part of an individual's identity is being associated with cultural habitus and reflective of ethnic or racial background. My research project examines whether speakers' physical appearance can influence people's perceptions of their accents and focuses on the correlation between prototypicality and the connotations of accents. Two experiments have been carried out: In Study 1, an audio soundtrack has been recorded by a male of Asian physical appearance who is a native speaker of Australian English (AusE). 50 Macquarie University students completed an online questionnaire and assessed the speaker's accent. In Study 2, a focus group was recruited from the online study, watch a video recording of the same speech, subsequently discuss the speaker's accent and then complete the same questionnaire again. The goal of this experiment is to find out if people's perceptions regarding the same speaker's accent change when the speaker presents more features and whether stereotypes can create cognitive biases towards people's accent. The results support the hypophysis of my study. It seems that people's recognition of accents is influenced by the speaker's appearance. My argument and research design for my doctoral thesis will build on this result and further study the correlation between appearance and accent.

Statement of Candidate

I confirm that the work in this thesis with the title "The Correlation between a Speaker's Appearance and People's Perception of their Accent" has not previously been submitted for a degree, nor has it been submitted as part of requirements for a degree to any other university or institution other than Macquarie University.

I also certify that this thesis is an original piece of research which has been written by me. Any assistance that I have received in the course of my research work and the preparation of the thesis itself has been appropriately acknowledged.

In addition, I confirm that all information sources and literature used for this project are indicated in the thesis.

The Macquarie University Faculty of Arts Human Research Ethics Committee approved the research presented in this thesis (reference number: 5201800287)

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Introduction

Background of Study

Accent-based discrimination is a central aspect of linguicism. Linguicism refers to assumptions being made because of the way a person speaks. We make assumptions about a person's educational background, social status, or even personal character because of how they use language. We judge by their range of vocabulary, register, pronunciation and fluency. This judgement occurs subconsciously and affects all communication processes. When it comes to non-native speakers and foreign accents, linguicism affects international communication from group assignments in Universities to decision making at multinational workplaces (Creese, 2010; Livingston, Schilpzand & Erez, 2014; Mai and Hoffmann, 2014; Peisker & Hlavac, 2014; Kayaalp, 2016). The influence of accent on people's cognition is significant. Kinzler et al. (2009) tested 112 five-year-old children with four experiments. They discovered that accents have a more substantial influence on children's social preference than skin colours (Kinzler et al., 2009). The preference of certain accents can also be seen in adults (Creese, 2010; Livingston, Schilpzand & Erez, 2014; Mai & Hoffmann, 2014; Peisker & Hlavac, 2014; Kayaalp, 2016). The recognition of a speaker's English competency is another aspect that is affected by accent. English competency in this context refers to the four macro language skills: listening, reading, writing, and speaking. Creese's (2010) study suggests that although their English competency is high, approximately 75 per cent of African immigrants were assigned to jobs that do not require them to communicate with customers. The discrimination against immigrants with non-native accents in job hiring and work allocations can be seen in the USA, Canada, Brazil, and Australia (Creese, 2010; Livingston, Schilpzand & Erez, 2014; Mai & Hoffmann, 2014; Peisker & Hlavac, 2014; de Souza et al., 2016).

Research in accent studies has been focusing on how recognising certain accents can lead to attitudinal changes. There is a research gap between the recognition of accents and the study of other cognitions. Many of the existing studies, such as Eurobarometer (2008), Lev-Ari and Keysar (2010), Pantos and Perkins (2013), Livingston, Schilpzand and Erez (2014), Romero-Rivas, Martin and Costa (2015), and de Souza et al. (2016), use only audio recordings of the accented speech in their experiments. There is a lack of research about whether the accent recognition itself can be subjective. This thesis contributes to the discussion of linguicism by focusing on the correlation between people's appearance and accent cognition. By using statistical instruments, it will investigate whether the perception of accent is independent of people's visual cognition. This thesis hypothesises that the person's appearance influences people's perception of a speaker's accent. By manipulating a speaker's phenotypic prototypicality (PP), this research observes participants' assessments of the speaker's accent in two studies. Phenotypic prototypicality (PP) is a visual combination of individuals' cultural symbols. It is the part of a person's appearance that shows their identity, social background, and culture. Self-reporting method and focus group studies are combined in the experiments to monitor both, participants' responses and their implicit attitudes. As this study is a pilot study for a larger project, the sample size is restricted, and the results will only give an indication of how to approach the topic on a larger scale. This thesis is divided into four parts. The first offers a literature review, which introduces the key terms and discussions in the arena of linguicism. The methodology chapter (ch2) explains the inventory used for this research. Chapter 3 reports and evaluates the two experiments that have been conducted to test the hypothesis. The findings are discussed and analysed in Ch4, and the conclusion summarises the primary outcomes of this

research and discusses the limitations as well as theoretical and practical implications for future projects.

Prototypicality and Stereotypes

Prototypicality is an element that is commonly used for social categorisation both in research and daily communication. It refers to an individual's representativeness of their social or cultural background. People with higher prototypicality tend to be seen as more representative of the group (Dragojevic et al., 2017). People's prototypicality refers to the social features of their social groups. For example, a person who wears traditional cultural clothing might be considered having a higher prototypicality compared to people who do not. Prototypicality can be manipulated for specific research purposes. Perceptual research uses prototypicality to create stimuli that show certain cultural images to the participants. By combining different cultural or biological features, researchers can isolate or create identities that serve specific goals in the study. The application of prototypicality is also seen in political events. Representatives such as ambassadors might wear particular clothes or colours to show their identities.

It is important to distinguish between prototypicality and stereotype. Prototypicality focuses on the correlation between people's identities and their backgrounds. Prototypical features are biological and cultural signifiers that differ between individuals and reflect their identities. These differences might refer to clothing choices, oral habits, or facial features and more (Wilkins, Chan & Kaiser, 2011). Prototypicality matches individuals with their backgrounds and evaluates the correlation between them. By combining various prototypicality, a profile of an individual's cultural identity can be established. This process personalises culture to create unique identities for each person.

In contrast, stereotypes are generalisations about groups of people (Hogg & Reid, 2006). Stereotypes commonly depersonalise individuals by their appearance and presume their ability or response based on pre-formed opinions of their backgrounds. The main aspects that stereotypes focus on are an individual's attitudes, behaviours, preferences, or capabilities. Stereotypes emerge from the belief that these aspects are determined by people's backgrounds (Hogg & Reid, 2006). Stereotypes promote judgements on individuals' ability base on their identity. There are both positive and negative stereotypes. Positive stereotypes are prejudices that lead to positivly skewed judgments such as 'Asians are good at mathematics' or 'Germans are rigorous'. Negative stereoypes lead to the contrary. Stereotyping is a phenomenon that is crucial in the research area of cross-cultural communication. Both, the influences of prototypicality and stereotypes on people's perception of accents are discussed in this thesis.

The role of prototypicality in communication is to assist the recognition of identities. Identities are indicators for social categorisations (Hogg & Reid, 2006) and therefore essential elements in communication. Interactions across communities, societies, classes, and countries are built on the recognition of identities (Yampolsky, Amiot & de la Sablonnière, 2013; Pekerti & Thomas, 2016; Yampolsky, Amiot & De La Sablonnière, 2016). A primary pair of identity categories is the 'in-group' and 'out-group' identity. This categorisation of 'in-group' and 'out-group' takes place at the very start of an interaction.

The favouritism of in-group identity is widely studied (Hogg & Reid, 2006; Bodenhausen, Kang & Peery, 2012; Mercer, 2013; Mai & Hoffmann, 2014; Dehghani et al., 2015; Stanciu et al., 2017). Hogg and Reid (2006) believe that the favouritism of in-group identity is one cause of biased judgment in cross-cultural communications. They suggest that social categorisation is a depersonalisation process (Hogg & Reid, 2006), which means that instead of considering

individuals as unique persons, people tend to recognise them as representatives of their culture of a culture. Hogg and Reid (2006) believe that this depersonalisation causes prejudiced attitudes and leads to stereotyping.

This thesis agrees that prototypicality has an indirect relationship with stereotypes. However, recognising an individual's prototypicality does not necessarily result in stereotyping. Mercer (2013) suggests that the categorisation of identities is determined by the 'Social Brain'. According to Mercer (2013), 'Social Brain' is in charge of people's social activities. The goal of the 'Social Brain' is to process complex and constant shifting social interaction efficiently (Mercer, 2013). In order to achieve effective social interaction, the 'Social Brain' uses prototypicality as implicit social markers to adjust strategies for different parties in the communication process (Hinton, 2017). This mechanism connects prototypicality with stereotypes. When the 'Social Brain' encounters an unfamiliar culture, it gathers pre-existing knowledge of the culture group and initials an image for the identity, but this pre-existing knowledge might involve stereotypes (Strom et al., 2012). Under the influence of in-group identities favouritism, people are more likely to stereotype others in a situation (Hogg & Reid, 2006; Bodenhausen, Kang & Peery, 2012; Strom et al., 2012; Mercer, 2013; Mai & Hoffmann, 2014; Dehghani et al., 2015; Stanciu et al., 2017). However, knowledge about a foreign culture is not fixed. With increasing exposure through cross-cultural interaction, the familiarity with the culture grows. There is also more knowledge about the individual acquired through communication, and the 'Social Brain' consistently constructs new in-group and out-group identities based on different topics (Mercer, 2013). This nature of social interaction is the reason why prototypicality is not directly related to stereotypes. As an indicator of an individual's cultural background, prototypicality leads to the initial image that might involve

depersonalisation and stereotypes. With growing knowledge of a foreign culture, communication becomes more personal, and the effect of generalisation fades before it disturbs the interaction (Peisker & Hlavac, 2014). This idea indicates that stereotype-related discrimination results from rejective attitudes towards a foreign culture. By resisting new knowledge of the foreign culture, people establish prejudiced opinions of a particular cultural identity, which means that biased opinions are the direct cause of stereotyping (de Souza et al., 2016).

There are three barriers that can contribute to rejective attitudes:

1. The first barrier is the language processing fluency. An encounter with a foreign culture tends to include language barriers. With a lack of understanding of the other person's language, communication can become difficult. Language processing and fluency can lead to decreasing credibility and negative attitudes (Lev-Ari & Keysar, 2010; Dragojevic et al., 2017). Low language processing fluency might cause reluctance in using that particular language. This attitude can be misinterpreted as an unwillingness to communicate (Lev-Ari and Keysar, 2010; Dragojevic et al., 2017) and works bi-directionally. The inability to understand a language can also be interpreted as a sign of rejection or carelessness. As increasing language processing fluency relies on practice, this effect creates a loop that further raises the language barrier and encourages linguistic stereotypes (Peisker & Hlavac, 2014).

2. The conflicts between cultural norms are another barrier that leads to rejective attitudes. People who celebrate St Patrick's Day, for example, wear green hats and clothes during the celebration. Wearing a green hat in China, however, is traditionally used to signify

someone whose spouse is having an extramarital affair. Therefore, Chinese people avoid wearing green hats. For people who are not familiar with the Chinese culture, this might be interpreted as a lack of interest or respect for the Irish culture. This type of barrier is less difficult to overcome compared to language issues. The misunderstanding can be eliminated through cross-cultural communication.

3. The third barrier is the influence of media. Mass media is a major contributor to the formation of stereotypes. Before researchers started to focus on stereotypes and discrimination, mass media had created many stereotypes, for example through TV programs and news reports. These biased opinions include not only racial and linguistic stereotypes but also gender and class stereotypes. Some examples are depictions of Asian people as unable to pronounce an 'r' in the English language, or the criminalisation of people with African appearance (Strom et al., 2012), and the famous and widely criticised 'Stranger Danger' misconception for sexual assault (Dr Georgina Sutherland et al., 2015). The latter stereotype does not only mislead people into ignoring the fact that only approximately 10 per cent of sexual violence is committed by strangers, but it also results in injustice in criminal court cases (Dr Georgina Sutherland et al., 2015; Kleider-Offutt et al., 2017). Audiences acquire these biases, and these stereotypes become a part of the initial image of, in this example, Chinese and African people.

These three barriers make intercultural and interracial interactions in difficult practices. Misconception and biases caused by stereotyping not only lead to discrimination in business but

also injustice in legal systems. People with higher African prototypicality are at greater risk to be misidentified by witnesses as criminals (Kleider-Offutt et al., 2017). They have a higher chance to be sentenced harshly than Anglo-offenders (Strom et al., 2012). Businesspeople with standard English accents receive higher preference because the accents are linked with positive stereotypes (Mai & Hoffmann, 2014). In schools and universities, migrant students often face isolation in class due to their nonstandard English accents (Kayaalp, 2016). Domestic Students might be unwilling to partner with Asian students in group assignment as they are stereotypically shy and not competent in English.

Attitudes towards Foreign Accents

Language underpins human social interactions. It allows for efficient information exchange in societies. The usage of language is an essential aspect of communication. Interlocutors constantly communicate their identities and attitudes not only by the content of their speech but how they deliver it: speed, tone, volume, register, and accent are all part of communication (Lev-Ari & Keysar, 2010; Pantos & Perkins, 2013; Colic-Peisker & Hlavac, 2014; Mai & Hoffmann, 2014; Kayaalp, 2016; Dragojevic et al., 2017). Someone's increasing speaking speed might suggest that the person intends to finish the conversation. People who receive this information might then end the conversation. Topic switching is a common practice when the speaker sees that other interlocutors are not engaging in the conversation, which might be a sign for rejection or lack of interest. These reactions are often unconscious. Compared to the communication of deliberately constructed content, these are the expressions of the interlocutors' implicit attitudes. Every individual also has a unique way of speaking. Linguistic features like tones, accents, or volumes personalise language and reflect people's identity. In high-context

culture countries such as China or Japan, the language usage is highly based on the context. The semanteme of a word can vary depending on the context, the tones the speaker is using, and the social position of the speaker. These complicated social interactions rely on people's 'cultural intelligence' to make sense (Mercer, 2013).

This thesis focuses on the implicit integration between interlocutors. It studies accent as an aspect of the passive and subconscious usage of language. Accents are essential components of inter-group communication. They are variations of a language that consists of unique phonetic variants and speech patterns. Accents vary between populations that are geographically, economically, educationally, or ancestrally distinct. As a cultural symbol, accents show each speaker's identity, culture, and tradition (Creese, 2010; Pantos & Perkins, 2013; Colic-Peisker & Hlavac, 2014; Livingston, Schilpzand & Erez, 2014; Mai & Hoffmann, 2014; Kayaalp, 2016; Dragojevic et al., 2017). For example, the British royal family's 'cut-glass accent' is a symbol of their high social class identity and royal heritage.

As a prototypical feature, accents historically increased the efficiency of human communication (Mercer, 2013). Although, in the gradually globalising world, accents can lead to misconceptions and miscommunication. Studies of linguicism (linguistic racism) and accent based discriminations have been conducted in many countries (Eurobarometer, 2008; Creese, 2010; Colic-Peisker & Hlavac, 2014; Romero-Rivas, Martin & Costa, 2015; de Souza et al., 2016; Kayaalp, 2016; Leach, Watson & Gnevsheva, 2016; Dragojevic et al., 2017) and fields (Kinzler et al., 2009; Lev-Ari & Keysar, 2010; Pantos & Perkins, 2013; Livingston, Schilpzand & Erez, 2014; Mai & Hoffmann, 2014; Pietraszewski & Schwartz, 2014; Dehghani et al., 2015; Dewaele & McCloskey, 2015;). A major area that researchers looked at is the discrimination in job recruitments. Mai and Hoffmann's (2014) study suggests that as there are more positive

stereotypes linked with standard accents, people are more likely to choose a business partner with standard accents. A survey conducted in 26 of all 27 European Union countries found that 34% of participants of a representative sample would under-evaluate a job applicant who speaks with a non-standard accent compared to an equally qualified candidate who speaks with a standard accent (Eurobarometer, 2008). Among the participants that were in charge of recruitments, this figure rose to 45% (Eurobarometer, 2008).

Accent based discrimination does not only exist in job hiring situations, but it also influences work distribution. As in the previously mentioned Canadian example, despite the fact that they speak fluent English, nearly three-quarters of workers who speak with an African accent were allocated jobs that do not require substantial communication skills (Creese, 2010). Discriminatory decisions are not based on English competency but marked by linguicism. In Commonwealth Africa, English is an official national language and subjects beyond primary school are mostly taught in English using the British school model (Creese, 2010). Because of this system, most of the Commonwealth African workers speak English fluently and are competent in English. However, this cultural capital is not recognised by the Canadian society (Creese, 2010). Being directed to English – as – Second – Language (ESL) classes, those foreign workers were imbued with the idea that speaking with a non-standard accent is equivalent to low English competency (Creese, 2010; Kayaalp, 2016). They are required to learn elementary level English in ESL. This policy does not only force these African workers to undertake classes that are useless for them, but it also reinforces the idea that their language and culture is not welcome in Canada. Creese (2010) calls this phenomenon 'Erasing English Language Competency'. It refers to the phenomenon that people consider certain English accents as signs of low English competency. This effect also can be seen in Canadian schools. Kayaalp (2016) interviewed

Turkish immigrant youths in Canadian schools. Turkish children who migrated to Canada with their parents face linguicism and exclusion due to their accent (Kayaalp, 2016). Immigrant students' mental well-being is highly affected by the rejection of their peers due to their non-native accent (Kinzler et al., 2009). For these young people, the only way to be accepted by their classmates is to leave behind their Turkish identity and be 'Canadianised' (Kayaalp, 2016). In line with Creese's (2010) and Kayaalp's (2016) research in Canada, de Souza et al. (2016) suggest that in situations that involve communication skills, people tend to discredit others' English competency when they speak with non-standard accents.

One interpretation of the phenomenon resulted in the Social Identity Theory (SIT). Proposed by Tajfel and Turner in 1979, SIT suggests that negative attitudes towards out-group identities develop naturally through inter-group communications (Hogg & Reid, 2006; Bodenhausen, Kang & Peery, 2012; Mai & Hoffmann, 2014; Dehghani et al., 2015; Stanciu et al., 2017). People also develop in-group favouritism or in-group bias towards in-group identities during communication (Hogg & Reid, 2006; Bodenhausen, Kang & Peery, 2012; Mai & Hoffmann, 2014; Dehghani et al., 2015; Stanciu et al., 2017). Individuals from other social groups are likely to be undervalued, and those who come from the same group tend to be overvalued. These attitudes are triggered by other people's prototypical features, such as skin-tone, cultural norms, and language. Pantos and Perkins (2013) suggest that language and more specifically accent is a core component of this phenomenon. The experiment by Kinzler et al. (2009) supports this idea by showing that 5-year-old children prefer making friends with those who speak with familiar accents over children with familiar skin-tones. This result indicates that accents are potentially more powerful prototypical features than skin-tones. During education and socialisation, children might develop diverse preferences for various cultural markers, such

as clothing or gestures. However, the significance of accents as cultural symbols is dominant. Based on the idea of SIT, accent discrimination can be recognised as a result of people's antipathy towards out-group identities.

In contrast to SIT, Lev-Ari and Keysar (2010), Dewaele and McCloskey (2015), and Dragojevic et al. (2017) suggest that the core of linguicism is 'processing fluency'. In the field of sociolinguistics, processing fluency refers to the amount of effort that is required to process messages. Processing fluency increases as people's familiarity with the information increases (Eurobarometer, 2008; Lev-Ari & Keysar, 2010; Simpson & Kashima, 2013; Livingston, Schilpzand & Erez, 2014; Pietraszewski & Schwartz, 2014; Dehghani et al., 2015; de Souza et al., 2016). With familiar topics, audiences can process and make sense of the content faster and better than when they are dealing with unfamiliar issues. People who grow up in the UK will process strong regional accents such as a Liverpool accent or a Scottish accent more quickly and more accurately compared to interlocutors who are not familiar with the British culture and dialects (Leach, Watson & Gnevsheva, 2016). This theory suggests that when encountering unfamiliar information such as a foreign accent or a strange topic, more cognitive resources are required from individuals in order to process the content. The content will become harder to understand and remember (Mai & Hoffmann, 2014).

Dragojevic et al. (2017) designed two studies to monitor participants' perceptual and cognitive processes of evaluating two distinct accents that tended to be linked with negative stereotypes. In the first study, 96 undergraduate students were asked to evaluate a speaker's Punjabi accent. The data suggest that when the speaker speaks with a stronger accent, they are considered more prototypical to their cultural background (Dragojevic et al., 2017). The participants also reported that they evaluated the speaker's speech with a stronger accent more

negatively because the speech is harder to understand (Dragojevic et al., 2017). The second study with 179 valid samples suggests a similar result. Participants believe that a speaker with a heavier Mandarin accent has a higher prototypicality compared to a speaker with a lighter Mandarin accent (Dragojevic et al., 2017). Processing fluency was also reported as the reason for the negative evaluation of people who speak with foreign accents (Dragojevic et al., 2017).

The focus of Lev-Ari and Keysar's (2010) study was on the discredit of foreign-accented speech. Thirty American English speakers participated in their first study. Each participant was required to listen to 45 statements that were recorded by three native English speakers, three speakers with mild, non-standard English accents, and speakers with heavy, non-standard English accents (Lev-Ari & Keysar, 2010). The results show that participants generally discredited the statements that were recorded by non-standard English accent speakers (Lev-Ari & Keysar, 2010). In a second study, 27 native English speakers were informed of the influence of 'processing fluency' and were asked to avoid the effect. Participants were able to avoid the effect of 'processing fluency' in the assessments on the statements with mild accents. The influence of 'processing fluency' on participants was still significant for the statements that were recorded with heavy accents (Lev-Ari & Keysar, 2010). Different from Dragojevic et al. (2017), Lev-Ari and Keysar's (2010) did not find a correlation between the strength of the accent and participants' evaluation. Participants did not assess heavy accents more negatively than mild accents (Lev-Ari & Keysar, 2010).

Despite the disagreement on the influences of the strength of accents, Dragojevic et al. (2017), and Lev-Ari and Keysar (2010) both believe that accent discrimination is not caused by implicit biases towards out-group identity, but that it is due to the low level of processing fluency. They suggest that people give less credit to speakers with foreign accents because their speech is

harder to understand. Compared to SIT, Dragojevic et al. (2017), and Lev-Ari and Keysar (2010) focus on the economic aspects of communication. They suggest that people with non-standard accents are less welcome because it requires more effort to process the conversation with them.

The limitation of this theory is that neither Dragojevic et al. (2017) nor Lev-Ari and Keysar (2010) tested participants' implicit attitudes in their experiments. Eliminating the effect of 'Erasing English Language Competency' is crucial for testing the theory, as participants who hold biased attitudes towards foreign accents are more likely to report difficulties to understand speech (Creese, 2010). A study by Livingston, Schilpzand and Erez (2014) recruited 117 participants to test whether people's implicit biases affect their attitudes towards companies, products, and recruitment choices. The results suggest that the influence of a non-native accent on people's decision-making processes is not universal (Livingston, Schilpzand & Erez, 2014). Only participants with stronger pro-American biases were significantly affected in the experiment (Livingston, Schilpzand & Erez, 2014). Livingston, Schilpzand and Erez (2014) suggest that, as biases are naturally implicit, participants might not notice or report them in the experiments. Dragojevic et al. (2017) and Lev-Ari and Keysar (2010) did measure participants' attitudes, but they used self-reflective methods in their studies. It means that it was up to participants to self-report to the researcher whether they have prejudiced opinions towards foreign accents. This procedure overlooks participant's implicit attitudes. Implicit attitudes are underlying opinions that cannot be accessed or observed by traditional self-reflective methods (Pantos & Perkins, 2013). Colic-Peisker and Hlavac (2014) suggest that in experimental conditions, participants are influenced by 'social desirability bias'. People are more likely to choose answers that are more 'socially correct' and agree with questions that are expressed in a positive way even in an anonymous situation (Colic-Peisker & Hlavac, 2014). Under the

influence of contemporary anti-discrimination culture, this phenomenon becomes more significant in studies regarding stereotypes, prejudice, and racism (Lev-Ari & Keysar, 2010; Colic-Peisker & Hlavac, 2014; Livingston, Schilpzand & Erez, 2014; de Souza et al., 2016). Attitudinal data collected using traditional self-reflective methods are likely to be invalid due to this effect. This thesis suggests that people's judgement on processing fluency is affected by their implicit attitude. Processing fluency is not the cause of accent-based discrimination, but an excuse for legitimating linguicism (Livingston, Schilpzand & Erez, 2014; de Souza et al., 2016).

Studying the relationships between accent and discrimination is not new. However, Livingston, Schilpzand and Erez (2014) and de Souza et al. (2016) offered a relatively new perspective on the correlation between the two elements. They suggest that there is insufficient evidence supporting a direct relationship between accent and discrimination. According to their observation, accent based discrimination only appears in people who have pre-existing biases towards foreign accents (Livingston, Schilpzand & Erez, 2014; de Souza et al., 2016). De Souza et al. (2016) suggest that accent became the focus of the discussion due to the conflict between people's prejudiced attitude and external pressure from society. De Souza et al. (2016) ran three experiments that focussed on the correlation between implicit attitude and linguicism. A total of 71 participants joined their first study and were assigned to evaluate either a Brazilian or a Portuguese candidate (de Souza et al., 2016). Their data suggest that non-native accents affect individuals' judgement on the speakers and this effect is modified by biased attitudes (de Souza et al., 2016). The researchers replicated their study with 124 Portuguese university students and came to similar conclusions. Participants with more prejudiced attitudes are significantly more likely to hire a candidate with a Portuguese accent than a candidate with a Brazilian accent who has the same professional skills (de Souza et al., 2016). The third experiment of de Souza et al.

(2016) with 105 participants supports the results of the previous two experiments. The results furthermore indicate that 'positive stereotypes' do not dilute the effect of prejudiced attitude on participants' decision-making process (de Souza et al., 2016).

De Souza et al. (2016) suggest that pressure from the global community on topics such as stereotypes, racism, and discrimination have increased around the world in recent years. It becomes harder for individuals who hold prejudiced attitudes towards a certain culture to express their opinions. De Souza et al. (2016) suggest that people use accent to legitimise their discriminatory behaviours to avoid judgement from society. By exaggerating the effect of 'processing fluency', people legitimise their discrimination against foreign accent speakers and eliminate them from jobs that require communication. Accent as a prototypically strong cultural element is an ideal excuse for discrimination (de Souza et al., 2016). People connect accent with English language competency and legitimise their discriminatory behaviours as egalitarian judgements on other's ability (de Souza et al., 2016). This phenomenon also parallels with 'Erasing English Language Competency'. When people legitimise their discrimination against foreign accent speakers, they also tend to connect the accent with 'bad English'. Creese's (2010) study supports this theory by studying people who speak fluent English with an African accent. The participants recalled receiving comments such as "go and take an English course" (Creese, 2010, p. 306).

Methodology

As the critical concept in the study of accent-based discrimination is the influence of individual people's attitudes, it is essential to clarify whether people's recognition of accent can

be affected by other prototypical features. By looking at both, participants self-report impressions of the experiment material and their responses to focus group questions, this research serves as a pilot study for future research in the discussion of linguicism. As an indication for larger projects, this thesis investigates the influence of visual stimulus on an individual's assessment on an accent. The idea of the 'legitimising role of accent' suggests that accents may be used as an excuse to legitimise prejudiced attitudes (de Souza et al., 2016). It indicates that an individual's judgement on 'processing fluency' can be affected by biased opinions towards foreign accents. As an individuals' phenotypic prototypicality (PP) is another element that is related to biased attitudes, this research tests whether a speaker's appearance can influence people's perception of the speaker's accent. The relationship between the familiarity with an accent and people's impression of the accent is also studied in this thesis. This research acknowledges the fundamental relationship between prototypicality and stereotypes. By manipulating the speaker's appearance, this research observes whether participants' evaluation of an accent varies in different experimental conditions. The hypothesis of this thesis is that with the disturbance of the speaker's appearance, participants' assessments on the speaker's speech in Study 2 are different from Study 1.

This thesis designed two studies to test whether people's perception of a speaker's accent can be influenced by the person's appearance. Study 1 is the Test of the Experiment Material's Validity. It uses an online survey as a quantitative method to examine whether the experiment material is adequate for this research and to select participants for the second study. Study 2 observes participants' responses to the stimulus. It uses a mixture of quantitative and qualitative methods. Data of participants' perceptions of the speaker's accent are collected through a Focus Group study and questionnaires. This research uses within-subject design in the two studies. It

applies repeated measures experiments to detect whether the same group of participants evaluate a speaker's accent differently under different conditions.

Within-Subject Design

Different from the between-subject design which collects two independent sets of samples, a within-subject design measures the same set of samples repeatedly in various conditions. It is also referred to as the repeated measures design. The goal of within-subject designs is to observe changes of the participants across varying conditions (Staller, 2010; Mathias, 2014). As multiple variables of each participant are measured collectively, a within-subject design is useful in the analysis of perceptions or developmental processes (Staller, 2010; Mathias, 2014).

Within-subjects designs are not affected by the 'error term' (Staller, 2010; Mathias, 2014). As an individual's before-treatment values serve as the control data for their after-treatment values, individual differences or heterogeneity are removed. By avoiding the disturbance of the error term and observing the same sample multiple times, the data that can be collected from each subject are considerably greater (Staller, 2010; Mathias, 2014). Within-subjects designs thus increase the statistical power in the observation of treatment effects (Staller, 2010; Mathias, 2014).

A limitation of within-subjects designs is the carryover effect. As the same sample is repeatedly measured, treatment effects can be carried across experiment conditions (Staller, 2010; Mathias, 2014). When an effect in earlier condition is compelling, the carryover effect can lead to greater outcome values in the later studies (Staller, 2010; Mathias, 2014). The dilution of

carryover effects relies on creating a 'wash-out' time period between different conditions (Staller, 2010; Mathias, 2014). When the carryover effect is truly effective, a longer 'wash-out' period is needed.

Method of Study 1

A closed-ended questionnaire is chosen as the method for Study 1. As a quantitative method, it is suitable for large data collection. Although as a self-reported method it does not provide information about respondents' implicit attitudes, it creates a suitable sample set for selecting participants for the second study (Pantos & Perkins, 2013). As this research is a pilot study, convenience sampling is applied for sample selections. Also referred to as accidental sampling, convenience sampling is a type of nonprobability sampling that selects participants from a population that is easy to access and available (Salkind, 2010). Convenience sampling is limited by providing samples that are less representative of the general population, the sample diversity is not guaranteed. This research benefits from the low cost of obtaining samples selected using convenience sampling. As this research is conducted at Macquarie University in Australia, the participants are selected from its student population.

One of the goals of Study 1 is to examine whether the experiment material is valid for this research. This thesis uses a native Australian English (AusE) speaker's accent as the experiment material for participants to evaluate. As this research also observes whether participants' identification of the accent changes in different conditions, it is crucial to confirm that the speaker's accent is Australian. This goal is achieved through participants' recognition of the speaker's accent. This thesis does not discuss the theoretical definition of an Australian Accent. It focuses on what is identified as an Australian Accent by the audiences. As the aim of the studies is to discover whether participants' perception of the accent varies between the two

experimental conditions, it is essential for the participants to acknowledge the identity of the accent. It eliminates potential biases that might have been involved in the speaker selection process. The experiment material is considered valid when most of the participants recognise the speaker's accent as an Australian Accent.

The data collected from the survey are analysed using three statistical instruments. In addition to the report of the frequency of each variable, this study tests the data with Chi-Square Goodness of Fit (χ^2) test and Bivariate Regression. As a test for nonparametric statistics, Chi-Square Goodness of Fit tests can be used for single variable testing; however, it is most commonly used to examine whether the relationship between two nominal or ordinal variables is statistically significant (Staller, 2010). It reports whether the obtained values of some observed behaviour or attribute significantly differ from one group of samples to the other. Cramér's V coefficient is used to calculate the effect size of Chi-Square Goodness of Fit tests. Cramér's V coefficient represents the proportion of an observed value in its maximum value (Hernon, 2004; Bergsma, 2013; Size, 2016). With a range between 0 and 1, Cramér's V coefficient suggests the strength of an association between two test variables (Hernon, 2004; Bergsma, 2013; Size, 2016). The Mann-Whitney U Test is also applied in the analyses of the data. Extended by H. B. Mann and D. R. Whitney based on Frank Wilcoxon's original idea, the Mann-Whitney U Test uses the rank order of the scores (Test & Hinton, 2019). As a non-parametric test, it tests hypotheses by examining whether the rank order of the values and the mean ranks is affected by an effect (Test & Hinton, 2019).

Bivariate Regression tests the correlations in Study 1. Bivariate Regression detects how an explanatory variable explains a criterion variable (Mancha & Leung, 2012). The explanatory variable is also referred to as an independent variable, predictor variable, or presumed cause. The

name criterion variable is exchangeable with the dependent variable, outcome variable, or presumed effect. By using Bivariate Regression, this thesis investigates the relationships between different aspects of participants' perception of the accent. Study 1 provides indications of predictor perceptions and whether there are variables that need to be paired in further observations. The effect size of Bivariate Regression is calculated using r2 and interpreted using Cohen's Effect Size. Cohen uses small, medium, and large to describe the relative size of effect sizes (Size, 2016; Cohen, 1988). An effect size under 0.2 is recognised as small; the medium effect is between 0.5 and 0.8; an effect size greater than 0.8 is considered large effect size (Size, 2016; Cohen, 1988).

Participants' evaluations of the speaker's accent are collected as scale level data. Outliers' influences in the distribution are eliminated by winsorisation. Winsorisation is a statistical method that cleans out noises in the data set (Salkind, 2010). By winsorising the outlier values, this method increases the desirable statistical properties of the data (Salkind, 2010). The winsorising process is to convert outlying high or low values to the next highest or lowest data points that are not an outlier (Salkind, 2010). Winsorisation benefits statistical analyses by preserving the information that a sample held within the highest or lowest data and eliminating the disproportionate influences that outliers bring to the distribution.

Methods of Study 2

Study 2 investigates whether the speaker's PP influences participants' perception of the speaker's accent. Underpinned by Study 1, Study 2 uses Focus Group study as well as a questionnaire for data collection. These mixed methods record not only participants' assessments on the speaker's accent, but also their attitudinal responses under the influence of the stimulus. A

survey using the same Closed-ended Questionnaire of Study 1 is used to collect the subjects'

perceptual data. The method of focus group study is chosen for collecting participants' attitudinal

responses. Study 2 acknowledges the importance of monitoring participants' implicit attitudes.

The questions for the focus group are designed to detect whether participants are affected by

'Erasing English Language Competency' (Creese, 2010; de Souza et al., 2016).

Focus group is a qualitative method that is highly efficient in action research (Goodman

and Evan, 2010). With pre-selected participants who share similar experiences, backgrounds, or

cultures, focus groups create safe and supporting environments for expressing personal feelings

(Goodman and Evan, 2010). The focus group was held in a seminar room on the North Ryde

campus of *Macquarie University*. It is a familiar environment for the participants. The

experiment location contributes to the establishment of a relaxed and supporting atmosphere

(Goodman and Evan, 2010; Carey, 2015). Participants in Study 2 are formed into a focus group

that is designed to analyse their implicit attitudes which are potentially not in line with their

responses to the questionnaire. The research design has considered the disturbance of social

favouritism. To encourage participants to freely express their perception of the speaker's accent,

the purpose of the studies was not disclosed. Instead, the aim was formulated as gathering ideas

that might help international students better adapt to Australian society.

Study 1 - Test of the Experiment Material's Validity

This study has two aims. It tests the validity of the experiment material and collects

respondents' evaluations of the male speaker's speech as the Independent Variable (IV). As the

identification of the speaker's accent is a central component of this research, it is essential to

verify the male speaker's accent. As this research is conducted in Australia, an Australian Accent was used for the study material. With the focus on whether an individual's appearance influences people's impression about their accents, this thesis tests whether the Asian PP will disturb participants' perception of an Australian Accent.

The data regarding respondents' perception of the male speaker's speech were collected for measuring implicit attitudes. The survey invites respondents to rate different aspects of the male speaker's general English Language abilities. As this research uses a within-subject design, the data are used as the Independent Variable (IV). The data is also used for studying potential correlations between different categories of participants' evaluation of the speaker's speech.

1.1 Experiment Material

The experiment material is a soundtrack of a 1.5-minute video, which has been recorded for this project. The video recording is a conversation about travel between two speakers. One speaker is female with Anglo-Australian appearance; the other speaker is male with an Asian appearance. Both speakers are volunteers who grew up in Australia and speak Australian English (AusE). The stimulus is the Asian male's PP. The reason for choosing this stimulus is that Asian males tend to be stereotyped based on their PP (Wilkins, Chan and Kaiser, 2011). As the stimulus is the PP of the male speaker, his accent is to be tested in this study. He takes the longer interviewee part in the conversation to maximise his speaking time so that his AusE accent can be verified. The female speaker functions as an interviewer to create an image of a natural discussion and provide a comparison PP that is less stereotyped. There is no content in the

conversation which identifies the speakers' nationalities or educational backgrounds. The soundtrack is extracted from the video for the experimental design of Study 1.

1.2 Participants

With the approval of the *Human Research Ethics Committee (HERC) of Macquarie University*, this research uses convenience sampling at Macquarie University in Sydney, Australia. Participants were recruited through paper advertisements on campus (appendix 1). The study was advertised as part of a project to improve international students' adjustment process to Australian society. The real aim of the research was not disclosed to participants to avoid disturbance of social favouritism.

Demographic information such as respondents' age, gender, nationality, and their field of study was collected to study whether participants' demographic characteristics contribute to their assessments on the speaker's accents. As this research did not apply for permission to use data collected from participants under the age of 18, underage respondents' answers were recorded, but not used in the analysis. No underage participants were recruited for Study 2.

1.3 Procedure

By scanning the Quick Response Code (QR code) or by directly typing in the URL (web address) provided in the advertisements, participants were led to the agreement page. As required by *HERC*, the agreement page is to provide information about the research and collect participants' consent. Subsequently, participants were asked to listen to the stimulus and answer fourteen questions after listening to the soundtrack. The questions include six questions for the

identification and evaluation of the male speaker's accent and general English Language abilities, followed by eight demographic questions. (Appendix 2)

1.4 Survey Design

With the purpose of identifying which participants are fundamentally familiar with AusE, this survey asks whether a participant is a 'Domestic Student' or an 'International Student'. As this study is conducted in Australia, a domestic student refers to a student who either has a Permanent Residency Visa (PR) or holds an Australian passport. The question does not ask whether a participant is identified as Australian to minimise the influence of cultural identity on the experiment result. A participant who identifies as an Australian does not necessarily have a good knowledge of AusE. As a PR or an Australian passport holder does not affirm a respondent's basic familiarity AusE, the domestic students are also asked whether they are native English speakers to ensure the identification further.

Participants who choose 'International Student' are then asked to identify the country they are from. This design is to determine respondents' basic familiarity with AusE. Although this research requires the participants to evaluate their familiarity with the accent, AusE speakers' evaluation may not be on the same scale as the international students'. As domestic students might be fundamentally familiar with Australian Accents, they have the potential to identify regional differences in the speaker's accent and respond with low familiarity with the accent. This study identifies whether the respondents potentially have high fundamental familiarity with AusE to minimise this effect. In the test of participants' familiarity with the accent, the data is used as a modifier for the analysis.

There is a 'No accent' option regarding the identification of the male speaker's accent. This design is for the possibility that people might recognise their own accent as 'no accent'. Participants who answered 'No accent', were directly taken to the demographic questions. Participants who answered 'Yes' were asked to identify the male speaker's accent and rate different aspects of the male speaker's general English Language ability using a 0 - 100 scale. They were also asked to evaluate the male speaker's language competency before starting the second part of the questionnaire.

Participants' demographic information and the identification of the male speaker's accent were collected as nominal data. Participants who selected 'Yes' to the question 'Does the male speaker in the audio have an accent?' were asked to identify the male speaker's accent in a multiple choice question. The options for the question are 'Asian Accent', 'Australian Accent', 'American Accent', and 'Other (please specify)'. Age ranks of the participants were given to the respondents to choose from. Data of participants' nationality, first language, and field of current study were collected with open questions. The answers to the open questions were divided into categories for the analysis. Participants' nationalities were divided into 'Australian' and 'Non-Australian'. The first language of participants was categorised with 'English' and 'Non-English'. Based on respondents' answer to the fields of the current study, this research separates participants' academic focuses to 'Relevant to cultural and linguistic studies' and 'Irrelevant to cultural and linguistic studies'. Whether the degree is relevant to cultural and linguistic studies is determined by whether the degree has compulsory linguistics, communication, or cultural studies units. As participants are selected using convenience sampling from the student population at *Macquarie University,* the course structures are based on the Student Handbooks of *Macquarie University.*

The evaluation of the male speaker's accent and general English Language ability were collected as ratio level data. Four aspects were measured using ratio level values between 0 – 100. Respondents were asked to rate the male speaker's accent strength, the understandability of the speech, and the male speaker's English competency. Whether the participants are familiar with the male speaker's accent was also measured with scores on a 0 – 100 scale. The questions that were used for the evaluation were 'How strong is the male speaker's accent?', 'How familiar are you with the accent?', 'How much can you understand the male speaker's speech?', and 'What is the male speaker's English competency?'.

The demographic questions of the survey are designed for selecting focus group participants for study 2. In addition, they help identify variables that potentially affect the result of this research. The data collected from the participants include their nationality, gender, first language, age, their field of study, and their education level. The survey finishes with an invitation to participate in Study 2. Participants agree to participate in further research by leaving their contact information. (The questionnaire and the raw data are attached in the appendix.)

1.5 Results

The survey was open from 11th of October 2018 to 26th of October 2018. Fifty people responded to Study 1. With an average completion rate of 48 per cent, the respondents typically spent two minutes and 19 seconds on the survey. Nineteen responses have been taken out of the data set as they provided no valid data. The valid sample size is 31 participants. With one respondent being under 18 years old, the remaining sample size is 30 participants.

1.5.1 Nominal Data

The data set is gender imbalanced. With two gender values missing, 89.29 per cent of the total sample is female ($f = 25$, $N = 28$). Representing 10.71 per cent of the total sample ($N = 28$), the number of male participants is three. The most frequent age range and education level are 18 to 22 and undergraduate education. With five values missing respectively, Participants who are aged between 18 and 22 comprise 84.62 per cent of the sample size ($f = 22$, $N = 26$). The percentage of participants who are currently studying an undergraduate degree is 88.46 percent ($f = 23$, $N = 26$). Participants who are aged between 23 and 27 are 11.54 per cent ($f = 3$) among the overall 26 samples. The participation of students who are currently studying a postgraduate degree is low. Only 7.69 per cent ($f = 2$) of the total sample ($N = 26$) are master's students. As this research uses the convenience sample method at *Macquarie University*, the high frequency of samples from undergraduate students who are aged between 18 and 22 is expected.

With a representation of 80 per cent of the total sample, 20 International students participated in Study 1. With five missing values, the valid percentage of Australian students is 20 per cent ($f = 5$, $N = 25$). International students have high participation in this study compared to Australian students (See Table 1a). Overall, 73.3 per cent of the participants have chosen 'Yes' to the question 'Does the male speaker in the audio have an accent?' ($f = 22$, $N = 30$) compared to 26.7 per cent of the participants who have chosen 'No accent' ($f = 8$, $N = 30$).

The male speaker's accent has been confirmed by most participants as an Australian Accent. Among participants who were required to identify the male speaker's accent, 81.5 per cent of the total 27 participants ($f = 22$) suggested that the male speaker has an Australian Accent. With five values missing, five participants did not recognise the male speaker's accent as Australian, which represents 16.7 per cent of the total sample. A roughly equal number of native

English speakers and non-native English speakers participated in Study 1. Forty-eight per cent of the participant speaks English as their first language ($f = 12$, $N = 25$). Fifty-two per cent speak a language other than English as their first language ($f = 13$, $N = 25$). Seven participants, which represents 28 per cent of the total sample ($N = 25$), study a subject relevant to cultural and linguistic studies, while 72 per cent are studying a major irrelevant to cultural and linguistic studies ($f = 18$, $N = 25$).

1.5.1.1 The preference of 'No accent' option.

Australian students show a higher preference for choosing the 'No accent' option. Of the 26.7 per cent of participants who have chosen 'No accent', 50 per cent were Australian students. Among Australian participants, 80 per cent chose the 'No accent' option. As Figure 1 shows, the percentage of participants' nationalities is similar to the percentage of participants' choice in identifying whether the male speaker has an accent.
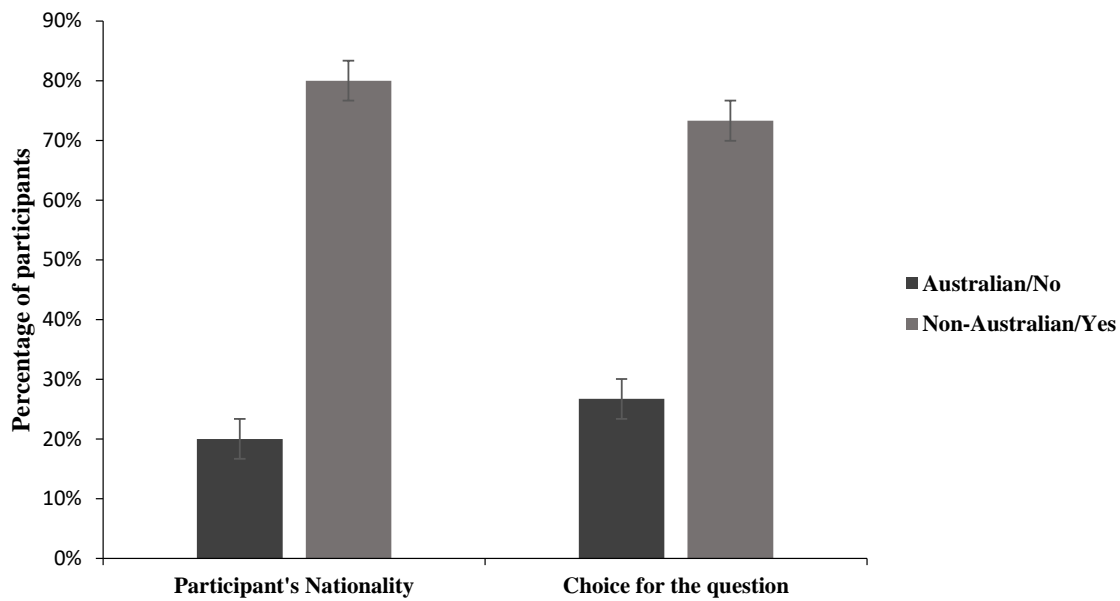
Figure 1. The distribution of participants' nationality compared to the distribution of participants' choice of whether the speaker has an accent

A Chi-Square Goodness of Fit Test was used to test whether Non-Australian students' preference for the answers to the question 'Does the male speaker in the audio have an accent?' differed from the Australian students. Non-Australian students' answer preferences to the question differ with statistical significance from the Australian students, χ^2 (1, 25) = 64, $p < .05$, Cramér's V = 1.60. The findings suggest that, compared to Non-Australian students, Australian students are more likely to categorise an Australian Accent as 'No accent'.

1.5.1.2 Participants' first language and field of study.

The data do not show a correlation between participants' first language and their identification of the male speaker's accent. A Chi-Square Goodness of Fit Test was run to

analyse whether participants who speak English as the first language are more accurate at identifying the male speaker's accent. All native AusE speakers successfully identified the speaker's Australian Accent by choosing either 'No accent' or 'Australian Accent' option. Overall, however, there was no statistically significant difference between English native speakers and those who do not speak English as their first language in identifying the male speaker's accent. χ^2 (1, 13) = 2.08, p = .15, Cramér's V = .40. In addition, the results of the Chi-Square Goodness of Fit Test show that a participant's major at university does not influence their ability to identify accents. There is no statistically significant difference regarding accent identification between students whose degree is relevant to cultural and linguistic studies and students whose degree is irrelevant to cultural and linguistic studies, χ^2 (1, 18) = 1.56, p = .21, Cramér's V = .29.

1.5.2 Ratio Level Data

The scores of participants who chose 'No accent' were winsorised to other respondents' scores. Scales of 0 – 100 were applied in the collection of their responses to different aspects of the male speaker's speech. There are four categories in the measurement: Participants were required to evaluate

- The strength of the male speaker's accent;
- Their familiarity with the accent;
- The understandability of the male speaker's speech;
- The male speaker's English competency.

As this research uses within-subject design, these categories are also used in Study 2 for repeated measurement.

Participants report their impression on the strength of the male speaker's accent by answering the question 'How strong is the male speaker's accent?' ($M = 45.07$, $SD = 22.22$, $N = 30$). Between the minimum value of 20 and the maximum value of 91, the range of the values is 71. As shown in Figure 2, the distribution is positively skewed with the mode of 22; and the skewness of .65. In order to simplify the frequency table, raw data are converted to score ranges in Table 1.
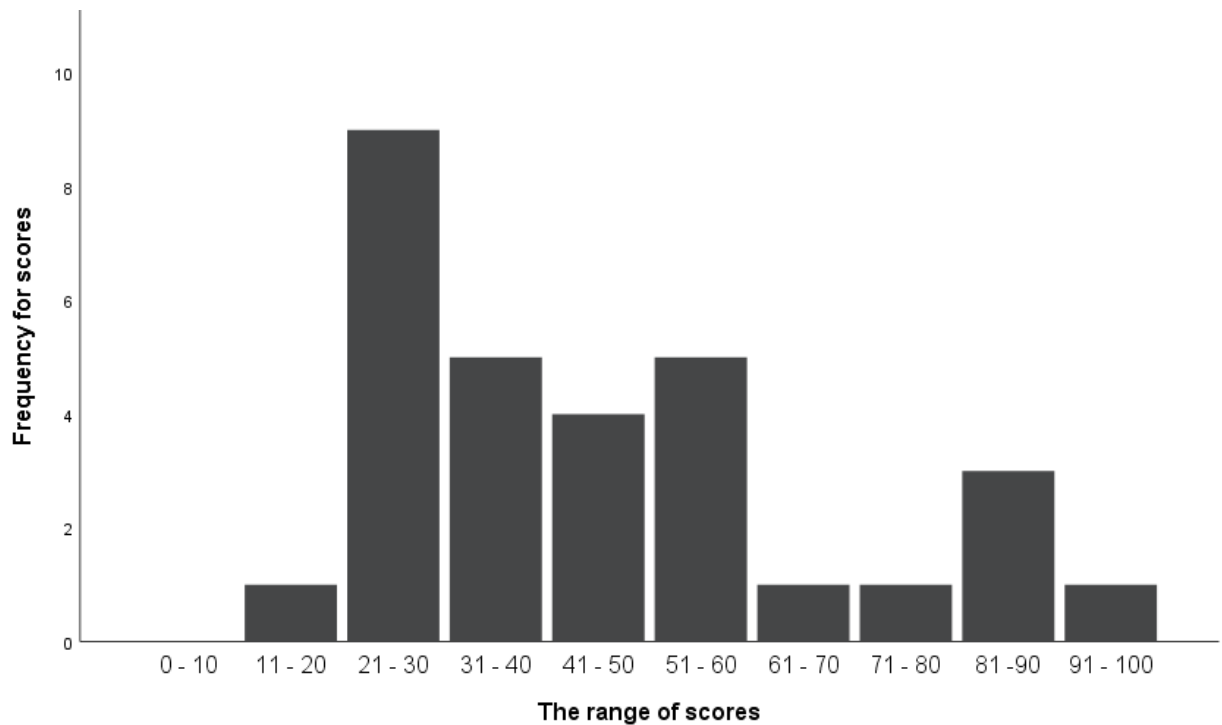
Figure 2. Frequencies of values for the evaluation of the accent strength

Table 1

Frequencies of Values for the Evaluation of the Accent Strength, (N = 30)

Score	*f*	Rel *f*	c*f*	Percentile
91 - 100	1	0.03	30	100.00
81 -90	3	0.10	29	96.67
71 - 80	1	0.03	26	86.67
61 - 70	1	0.03	25	83.33
51 - 60	5	0.17	24	80.00
41 - 50	4	0.13	19	63.33
31 - 40	5	0.17	15	50.00
21 - 30	9	0.30	10	33.33
11 - 20	1	0.03	1	3.33
0 - 10	0	0.00	0	0.00

As 81.5 per cent of participants identified the male speaker's accent as an Australian Accent, the participants are generally familiar with the Australian Accent ($M = 70.20$, $SD = 26.28$, $N = 30$). The range of participants' familiarity with the male speaker's accent is close to the range of the strength category. With the minimum value of 22 and the maximum value of 100, the range is 78. Opposite to participants' recognition of the strength of the male speaker's accent, the figure of participants' familiarity with the male speaker's accent is negatively skewed (Figure 3). With the mode of 100, the skewness of this figure is -.31. The simplified frequency table for the category of familiarity is displayed in Table 2.
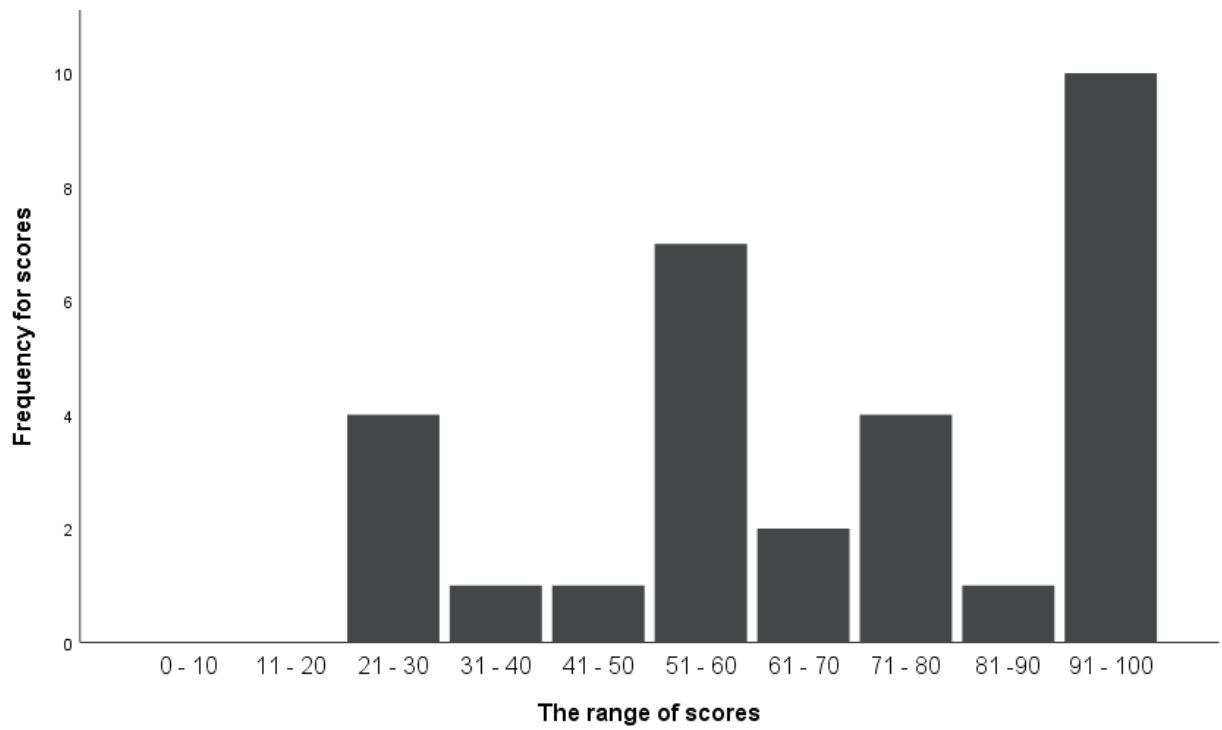
Figure 3. Frequencies of values for the evaluation of the familiarity with the accent

Table 2

Frequencies of Values for the Evaluation of the Familiarity with the Accent, (N = 30)

Score	*f*	Rel *f*	c*f*	Percentile
91 - 100	10	0.33	30	100.00
81 -90	1	0.03	20	66.67
71 - 80	4	0.13	19	63.33
61 - 70	2	0.07	15	50.00
51 - 60	7	0.23	13	43.33
41 - 50	1	0.03	6	20.00
31 - 40	1	0.03	5	16.67
21 - 30	4	0.13	4	13.33
11 - 20	0	0.00	0	0.00
0 - 10	0	0.00	0	0.00

The data suggest that participants generally had no problem understanding the male speaker's speech (*M* = 89.83, *SD* = 11.08, *N* = 30). Two extreme outliers were identified and winsorised in this data set. The outliers evaluation were 61 per cent lower than the next lowest score. After winsorising the outliers' score, the minimum value becomes 70. The maximum value is 100 with a range of 30. Differing from the first two categories, the range of this data set is relatively small. With the negative skewness of -.67, the distribution of values is leaning towards the high end of the scale (Figure 4). As Table 3 shows, participants' evaluation of the understandability of the male speaker's speech is high.
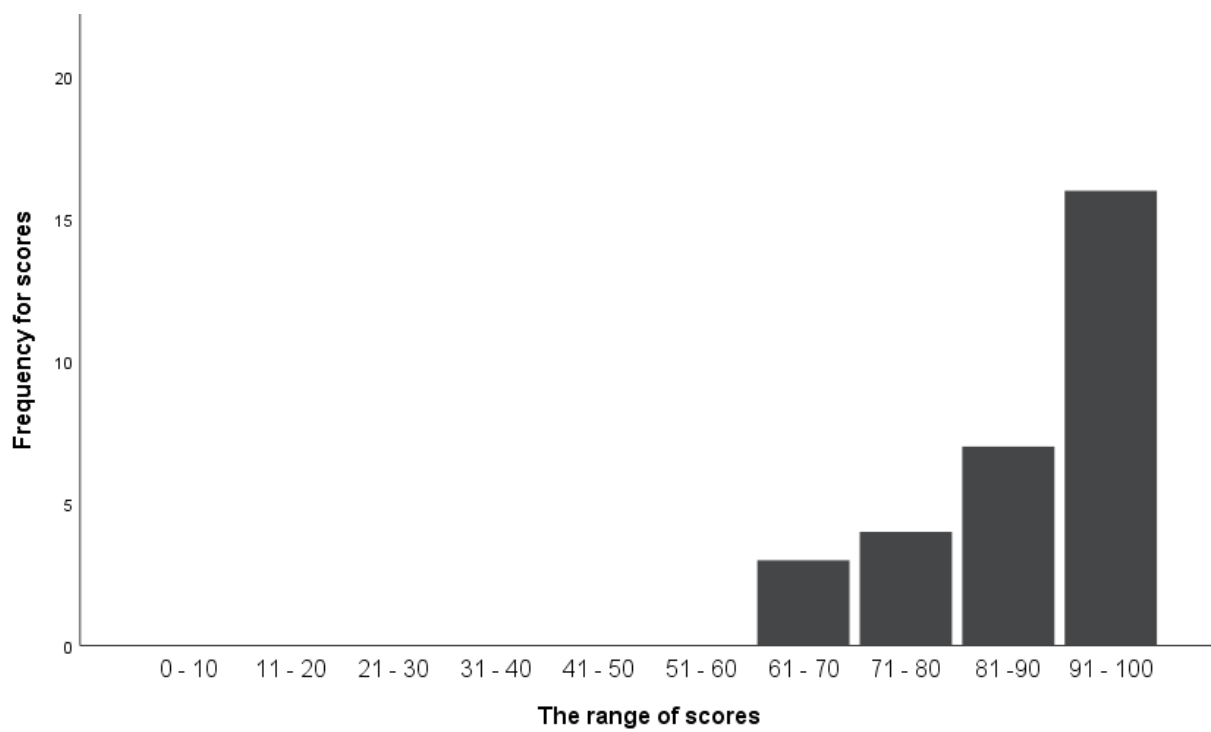
Figure 4. Frequencies of values for the evaluation of the understandability of the speaker

Table 3

Frequencies of Values for the Evaluation of the Understandability of the Speaker, (N = 30)

Score	f	Rel f	cf	Percentile
91 - 100	16	0.53	30	100.00
81 -90	7	0.23	14	46.67
71 - 80	4	0.13	7	23.33
61 - 70	3	0.10	3	10.00
51 - 60	0	0.00	0	0.00
41 - 50	0	0.00	0	0.00
31 - 40	0	0.00	0	0.00
21 - 30	0	0.00	0	0.00
11 - 20	0	0.00	0	0.00
0 - 10	0	0.00	0	0.00

Participant evaluation of the male speaker's English competency shows a similar pattern to their evaluation of the understandability of the speech ($M = 91.23$, $SD = 11.53$, $N = 30$). The distribution is negatively skewed with a skewness of -1.36. The minimum is 62, and the maximum is 100. With a slightly larger range of 38, the frequency of score ranges is not significantly different from the last category (Table 4). The distribution of participants' evaluation of the male speaker's English competency is similar to their evaluation of the understandability of the male speaker's speech (Figure 5).
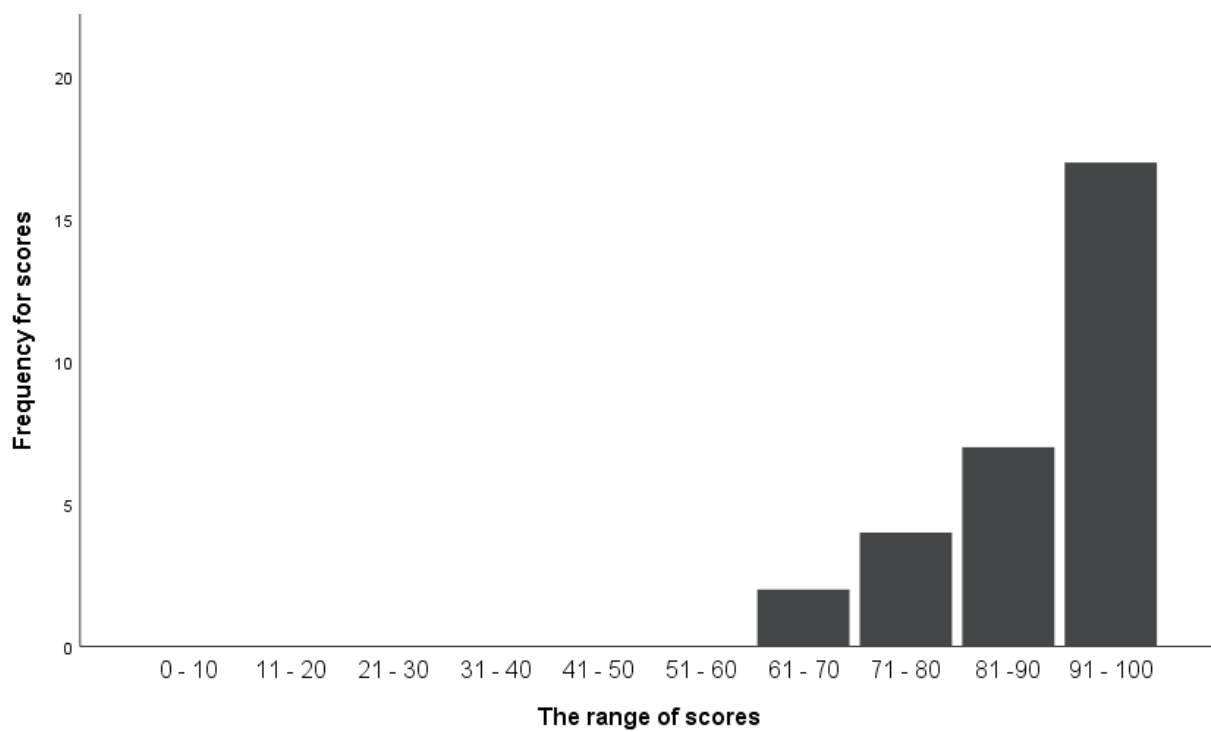
Figure 5. Frequencies of values for the evaluation of the speaker's English competency

Table 4

Frequencies of Values for the Evaluation of the Speaker's English Competency, (N = 30)

Score	f	Rel f	cf	Percentile
91 - 100	17	0.57	30	100.00
81 -90	7	0.23	13	43.33
71 - 80	4	0.13	6	20.00
61 - 70	2	0.07	2	6.67
51 - 60	0	0.00	0	0.00
41 - 50	0	0.00	0	0.00
31 - 40	0	0.00	0	0.00
21 - 30	0	0.00	0	0.00
11 - 20	0	0.00	0	0.00
0 - 10	0	0.00	0	0.00

1.5.2.1 Relationships between nominal and ratio level data.

Independent-Samples Mann-Whitney U Tests were used to see whether the participants' demographic characteristics could modify the distribution of their evaluation of different aspects of the male speaker's speech. The ratio level data collected from the survey were sorted into groups based on participants' nationality, first language, the field of current study, and their identification of the male speaker's accent.

Sorting by participants' nationality.

There is no statistically significant correlation between participants' nationality and their evaluation of different aspects of the male speaker's speech. The distribution of strength of the male speaker's accent is the same across categories of participants' nationality (Mann–Whitney $U = 77.00$, $p = .07$, $n_1 = 5$, $n_2 = 20$, two-tailed test). The distribution of participants' familiarity with the male speaker's accent is the same across categories of participants' nationality (Mann–Whitney $U = 29.00$, $p = .17$, $n_1 = 5$, $n_2 = 20$, two-tailed test). The distribution of participants' evaluation of the understandability of the male speaker's speech is the same across categories of participants' nationality (Mann–Whitney $U = 31.00$, $p = .22$, $n_1 = 5$, $n_2 = 20$, two-tailed test). The distribution of participants' evaluation of the male speaker's English competency is the same across categories of participants' nationality (Mann–Whitney $U = 22.50$, $p = .06$, $n_1 = 5$, $n_2 = 20$, two-tailed test). Students with different nationalities did not show distinct assessment of the speaker's speech.

Sorting by participants' first language.

There is a statistically significant correlation between participants' first language and their assessment on the understandability of the male speaker's speech. Rejecting the null hypothesis that the distribution is the same, the distribution of participants' evaluation of the understandability of the male speaker's speech is statistically significantly different across categories of participants' first language (Mann–Whitney $U = 41.00$, $p < .05$, $n_1 = 12$, $n_2 = 13$, two-tailed test). The understandability of the male speaker's speech is the only category that correlated with the participants' first language. The distribution of the strength of the male speaker's accent is the same across categories of participants' first language (Mann–Whitney U

= 79.50, p = .94, n_1 = 12, n_2 = 13, two-tailed test). The distribution of participants' familiarity with the male speaker's accent is the same across categories of participants' first language (Mann–Whitney U = 63.00, p = .40, n_1 = 12, n_2 = 13, two-tailed test). The distribution of participants' evaluation of the male speaker's English competency h is the same across categories of participants' nationality (Mann–Whitney U = 54.00, p = .21, n_1 = 12, n_2 = 13, two-tailed test). Participants who speak English as the first language evaluate the understandability of the speaker's speech higher than the participants who speak a language other than English as their first language. In other categories such as the evaluation of the strength of the speaker's accent, the familiarity of the accent, and the competency of the speaker's English, native English speakers do not show a statistically significant difference compared to non-native English speakers.

Sorting by participants' field of study.

No statistically significant correlation was found between participants' field of current study and their evaluation of different aspects of the male speaker's speech. The distribution of the strength of the male speaker's accent is the same across categories of participants' field of current study (Mann–Whitney U = 46.00, p = .33, n_1 = 7, n_2 = 18, two-tailed test). The distribution of participants' familiarity with the male speaker's accent is the same across categories of participants' field of current study (Mann–Whitney U = 76.00, p = .46, n_1 = 7, n_2 = 18, two-tailed test). The distribution of participants' evaluation of the understandability of the male speaker's speech is the same across categories of participants' field of current study (Mann–Whitney U = 77.00, p = .42, n_1 = 7, n_2 = 18, two-tailed test). The distribution of participants' evaluation of the male speaker's English competency is the same across categories

of participants' nationality (Mann–Whitney $U = 5200$, $p = .53$, $n_1 = 7$, $n_2 = 18$, two-tailed test). Compared to students who are doing a degree irrelevant to cultural and linguistic studies, students who are studying a major relevant to cultural and linguistic studies do not show a statistically significant different evaluation of the speaker's speech.

Sorting by the identification of the speaker's accent.

There is no statistically significant difference regarding the evaluation of the speaker's speech between participants who identified the speaker's accent and participants who did not recognise the speaker's accent. The distribution of the strength of the male speaker's accent is the same across categories of participants' identification of the speaker's accent (Mann–Whitney $U = 58.50$, $p = .83$, $n_1 = 22$, $n_2 = 5$, two-tailed test). The distribution of participants' familiarity with the male speaker's accent is the same across categories of participants' identification of the speaker's accent (Mann–Whitney $U = 33.50$, $p = .46$, $n_1 = 22$, $n_2 = 5$, two-tailed test). The distribution of participants' evaluation of the understandability of the male speaker's speech is the same across categories of participants' identification of the speaker's accent (Mann–Whitney $U = 31.00$, $p = .15$, $n_1 = 22$, $n_2 = 5$, two-tailed test). The distribution of participants' evaluation of the male speaker's English competency is the same across categories of participants' identification of the speaker's accent (Mann–Whitney $U = 24.00$, $p = .06$, $n_1 = 22$, $n_2 = 5$, two-tailed test). Whether the participant identifies the male speaker's Australian Accent does not indicate their scores on the assessments of the speaker's speech.

1.5.2.2 Analysis within ratio data.

Bivariate regressions were conducted to examine how well the evaluations on different aspects of the male speaker's speech could predict each other. Six regressions have been tested. The first regression tests whether participants' familiarity with the male speaker's accent affects their evaluation of the accent strength. This study then investigates the correlation between the familiarity with the accent and the assessment of the speech's understandability. The third regression shows the relationship between participants' evaluation of the accent strength and the speech's understandability. The correlation between the familiarity and the participants' evaluation of the speaker's English competency is tested in the fourth session. The fifth regression detects how well the participants' evaluation of the accent strength could predict their evaluation of the speaker's English competency. The last regression shows whether the participants' evaluation of the speech's understandability affects their impressions of the speaker's English competency. The results are outlined in the following paragraphs.

The relationship between the evaluation of the familiarity with the accent and the evaluation of the accent strength.

A bivariate regression was applied to test how much participants' familiarity with the male speaker's accent could predict their evaluation of the strength of the accent. The scatterplot shows that the relationship between participants' familiarity with the speaker's accent and their evaluation of the strength of the accent was negative and not linear (Figure 6). No bivariate outlier was revealed. The correlation between participants' familiarity with the speaker's accent and their evaluation of the strength of the accent was not statistically significant, r (28) = .25, p

= .09. The equation of regression for predicting the evaluation of the strength of the speaker's accent from participants' familiarity with the accent was $\hat{y}$ = 60.15 - .22x. The r^2 for the equation was .065. There is 6.5% of the variance in the evaluation of the strength of the speaker's accent was predictable from participants' familiarity with the accent, indicating a weak relationship (Cohen, 1988). The bootstrapped 95% confidence interval for the slope to predict participants' evaluation of the strength of the speaker's accent from participants' familiarity with the accent range from -.53 to .10. These findings suggest that participants' familiarity with the accent does not predict their evaluation of the strength of the speaker's accent.
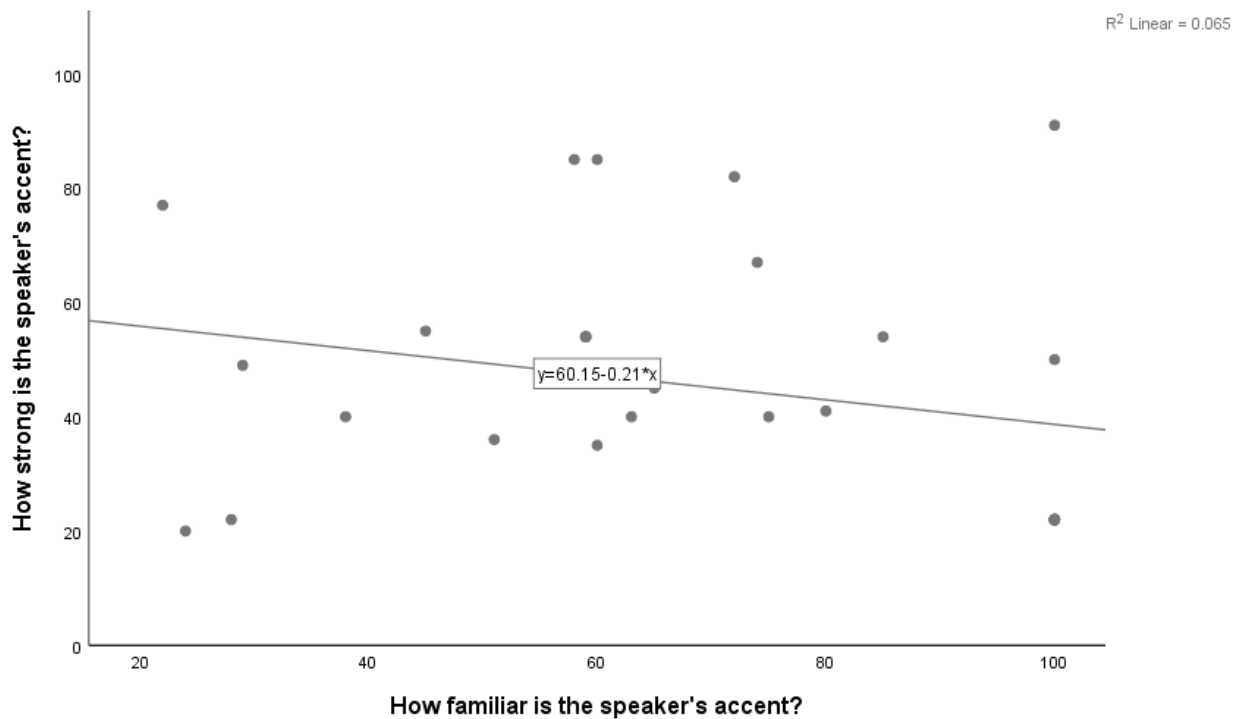

Figure 6. Scatterplot of the evaluation of the familiarity with the accent by the evaluation of the accent strength

Using the evaluation of the familiarity with the accent to predict the evaluation of the understandability of the speaker.

A bivariate regression was conducted to analyse how well the participants' familiarity with the male speaker's accent could predict their evaluation of the understandability of the speaker's speech. A scatterplot showed that the relationship between participants' familiarity with the speaker's accent and their evaluation of the understandability of the speaker's speech was positive and linear with no bivariate outliers revealed (Figure 7). Participants' familiarity with the speaker's accent and their evaluation of the understandability of the speaker's speech are statistically significantly correlated, r (28) = .61, p < .05. The regression equation for using participants' familiarity with the speaker's accent to predict their evaluation of the understandability of the speaker's speech was $\hat{y}$ = 71.86 + .26x. The r^2 for the equation was .369. Participants' familiarity with the speaker's accent predicts 36.9% of the variance in their evaluation of the understandability of the speech, indicating a moderately strong relationship (Cohen, 1988). The default 95% confidence interval for the slope to predict the evaluation of the understandability of the speaker's accent from participants' familiarity with the accent range from .13 to .39. It indicates that for each one unit of increase of participants' familiarity with the speaker's accent, their evaluation of the understandability of the speech increases by .13 to .39 points. Participants' familiarity with the speaker's accent is a predictor for their evaluation of the understandability of the speaker's speech.
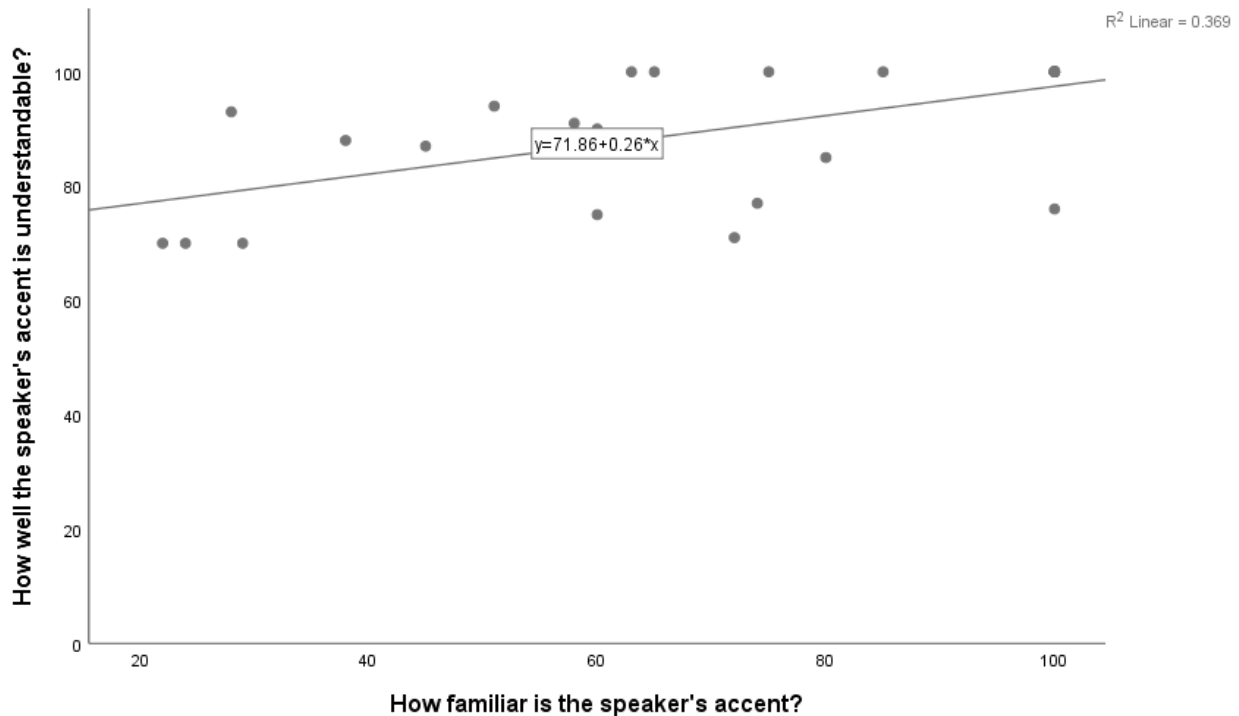
Figure 7. Scatterplot of the evaluation of the familiarity with the accent by the evaluation of the understandability of the speaker

Predicting the evaluation of the speaker's English competency using the evaluation of the familiarity with the accent.

How well participants' familiarity with the male speaker's accent could predict their evaluation of the speaker's English competency is tested by bivariate regression. The scatterplot shows that the relationship between participants' familiarity with the speaker's accent and their evaluation of the speaker's English competency was positive and linear (Figure 8). No bivariate outlier was revealed. There is a statistically significant correlation between participants' familiarity with the speaker's accent and their evaluation of the speaker's English competency, *r* (28) = .64, *p* < .05. The regression equation for predicting the evaluation of the strength of the

speaker's English competency from participants' familiarity with the speaker's accent was $\hat{y} =$ 71.46 + .28x. The r^2 for the equation was .412. It means that 41.2% of the variance in the evaluation of the speaker's English competency was predictable from participants' familiarity with the speaker's accent, indicating a moderately strong relationship (Cohen, 1988). The slope to predict the evaluation of the competency of the speaker's English from participants' familiarity with the accent range from .15 to .41 with the default 95% confidence interval. It indicates that for each one unit of increase of participants' familiarity with the speaker's accent, their evaluation of the speaker's English competency increases by .15 to .41 points. These findings suggest that participants' familiarity with the male speaker's accent can be used to predict their evaluation of the speaker's English competency.

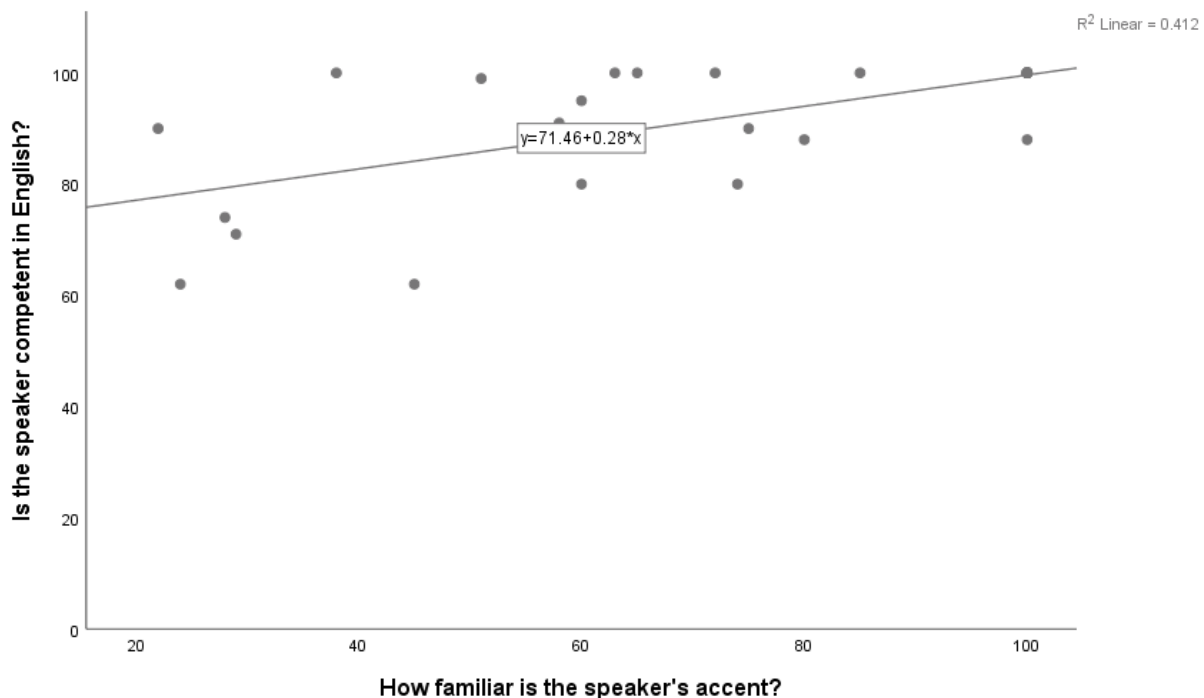*Figure 8.* Scatterplot of the evaluation of the familiarity with the accent by the evaluation of the speaker's English competency

The correlation between the evaluation of the accent strength and the evaluation of the

understandability of the speaker.

A bivariate regression was conducted to study the degree to which participants' evaluation of the strength of the male speaker's accent could predict their evaluation of the understandability of the speaker's speech. The scatterplot showed that the correlation between participants' evaluation of the strength of the male speaker's accent and their evaluation of the understandability of the speaker's speech was negative and linear with no bivariate outliers revealed (Figure 9). The correlation between participants' evaluation of the strength of the speaker's accent and their evaluation of the understandability of the speaker's speech is statistically significant, r (28) = .52, p < .05. The regression equation for using participants' evaluation of the strength of the speaker's accent to predict their evaluation of the understandability of the speaker's speech was $\hat{y}$ = 101.40 - .26x. The r^2 for the equation was .265. Participants' evaluation of the strength of the speaker's accent predicts 26.5% of the variance in their evaluation of the understandability of the speech, indicating a median relationship (Cohen, 1988). The default 95% confidence interval for the slope to predict the evaluation of the understandability of the speaker's speech from participants' evaluation of the strength of the accent range from .42 to .09. It indicates that for each one unit of increase of participants' evaluation of the strength of the speaker's accent, their evaluation of the understandability of the speech decreases by .42 to .09 points. These findings suggest that participants' evaluation of the strength of the speaker's accent can predict their evaluation of the understandability of the speaker's speech.
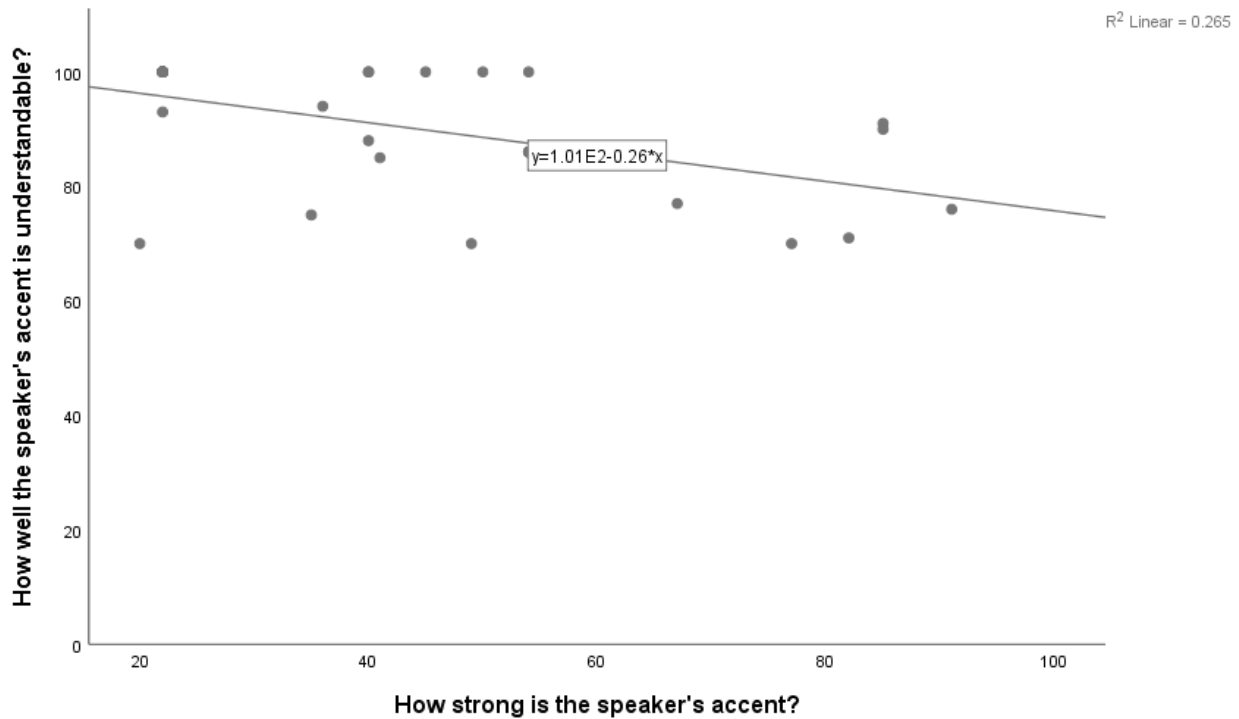
Figure 9. Scatterplot of the evaluation of the accent strength by the evaluation of the understandability of the speaker

The evaluation of the accent strength is not a predictor of the evaluation of the speaker's English competency.

A bivariate regression is applied to test how well the participants' evaluation of the strength of the male speaker's accent could predict their evaluation of the speaker's English competency. With no bivariate outliers, the scatterplot shows that the relationship between participants' evaluation of the strength of the male speaker's accent and their evaluation of the speaker's English competency is positive and not linear (Figure 10). There is no statistically significant correlation between participants' evaluation of the strength of the male speaker's accent and their evaluation of the speaker's English competency, r (28) = .14, p = .23. The

regression equation for predicting their evaluation of the strength of the speaker's English competency from participants' evaluation of the strength of the male speaker's accent was $\hat{y} =$ 94.54 - .07x. The r^2 for the equation was .020. It suggests that 2.0% of the variance in the evaluation of the speaker's English competency was predictable from participants' evaluation of the strength of the male speaker's accent, indicating a weak relationship (Cohen, 1988). The bootstrapped 95% confidence interval for the slope to predict the evaluation of the speaker's English competency from participants' evaluation of the strength of the speaker's accent range from -.27 to .13. Participants' evaluation of the strength of the male speaker's accent is not a predictor for their evaluation of the speaker's English competency.

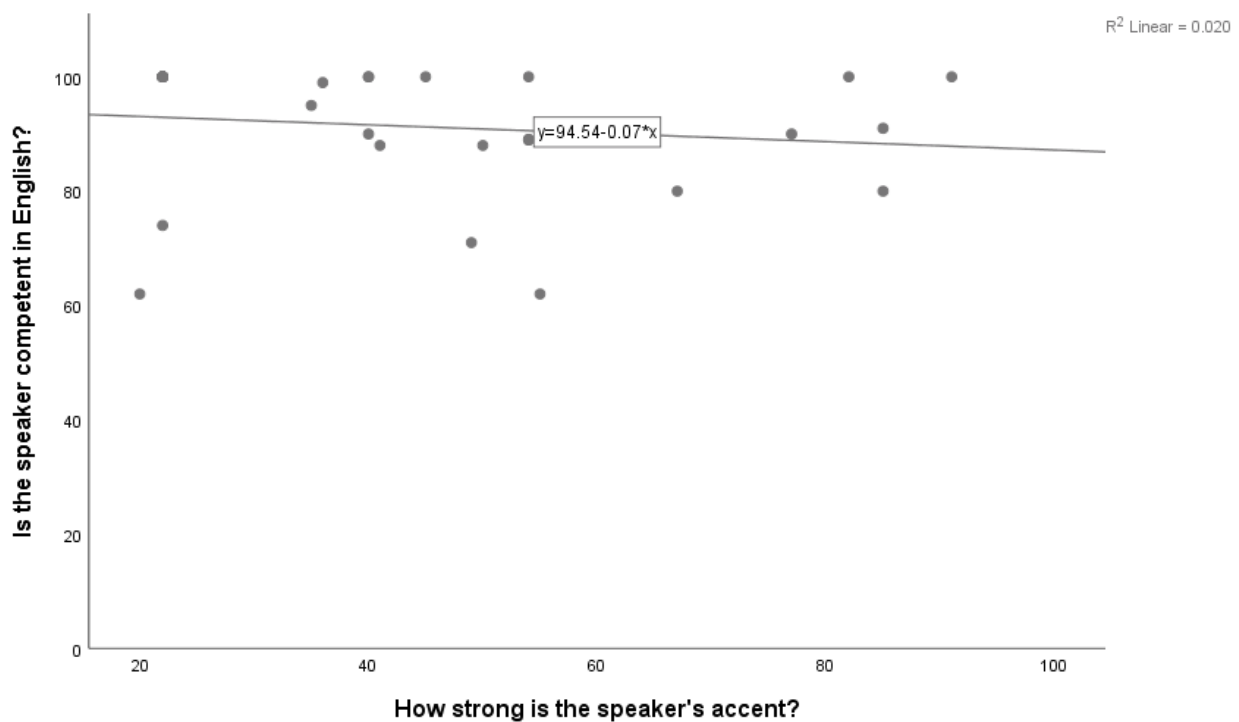
Figure 10. Scatterplot of the evaluation of the accent strength by the evaluation of the speaker's English competency

Using participants' evaluation of the understandability of the male speaker's speech to predict their evaluation of the speaker's English competency.

A bivariate regression was conducted to test how well the participants' evaluation of the understandability of the male speaker's speech could predict their evaluation of the speaker's English competency. A scatterplot showed that the correlation between participants' evaluation of the understandability of the English competency was positive and linear with no bivariate outliers revealed (Figure 11). There is a statistically significant correlation between participants' evaluation of the understandability of the speaker's speech and their evaluation of the competency of the speaker's English, r (28) = .49, p < .05. The equation of regression for using participants' evaluation of the understandability of the speaker's speech to predict their evaluation of the speaker's English competency was $\hat{y}$ = 45.18 + .51x. The r^2 for the equation was .243. Participants' evaluation of the understandability of the speaker's speech predicts 24.3% of the variance in their evaluation of the speaker's English competency, indicating a median relationship (Cohen, 1988). The default bootstrapped 95% confidence interval for the slope to predict the evaluation of the speaker's English competency from participants' evaluation of the understandability of the speech range from .16 to .86. For each one unit of increase of participants' evaluation of the understandability of the speech, their evaluation of the speaker's English competency increases by .16 to .86 points. Participants' evaluation of the understandability of the male speaker's speech can be used to predict their evaluation of the speaker's English competency.
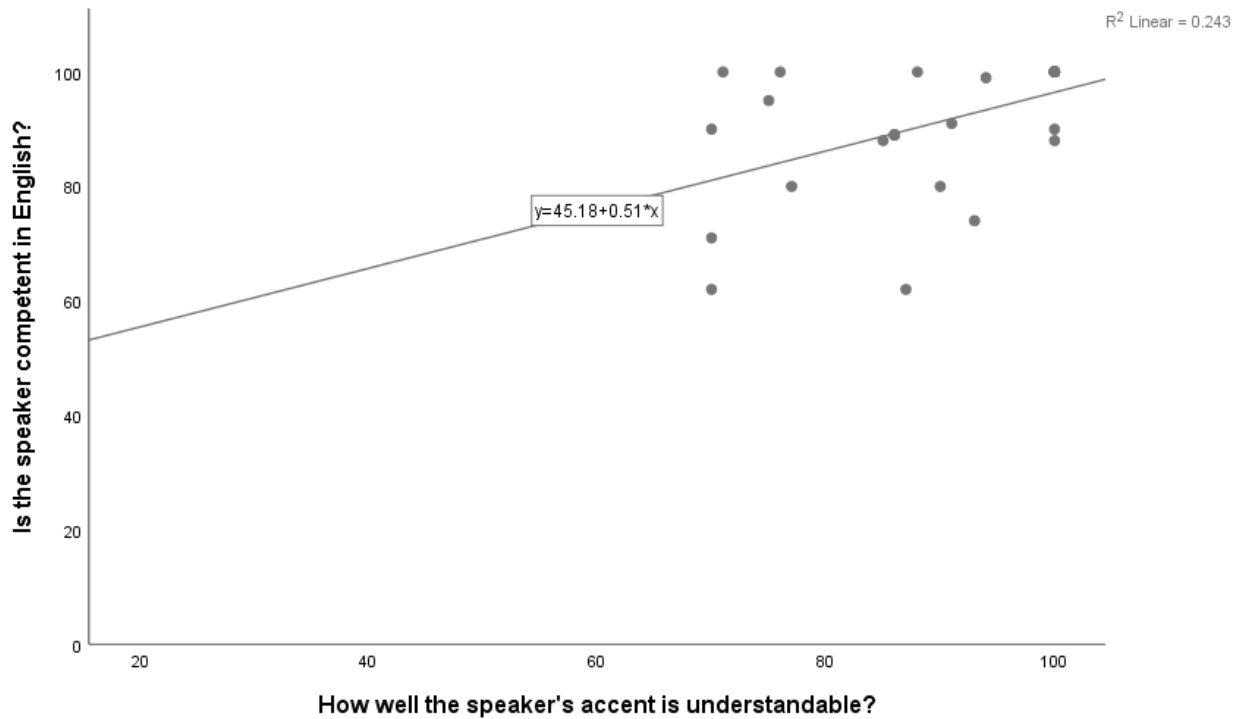
Figure 11. Scatterplot of the evaluation of the understandability of the speaker by the evaluation of the speaker's English competency

1.6 Discussion

The result shows a correlation between being a native AusE speaker and choosing the 'No accent' option for the identification of an Australian Accent. It implicates that people might not be aware of their own accents. This thesis suggests that it is essential to use 'No accent' as an option in accent studies, as participants may not recognise the accent type of their mother tongue. Although Australian participants might have their own regional accent, studying in a university potentially neutralises their accents (Evans and Iverson, 2007). As the male speaker who volunteered for this research is a master's student from Melbourne, both his urban and his academic background gives him a similar accent type student enrolled in higher education in

Sydney have (Evans and Iverson, 2007). The only Australian student who indicated that the male speaker has an accent is currently doing linguistically relevant studies. Despite the fact that the data do not suggest a statistically significant difference between the two groups, it is not clear whether a student who is doing cultural and linguistic relevant studies has a better awareness of their own accent. This aspect will be interesting to explore in a larger study.

The analysis of the relationships between participants' first language and their identification of the male speaker's accent suggests that students who speak a language other than English as their first language do as well as students who are English native speakers. This finding is limited by the background of the participants in this study. The participant group of this research is completing higher education in English taught degrees. Their knowledge of the English language might be higher than that of the average population. It is no surprise that more international than domestic students participated because the aim of the study was defined as finding the means to better support international students. With the majority being international students, the participants also have a higher exposure to cultural differences which leads to a higher awareness of language differences (Evans *et al.*, 2017). This study also does not have sufficient data to clarify the influence of an individual's linguistic ability on the identification of their own accents. Whether the preference of 'No accent' option can be applied to bilingual people or participants who study languages and linguistics needs to be further investigated.

1.6.1 Participants' conception of the speaker's accent and speech

No correlation was revealed by the analysis between participants' nationality and their evaluation of different aspects of the male speaker's speech. There is no evidence that students who come from outside Australia rate Australian speaker's accent strength or English

competency differently than Australian students. This finding extends to participants' first language and field of current study.

There are no significant differences between participants who did not recognise the Australian Accent and those who successfully identified the accent by evaluating the speaker's speech. The finding has two indications.

1. It suggests that the evaluations of the speaker's speech are normally distributed. Participants who do not speak AusE did not provide different evaluations on the strength of the speaker's accent than their counterparts. Students who are studying cultural and linguistic related subjects did not rate the speaker's English differently from those who are not.

2. The finding also shows that the evaluation of the speaker's speech is independent of people's recognition of the accent. Regardless of whether participants recognised the accent, their assessments of the speaker's speech follow the same pattern as the respondents who successfully identify the accent. This finding implies that accent types do not affect people's perception of the speakers'' speech. As this research only uses Australian Accent as the experimental material, further research using different accent types is needed to confirm this effect.

Participants' assessment of the speaker's speech is not affected by their cultural background, first language, or academic focus. Regardless of whether participants successfully identify the speaker's accent, they provide an equal level of assessment on the speaker's speech, including the strength of the accent. There is a correlation between the participants' background

and their evaluation of the male speaker's speech: students who are native English speakers give higher scores on the understandability of the speaker's speech. This correlation is expected as native English speakers generally understand English speech better.

There are complex correlations between categories of participants' evaluation of the male speaker's speech. Participants' familiarity predicts two other aspects of the speaker's speech. The more familiar a participant is with the Australian Accent, the higher the participant rates the understandability of the speech. This finding agrees with the studies of Peisker and Hlavac (2014) Leach, Watson and Gnevsheva (2016), and Evans *et al.* (2017), which suggest that increased contact with an accent leads to a better ability of understanding and learning that accent. Participants also believe the speaker is more competent in English when they are familiar with the Australian Accent. This result supports Peisker and Hlavac's (2014) research, which was also based in Australia. Peisker and Hlavac (2014) believe that middle-class Australians are not susceptible to the 'Erasing competency' phenomenon (Creese, 2010). They suggest that the Australian multicultural office environment increases middle-class Australian's familiarity with international culture and accents; thus reduces the influence of 'Erasing competency' phenomenon (Peisker and Hlavac, 2014). This idea is also supported by the results of the following tests in the study.

The bivariate regression between participants' evaluation of the strength of the male speaker's accent and their assessment of the speaker's English competency shows a non-linear relationship. It suggests that participants' evaluation of the speaker's English competency is independent of their evaluation of the speaker's accent strength. There is also no statistically significant correlation between the evaluation of the speaker's accent strength and participants' familiarity with the accent. Participants' evaluation of the strength of the speaker's accent cannot

be used as a predictor for their familiarity with the accent. These findings indicate that an individual's evaluation of the strength of a speaker's accent does not influence their conception of the speaker's English competency, neither directly or indirectly. The familiarity with the accent determines people's conception of the speaker's English competency. The 'Erasing competency' phenomenon (Creese, 2010) is not related to whether the people recognise the speaker has a 'strong accent' but related to the conception of an 'unfamiliar accent'. This thesis suggests that the influence of 'unfamiliar accent' is strengthened by the conception of 'strange culture'. As the familiarity with an accent is linked with the acceptance of the culture (Bosse and Gerosa, 2017), 'Erasing competency' (Creese, 2010) is linked with the prejudice beliefs of a particular culture.

It is worth noting that participants' evaluation of the understandability of the speaker's speech is correlated with their rating on the speaker's English competency. The better participants understand the speaker, the higher they rate the speaker's English competency. This correlation is expected as the data show that the distributions of participants' evaluation on the understandability of the speech and the speaker's English competency are similar. The understandability of the speech is also correlated with the assessment of the accent strength. The correlation between the evaluation understandability of the speech and the speaker's English competency has an r^2 of .243. The correlation between the evaluation of the accent strength and the speaker's English competency has an r^2 of .265. These are relatively small effect sizes compared to the relationship between the familiarity of the accent and evaluation of the speaker's English competency, which has the most significant effect size in the analysis with an r^2 of .412. This thesis does not suggest to overlook the correlation between understandability and accent strength. Accent strength has its influences on the understandability. As understandability is

related to the evaluation of English competency, it has been expected that accent strength influences the assessment of the speaker's competency. The correlation is indirect, and both of the links have effect sizes significantly smaller than the influence of the familiarity.

1.6.2 Limitations and outlook

These findings are limited as the sample is small and diversity is high. The participants in this study are multinational. Influence of a single culture is diluted by others. As identity influences the openness towards a foreign culture, studies that focus on a specific culture might present different results. Results may also depend on the first language of the participant which is not identifiable in such a small sample. As the sample group is gender imbalanced, the influence of gender needs to be further investigated. The education level of the participants also contributes to the limitations of this study. Participants in this research are university students. The multicultural environment and the education itself might increase participants' acceptance of unfamiliar culture. The sample also lacks generational diversity. The understanding of cross-cultural communication and social norms varies through generations. Different generations may have different degrees of openness towards foreign language and culture, that might lead to distinct responses to this experiment. Another limitation is the stimulus that was used in the study. AusE is one of the super-central varieties of English (Mair, 2016), the general familiarity in the international society is high. As the results suggest, participants are generally familiar with the accent. The results might differ for an English variety that is not as commonly used in the world. Last but not least, this study is mainly limited by its sample size. As this research is a pilot for a larger PhD project, the time for participant recruitment was brief. The small sample size of this study potentially increased the error rate of the statistical analyses.

Study 2 - Observation of Participants' Responses to the Stimulus

The goal of Study 2 is to use data collected from Study 1 to examine whether the speaker's appearance has influences on participants' perception of the speaker's speech. The focus group is formed to encourage in-depth discussion between the participants on the influence of accents in their daily communication. This research observes the discussion and investigates whether the participants are affected by the 'Erasing English Language Competency' phenomenon. The focus of this observation is the connection between accent and English competency. As a pilot study for a larger PhD project, the design of this experiment focuses on providing implications for future research. Two methods were used for sample collection in Study 2.

1. Participants' assessments on the speaker's speech before viewing the stimulus were collected using the same questionnaire that was used in Study 1.

2. A focus group was formed to record participants' attitudinal responses. The conversation between the host and the participants has been recorded as an audio document. The questionnaire responses are attached in the appendix (3). The audio recording is available upon request.

This study collects participants' attitudinal responses for implicit attitude measurements. As implicit attitude plays a crucial part in individual's perception (Livingston, Schilpzand and Erez, 2014; de Souza *et al.*, 2016; Hinton, 2017), the mixed method is to produce a more

accurate picture of the participants' perception of the stimulus. The questions are also designed to encourage the participants to express their ideas. As directly asking participants about linguicism-related issues might lead to social favouritism responses, questions that are directly related to stereotypes and discriminations were avoided in the study.

2.1 Stimulus

Study 2 uses a visual stimulus in addition to the audio record that is used in Study 1. This study uses the original video from which the experimental material for Study 1 was extracted. In this stimulus, the footage of the two speakers having a conversation is shown to the participants. As the stimulus is video footage, the participants are expected to have both the visual impression of the speaker's appearance and the perception of his accent. The stimulus for Study 2 is 1.5-minute long.

2.2 Participants

Eleven participants responded to the recruitment of Study 2, six of them were selected for the study. The selection of participants is based on their first language and nationality. As this research uses Asian appearance as the stimulus to test participants'' responses on an Australian Accent, Anglo-Australian and Anglo-British native English speakers are recruited for this study. This design is to reduce the diversity of the focus group participants and further reduce the influence of social favouritism. Asian-Australian students were not chosen because the same as the male speaker, they are AusE speakers with Asian appearance. Their judgement on the speaker's accent is not susceptible to the influence of Asian PP.

All of the participants for Study 2 are between ages 18 to 22 and are currently completing undergraduate studies. The gender of the participants is imbalanced as the total sample is imbalanced in gender. Five of the students are female, and one student is male, including the four Anglo-British participants who are on exchange programs as international students. English is the first language of each participant.

2.3 Procedure

Participants who were selected for the study were contacted by Email to arrange a time for the focus group. One week passed before the focus group meeting. It functioned as the wash-out period for potential carryover effects. The group met in a seminar room on campus which was booked for the study. After the arrival of all participants, the host introduced the study and delivered the consent forms. To avoid potential bias from the researcher, the host of the focus group is a student volunteer. Training and instructions on how the focus group should be conducted were provided to the host by the researcher. As mentioned in Study 1, the goal of this research is not disclosed to the participants. This action is to prevent the participants from intentionally avoiding stereotypical judgements.

All participants signed the consent form and agreed to participate in Study 2. Participants were asked to watch the stimulus. Paper versions of the questionnaires were passed to participants after viewing the video. The participants were asked to answer the survey immediately after watching the stimulus to collect their first response to the video. This action was done to avoid participants influencing each other. In order to match the participants' score with their score in Study 1, participants were asked to complete the questionnaire including the

demographic questions. The host initiated the focus group discussion using open questions (Appendix 4). During the discussion, the host encouraged participants to express their opinions and share their real-life experiences with others. The discussion focuses on international communication and accents. Three recording devices in the room recorded the conversation. After the discussion, the focus group members were given a movie ticket to honour their participation.

2.4 Focus Group Question Design

The focus group aims to discover participants' implicit attitudes. The questions are designed to test whether the 'Erasing English Language Competency' effect (Creese, 2010) influences the participants. The questions consisted of, warm-up questions, main/open questions, follow-up questions. Follow-up questions are designed to encourage participants to explain their answers further, to be asked when the participants do not provide enough responses to the main questions, or to help the participants understand the main questions.

The warm-up question is 'Do you normally pay attention to people's accents during conversations?'. The question was used to introduce the topic to the participants. The first main question was 'Do you think accents can influence communication?'. A follow-up question of 'How do you think accents can influence communication?' was asked and participants were invited to give examples. As participants confirmed the influence of accents but responses were vague, the second main question was asked: 'Do you think accents can affect the quality of a conversation?'. Both follow-up questions, 'Have you experienced or encountered a situation like that?', and 'Can you briefly talk about the situation at that time?' were asked when the participant's answer was short and did not provide enough information. As the participants

suggested that it is harder to understand someone's speech with a strong accent in this question, the main question 'Do you think accents can make people's speech harder to understand?' was not asked in the experiment. This study further asked, 'Do you have any advice for international students to avoid miscommunication?' to detect whether participants connect accent with improving English competency.

2.5 Results

This study was able to match all the focus group participants with their record in Study 1 using six demographic categories: nationality, gender, first language, age, education level, and field of current study. The participants are coded as Domestic Student#1, Domestic Student #2, International Student #1, International Student #2, International Student #3, and International Student #4. Based on participants' responses in Study 1, the variance is calculated.

Domestic Student #1's response in Study 2 was consistent with the data from Study 1. The person chose 'No accent' option in both of the studies. His evaluation of the strength of the speaker's accent changed by -2 points. The score of the assessment on the familiarity with the accent, the understandability of the speaker's speech, and the speaker's English competency were all 100 points and have not changed from Study 1.

Domestic Student #2 is the only Australian student who indicated the speaker has an accent in Study 1. She also chose 'Yes' to the same question in Study 2 and identified that the male speaker has an Australian Accent. Compared to Domestic Student #1, Domestic Student #2's evaluation of the different aspects of the speaker's speech varied more from Study 1. Her evaluation of the speaker's accent strength had a decrease of 10 points. The understandability of

the speech increased by 22 points. The familiarity of the accent changed -8 points and the speaker's English competency remains the same at 100.

International Student #1 is one of the participants in Study 1 that did not identify the speaker's accent as an Australian Accent. In study 2, her answer to the question 'What kind of accent does the male speaker have?' changed from 'American' in Study 1 to 'Others'. She further explained the answer as "Australian + American + Something else". Her evaluations on the speaker's accent strength and her familiarity with the accent also changed. The score of the strength of the accent significantly increased by 35 points, and the familiarity decreased 20 points. The understandability score and the competency score did not vary with 100 and 90 respectively.

International Student #2 is another participant who did not recognise the speaker's Australian Accent. Her choice for the speaker's accent in both Study 1 and 2 was Asian. Her evaluation of the strength of the speaker's accent dropped a dramatic 65 points from the first study. In the contract, the familiarity with the accent grew 22 points. Although her assessment of the speaker's English competency increased 4 points, her evaluation of the understandability decreased 21 points.

International Student #3 also identified the speaker's accent as an Asian accent in Study 1. Her response to the identification of the speaker's accent changed to Australian in the second study. There is a significant decrease of 31 points in her evaluation of the speaker's accent strength. The familiarity was significantly increased by 30 points. Her assessment on the understandability of the speech and the speaker's English competency was also increased by 25 and 5 points respectively.

Different from other international students, International Student #4 identified the speaker's accent as an Australian Accent in both of the studies. In the second study, her evaluation of the strength of the speaker's accent changed -15 points. The person's familiarity with the accent had an increase of 5 points. The assessments on the understandability of the speech and the English competency of the speaker did not change from Study 1 with both 100 points.

2.5.1 Focus Group Responses

Participants' responses in the focus group are summarised in this report. Every participant in the study contributed to the discussion.

In response to the warm-up question, International Student #3 suggests that she starts to notice an accent when it is hard to understand what the person says. Domestic Student #1 feels that when the other person is more nervous, their accent sounds more prominent to him. International Student #4 suggests that when she is in her home country, she tends to notice other people's accent more. She believes that this is because she is more familiar with the accents at home. As she is not familiar with the Australian Accent, she does not feel other people's accents are noticeable for her in Australia.

For the main questions, participants all agreed that accents could influence communication. International Student #1 suggests that accents might lead to misinterpretation. International Student #4 states that certain phrases might become hard to understand if the person has an accent. Domestic student #2 suggests that based on her experiences in positions with the duty of care, her own Australian Accent has made helping international students a lot harder.

Domestic Student #1 believes that it is harder for everyone in the conversation as everyone needs to adapt to a different way of communication. He also suggests that accent might be an element that triggers people's bad memories with certain people and can bring the unpleasant emotion to the current conversation as stereotypes. International Student #2 feels that when encountering unfamiliar topics, accents can make the communication very difficult. She had experiences that other people did not understand her English accent, and they tried to guess what she meant based on the stereotypes of British people. She suggests that an unfamiliar accent could be a trigger for stereotyping.

2.6 Discussion

The scale level data show that, compared to Study 1, five out of the total six participants' evaluation on the strength of the male speaker's accent slightly decreased or remained the same. On the other hand, participants' familiarity with the accent generally increased. Three students gave out a higher score than in Study 1, and one student's score stayed at 100. In the understandability category, two participants raised their score to 100 while most of the scores stayed the same in Study 2 at 100. Two participants increased their score for the male speaker's English competency in Study 2, with no change in other participants.

Study 1 suggests a positive correlation between participants' familiarity with the speaker's accent and their evaluation of the understandability of the speech. Study 2 could not confirm this correlation. Two participants reduced their score on the familiarity with the accent and did not drop their evaluations of the understandability of the speaker's speech. These results imply a potential gap between the exposure to one accent and participants' self-recognised

familiarity with the accent. As this research uses repeated measures, participant's exposure to the speaker's accent is increased through the experiments. With their evaluation of the understandability of the speech and the English competency generally increased, two participants reduced their score of the familiarity with the speaker's accent. Leach, Watson and Gnevsheva (2016) as well as Evans *et al.* (2017) suggest that with increased exposure to one accent, the understandability of the accent increases. This result indicates that participants' attitudes toward the speaker might influence their judgement of their familiarity with the accent.

This result also suggests that compared to the evaluation of the understandability of the speech or the speaker's English competency, participants' perception of the familiarity with the accent is susceptible to attitudinal changes. Both, participants' assessment of the understandability of the speaker's speech and their evaluation of the speaker's English competency proved to be correlated with their familiarity with the accent in Study 1. This relationship was not observed in Study 2, as these two categories were not affected by the variation of participants'' familiarity with the accent. Under the influence of the stimulus, participants'' evaluation of the understandability of the speech as well as the speaker's English competency followed the pattern of increased exposure. As the stimulus is to trigger participants' attitudinal changes, this result indicates that individuals'' attitudes do not influence these two categories. Participants' familiarity with the accent is affected by the stimulus in the second experiment condition. As the previous paragraph suggests, participants' familiarity did not follow the same pattern as the exposure to the accent. These findings do not only show that participants'' self-rated familiarity is not a representation of their exposure to the accent but also indicate that participants'' familiarity is affected by their attitudes.

On the other hand, participants' assessment on the understandability of the speech and the speaker's English competency are relatively stable. This study cannot find a strong influence on the change of participants'' familiarity with the accent on their evaluation of the understandability of the speech and the speaker's English competency. A limitation of these findings is that the focus group consists of both international students and domestic students. As native AusE speakers are more likely to judge their familiarity with an Australian Accent based on regional differences compared to the international difference, the interpretation of domestic students' attitudinal changes should be separate from the international students. In future research with a larger sample size, domestic participants need to be separately analysed. The study of Leach, Watson & Gnevsheva (2016) examined native English speakers' attitudes and recognition of five distinct accents (Liverpool, Manchester, Crewe, Stoke-on-Trent and Macclesfield) in northern England. The research has not been replicated with accents that are strongly different such as Queensland Australian Accent - Sydney Accent, or Canton Cantonese - Hong Kong Cantonese.

The data of this thesis also show a correlation between participants' familiarity with the accent and their evaluation of the accent strength. The result suggests a negative correlation between the two categories. This relationship was not found in Study 1. Combined with the findings from the first study, this thesis suggests that individuals'' perception of the strength of a speaker's accent can be affected by their attitudinal change. Without the footage being shown with the stimulus, participants'' attitudes towards the speaker were not involved in the first study. It suggests that participants' self-reported familiarity in Study 1 can be considered as the exposure to the accent. As Study 1 did not find a correlation between participants' assessment on the accent strength and their familiarity with the accent, the increasing exposure to an accent

should not be recognised as an element that affects people's rating of the accent strength. The change of participants'' rating on the speaker's accent strength in Study 2 is alternatively a result of the influence of the stimulus.

Under the influence of the visual stimulus, most of the participants changed their score on the assessment of the speaker's accent. As some of the negative changes are as significant as from 85 to 20 or from 35 to 4, this thesis suggests that participants are affected by social favouritism. Participants reduced their evaluation of the speaker's accent strength because the speaker is Asian. A major limitation of this finding is that this study does not have a control group with participants watching a stimulus that is recorded by an Anglo-Australian speaker. It is hard to determine whether the visualised conversation itself disturbs participants'' evaluation of the speaker's accent strength. These findings imply that the influence of social favouritism and visual images on the study of accent need to be further researched.

These findings support this thesis's hypothesis that the speaker's appearance can influence people's perception of accent. The results show that participants' evaluations of the strength of the accent and their familiarity with the accent are susceptible to attitudinal changes. Their assessments on the understandability of the speaker's speech and the English competency on the contract are relatively stable. Study 1 discovers that participants'' evaluation of the strength of the speaker's accent is independent of the accent type. It indicates that participants'' judgement on the accent strength is not related to how well they recognise the accent. As Study 1 data also shows that the less the participants understand the speaker's speech, the stronger they tend to rate the speaker's accent, this thesis suggests that people's perception on accent strength depends on how much they understand the speech.

This idea is in line with Lev-Ari and Keysar's (2010) study which shows a non-correlated relationship between the actual accent strength and participants'' evaluation of the speaker. This thesis agrees that the strength of a speaker's accent can be objectively assessed by native speakers of the accent or linguists focusing on accents. Although, to non-native speakers of the accent that are not specialised in accents, it is a subjective evaluation that is related to how well they can understand the speaker and their attitudes toward the speaker's cultural background. Aside from overrating the accent strength due to not being able to understand the content, it can also be influenced by both social favouritism and the 'Legitimising Role of Accent'. A person can under-rate a speaker's accent because the speaker is a member of an outgroup background.

This research applied individual analyses to three participants. Despite her other scores following the general trend, International Student #2 evaluated the understandability of the speaker's speech significantly lower in Study 2 with 21 points decrease. The direction of the change is opposite to the course of the correlation between increased exposure and understandability that was discovered in Study 1. She is also one of the only two participants that did not give a 100 score to the speaker's English competency in Study 2. International Student #1 has a remarkably different evaluation on the speaker's accent compared to everyone else. In Study 2, her assessment on the strength of the male speaker's accent significantly increased by 35 points, and she was one of the participants that decreased their evaluation on the familiarity with the accent. Her assessment of the male speaker's English competency remains unchanged at 90. It suggests that the two participants might be influenced by the 'Erasing competency' effect (Creese, 2010). One characteristic that the two students share is that neither of them recognised the speaker's Australian Accent. It is worth noting that Domestic Student #2 also reduced her score for the familiarity with the accent in Study 2 while her assessment on the strength of the

accent decreased and the understandability increased. This result may be due to her focus on the identification of the accent. As she was the only Australian student who established that the speaker has an accent, this participant might have higher attention to identifying accents due to her linguistic-related studies. In Study 2, she might notice that the speaker's accent is different from her own. She could reduce the score for the familiarity with the accent due to the notice of regional differences. Accent differences resulting from the speaker's family background may also have been a factor. It is possible that the speaker is from a bilingual family with languages other than English (LOTE) and the family's accent may have contributed to the development of a unique Australian Accent. These data indicate that the speaker's appearance disturbed the two participants evaluation of his accent. These findings further support the hypothesis of this thesis that people's perception of a speaker's accent can be influenced by the speaker's appearance. Combined with the previous findings, the data suggest that this effect is more significant for individuals who cannot successfully identify the speaker's accent. This effect can lead to confusion about the speaker's accent, misperception regarding the property of the accent (strength, familiarity), decreasing ability to understand the content, and under-evaluating the speaker's English competency.

Participant's responses to the focus group also support the findings of Study 1 and the scale level data in Study 2. Participants confirmed the central position of familiarity in the communication that involves different accents. They suggest that an unfamiliar accent directly affects the quality of the conversation. The participants also discussed the relationship between accents and stereotypes. The students believe that when the quality of the communication is disturbed by accents, people guess the other person's intention based on stereotypes. This idea supports the perspective of this thesis that accent is a trigger for stereotyping.

The responses of the focus group have multiple implications for future research. During the recording of the focus group discussion, some participants' accent strength changed as the conversation proceeded. The participants also mentioned that they noticed the accent more when a speaker is more nervous. Further studies focusing on the effect of different emotions on individuals' accent will help to identify this phenomenon. In-depth research on this effect will assist future research on participants' attitudes in focus groups. It will also benefit the projects by establishing connections between language usage and the expression of identity. Another aspect that requires further studies is the self-blame effect stemming from accent related misunderstandings. The international students in this study reported feeling guilty of not being able to understand Australian lecturers in class. This effect leads to an unwillingness in communication not only for international students but also for AusE speakers. This phenomenon might be related to more than an imbalanced power distribution in the classroom. International students who are native English speakers but do not speak AusE were more affected by this effect as they suggest feeling they 'Should understand'. It indicates that the phenomenon may connect to a self-identified advantage and its related expectations.

2.6.1 Limitations and outlook

A general limitation of this research is that this study does not have a referencing evaluation of the strength of the speaker's accent. With a standardised assessment of the speaker's accent strength from native AusE speakers, future research can analyse the range of variation of non-native speakers on the evaluation of the accent strength. The influence of the

speaker's appearance might also be different from native AusE speakers compared to international students. This limitation can be eliminated with analyses that are modified by participants nationality in future projects with larger sample size and longer duration. As this research discovered a significant correlation between participants' first language and how well they understood the speaker, the sample group should also be modified by the participants' first language in in-depth research.

Another reason to modify participants' first language is that the data this study collected are limited by the high understandability of the experiment material. The data shows that native English speakers' evaluations of the understandability of the speech and the speaker's English competency started at the high end of the scale with 75 as the lowest value for the understandability of the speech and 88 as the lowest score for the English competency. Seventy-Five per cent of the native speakers rated the understandability of the speech as 100, and 66.7 per cent of them suggest that the male speaker's understandability of the speech is 100. There was not enough space for the scores to increase in Study 2. Combined with modification for participants' first language, future research using statistical methods may manipulate the understandability of the experiment material for different language users. More study should also focus on the influence of social favouritism. Compared to discriminatory behaviours, the effect of social favouritism is less well understood. It is not clear whether it can affect an individual's behaviours and if so, in what way. Further research should identify and extract social favouritism from the general biased attitude.

As a pilot study for a future project, the duration of this research restricts the number of participants that can be recruited. This limitation does not only increase the risk of having errors in statistical analyses but it also directly impacts on the number of focus groups that can be

conducted. Future projects with a larger sample size should consider a mixed of between-subject design and repeated measures. More focus groups with higher focused participant demographic should be considered for further research. It will also be necessary to form control groups for both before treatment and after treatment stage data collection. This design will help to determine how much visual images added to the conversation affect participants' evaluations. This research does not have sufficient data to evaluate the influence of gender on the result.

Further studies with a larger sample size should be gender balanced. The duration of the thesis also affects the length of the wash-out period. This thesis provided a one-week wash-out period between the two studies to minimise the carryover effect. One-week wash-out period might not be long for within-subject research. Participants' memory of the conversation might influence the increased understandability of participants in the focus group. This limitation potentially affects the analyses by increasing the noise in the data set.

Conclusion

This thesis examined the correlation between a speaker's phenotypic prototypicality (PP) and people's perception of an accent. The research hypothesises that a speaker's appearance influences people's judgement of the accent. This assumption was tested by a mixture of quantitative and qualitative methods in a repeated measure design. The data support the hypothesis by showing that the participants' impression of the speaker's accent was influenced by the person's appearance. This research suggests that people's exposure to an accent also affects their perception of the accent. Correlations were found between participants' exposure to the accent and multiple aspects of their evaluations of the accent, such as their understanding of

the speech, and their assessments of the speaker's English competency. This study discovered a cognitive gap between people's self-reported familiarity with an accent and their exposure to the accent. When asked to identify a speaker's accent in an audio recording, participants' recognition of their familiarity with the accent matches their exposure to the accent. When the speaker's image is shown to the participants, their evaluation of the familiarity diverges from their exposure to the accent. This result indicates that using participants' self-reported familiarity as a measurement of their exposure to an accent might not be a reliable design for accent studies.

This research could not find a relationship between participants' recognition of the strength of the accent and other variables in the experiments. Participants' perception of the speaker's accent strength might be highly subjective and depending on their attitude towards the speaker. In line with Lev-Ari and Keysar's (2010) study, this thesis does not recognise the actual strength of a speaker's accent as a factor that influences people's perception of the speaker. In contrast, people's perceived accent strength is the result of their impression of the speaker. Both, participants' self-reported familiarity of the accent and their evaluation of the accent strength, were affected by the appearance of the speaker in this research. Different from their self-reported familiarity, participants' evaluations of the speaker's accent strength are likely to be affected by social favouritism.

The results from the second study of this thesis are not robust due to the small sample size. However, the results are valuable as a guide for a larger project:

More focus group participants will be recruited in a larger PhD project.

There is a potential disturbance of the carryover effect in the experiments. The wash-out period in this research might not be sufficient for eliminating the influence of the first study. Future research is required to determine a standard wash-out period for accent studies.

This research identified the necessity of including 'No accent' as an option in surveys for accent studies because native speakers of a language tend to consider that they do not have an accent. The 'No accent' option offers a better reflection of native speakers' perception of their own accent. There was one participant in the focus group whose score pattern is entirely different from that of other participants. The student is a native AusE speaker and studies linguistics related subjects. Although one example is not enough to indicate an effect of people's expertise on their perception of accents, it implies a new aspect for the study of accents.

This research explicates that people's perception of an accent can be influenced by their attitudes towards the speaker's appearance. It indicates that accent studies need to consider the potential disturbance of communication-based on these factors. There is a need for further studies to clarify these effects and establish measurements for controlling the disturbances.

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Appendices

Appendix 1 - Advertisement

Appendix 2 - Consent Form

Department of MMCCS
Faculty of Arts
MACQUARIE UNIVERSITY NSW 2109

MACQUARIE University
SYDNEY-AUSTRALIA

Phone: +61 (0)4 0214 7948
Email: zhi.li7@students.mq.edu.au

Chief Investigator's / Supervisor's Name & Title: _____Dr Sabine Krajewski_____

Participant Information and Consent Form

Name of Project: _____Accent Study_____

You are invited to participate in a study of accent. The goal of this research is to gather ideas that help international students better adapt to Australian society. It will raise awareness about how accents are perceived and how linguistic difference may be integrated in learning about each other and creating synergy in student lives. In this focus group study, you will be invited to discuss your ideas about accents with other participants.

The study is being conducted by Zhi Li to meet the requirements of MRes (Master of Research) year 2, under the supervision of Dr Sabine Krajewski (Tel: 9850 2167; Email: sabine.krajewski@mq.edu.au) of the Department of MMCCS (Music, Media, Communication and Cultural Studies).

If you decide to participate, you will be asked to watch a conversation between two speakers. After the conversation, you will be given a 25 minutes discussion time with other participants before filling out a questionnaire independently. The discussion will be video recorded for research purpose. The total time of the experiment is expected to be on longer than 30 minutes. At the end of the experiment, all of the participants will have the chance to win an Event cinema movie ticket.

Any information or personal details gathered in the course of the study are confidential, except as required by law. No individual will be identified in any publication of the results. Access to the data is limited to the researchers, no information identifying participants will be released without explicit consent of the participants. A summary of the results of the data can be made available to you on request by email.

Participation in this study is entirely voluntary: you are not obliged to participate, and if you decide to participate, you are free to withdraw at any time without having to give a reason and without consequence.

I, _____ (participant's name) _____ have read (or, where appropriate, have had read to me) and understand the information above and any questions I have asked have been answered to my satisfaction. I agree to participate in this research, knowing that I can withdraw from further participation in the research at any time without consequence. I have been given a copy of this form to keep.

Participant's Name:_____
  (Block letters)

Participant's Signature: _____ Date:_____

Investigator's Name:_____
  (Block letters)

Investigator's Signature: _____ __ Date:_____

The ethical aspects of this study have been approved by the Macquarie University Human Research Ethics Committee. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics & Integrity (telephone (02) 9850 7854; email ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

(INVESTIGATOR'S [OR PARTICIPANT'S] COPY)

Appendix 3 - Questionnaire

Department: MMCCS
Faculty of Arts

MACQUARIE
University
SYDNEY-AUSTRALIA

Does the male speaker in the video has an accent?
1. Yes
2. No

What kind of accent does the speaker has?
1. Asian accent
2. Australian accent
3. American accent
4. Other (please specify): _____

How strong is the speaker's accent?
(0 as no accent, 100 as a very strong accent)

_____

How familiar are you with the accent?
(0 as never heard before, 100 as very familiar)

_____

How much can you understand the speaker's speech?
(0 as cannot understand, 100 as fully understand)

_____

What is the speaker's English competency?
(0 as very poor, 100 very good)

_____

Department: MMCCS
Faculty of Arts

MACQUARIE
University
SYDNEY · AUSTRALIA

You are

1. Female
2. Male
3. Other

Are you a domestic student?

1. Yes
2. No

Where are you from?

_____

What is your degree?

Undergraduate
Master of coursework
HDR candidate
Other (please specify)

What do you study?

_____

Appendix 4 - Questions for Focus Group

Focus group sample questions

1. Do you normally notice people's accent during conversations? / Does people's accent catch your attention during conversations?

2. Do you think accents can influence communication?
   a) What do you think the influences can be? / How do you think accents can influence communications?
   b) Can you give me an example?

3. (Depends on the answer to question 2) Do you think accents can affect the quality of a conversation?
   a) Have you experienced or encountered a situation like that?
   b) Can you briefly talk about the situation at that time?

4. (Depends on the answer to question 2) Do you think accents can make people's speech harder to understand?
   a) Do you have any advice for international students to avoided miscommunications?

5. What do you think **the university** can do to help international students in such situations?
   a) What do you think fellow students can do to support international students in such situations?
   b) What do you think the lecturers can do?

Appendix 5 - Study 1 Responds

Department: MMCCS Faculty of Arts

Q1 Do you agree to participate in this research

Answered: 50   Skipped: 0
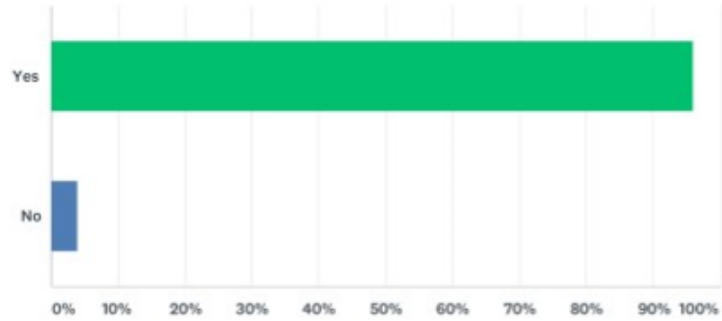
ANSWER CHOICES	RESPONSES	
Yes	96.00%	48
No	4.00%	2
TOTAL		50

Q2 Does the male speaker in the audio has an accent?

Answered: 31   Skipped: 19
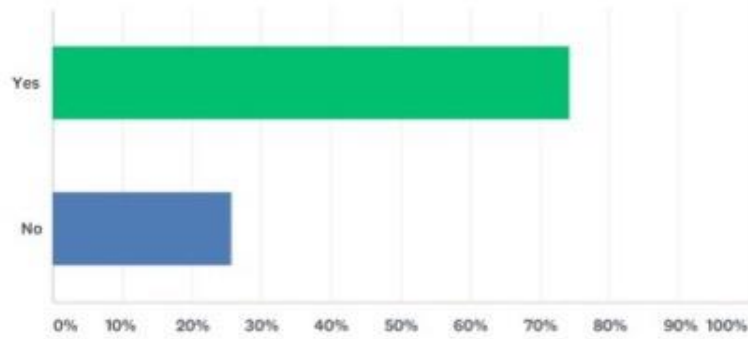
ANSWER CHOICES	RESPONSES	
Yes	74.19%	23
No	25.81%	8
TOTAL		31

Q3 What kind of accent does the male speaker have?

Answered: 20   Skipped: 30
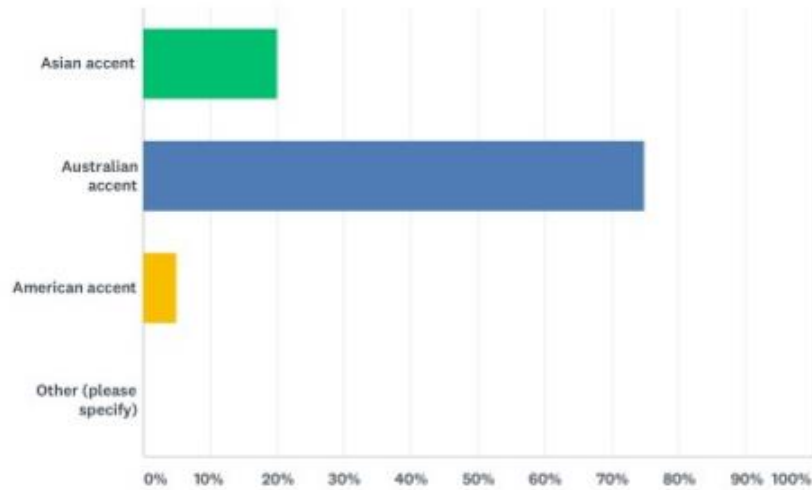
ANSWER CHOICES	RESPONSES	
Asian accent	20.00%	4
Australian accent	75.00%	15
American accent	5.00%	1
Other (please specify)	0.00%	0
TOTAL		20

#	OTHER (PLEASE SPECIFY)	DATE
	There are no responses.	

Q4 How strong is the male speaker's accent?(0 as no accent, 100 as a very strong accent)

Answered: 20   Skipped: 30
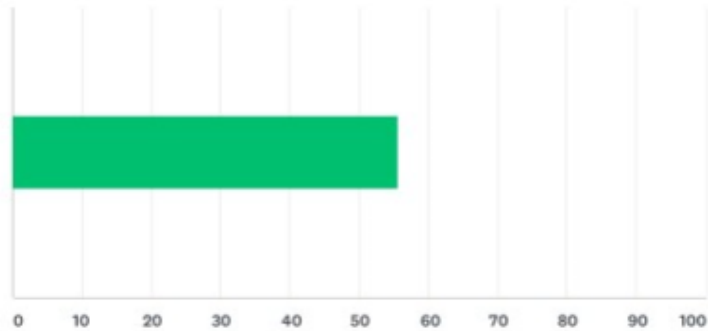
ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	56	1,114	20
Total Respondents: 20			

#		DATE
1	67	10/26/2018 5:34 PM
2	40	10/26/2018 5:17 PM
3	45	10/26/2018 3:16 PM
4	40	10/26/2018 2:14 PM
5	85	10/26/2018 9:50 AM
6	100	10/15/2018 10:55 AM
7	77	10/12/2018 12:45 AM
8	50	10/11/2018 5:59 PM
9	54	10/11/2018 5:02 PM
10	22	10/11/2018 4:25 PM
11	35	10/11/2018 3:28 PM
12	40	10/11/2018 3:16 PM
13	41	10/11/2018 3:08 PM
14	85	10/11/2018 3:06 PM
15	36	10/11/2018 2:52 PM
16	49	10/11/2018 2:23 PM
17	20	10/11/2018 2:23 PM
18	55	10/11/2018 10:24 AM
19	82	10/11/2018 3:29 AM
20	91	10/11/2018 2:11 AM

Q5 How familiar are you with the accent?(0 as never heard before, 100 as very familiar)

Answered: 20   Skipped: 30
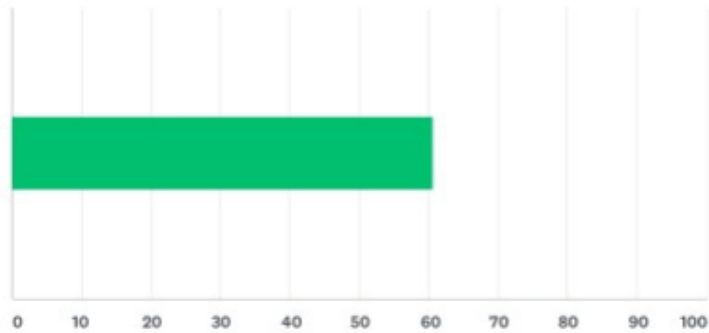
ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	61	1,215	20
Total Respondents: 20			

#		DATE
1	74	10/26/2018 5:34 PM
2	75	10/26/2018 5:17 PM
3	65	10/26/2018 3:16 PM
4	38	10/26/2018 2:14 PM
5	58	10/26/2018 9:50 AM
6	86	10/15/2018 10:55 AM
7	22	10/12/2018 12:45 AM
8	100	10/11/2018 5:59 PM
9	85	10/11/2018 5:02 PM
10	28	10/11/2018 4:25 PM
11	60	10/11/2018 3:28 PM
12	63	10/11/2018 3:16 PM
13	80	10/11/2018 3:08 PM
14	60	10/11/2018 3:06 PM
15	51	10/11/2018 2:52 PM
16	29	10/11/2018 2:23 PM
17	24	10/11/2018 2:23 PM
18	45	10/11/2018 10:24 AM
19	72	10/11/2018 3:29 AM
20	100	10/11/2018 2:11 AM

Q6 How much can you understand the male speaker's speech?(0 as cannot understand, 100 as fully understand)

Answered: 20   Skipped: 30
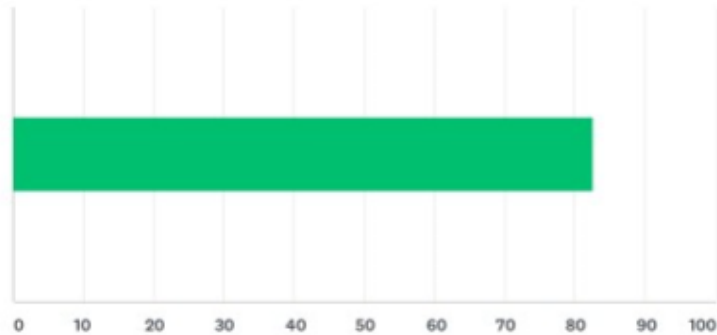
ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	83	1,652	20
Total Respondents: 20			

#			DATE
1	77		10/26/2018 5:34 PM
2	100		10/26/2018 5:17 PM
3	100		10/26/2018 3:16 PM
4	88		10/26/2018 2:14 PM
5	91		10/26/2018 9:50 AM
6	100		10/15/2018 10:55 AM
7	70		10/12/2018 12:45 AM
8	100		10/11/2018 5:59 PM
9	100		10/11/2018 5:02 PM
10	93		10/11/2018 4:25 PM
11	75		10/11/2018 3:28 PM
12	100		10/11/2018 3:16 PM
13	85		10/11/2018 3:08 PM
14	90		10/11/2018 3:06 PM
15	94		10/11/2018 2:52 PM
16	28		10/11/2018 2:23 PM
17	27		10/11/2018 2:23 PM
18	87		10/11/2018 10:24 AM
19	71		10/11/2018 3:29 AM
20	76		10/11/2018 2:11 AM

Q7 What is the male speaker's English competency?(0 as very poor, 100 very good)

Answered: 20   Skipped: 30
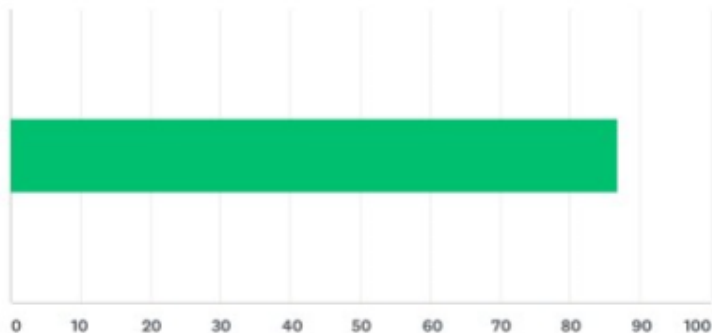
ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
	87	1,736	20
Total Respondents: 20			

#			DATE
1	80		10/26/2018 5:34 PM
2	90		10/26/2018 5:17 PM
3	100		10/26/2018 3:16 PM
4	100		10/26/2018 2:14 PM
5	91		10/26/2018 9:50 AM
6	100		10/15/2018 10:55 AM
7	90		10/12/2018 12:45 AM
8	88		10/11/2018 5:59 PM
9	100		10/11/2018 5:02 PM
10	74		10/11/2018 4:25 PM
11	95		10/11/2018 3:28 PM
12	100		10/11/2018 3:16 PM
13	88		10/11/2018 3:08 PM
14	80		10/11/2018 3:06 PM
15	99		10/11/2018 2:52 PM
16	71		10/11/2018 2:23 PM
17	28		10/11/2018 2:23 PM
18	62		10/11/2018 10:24 AM
19	100		10/11/2018 3:29 AM
20	100		10/11/2018 2:11 AM

Q8 You are

Answered: 28   Skipped: 22
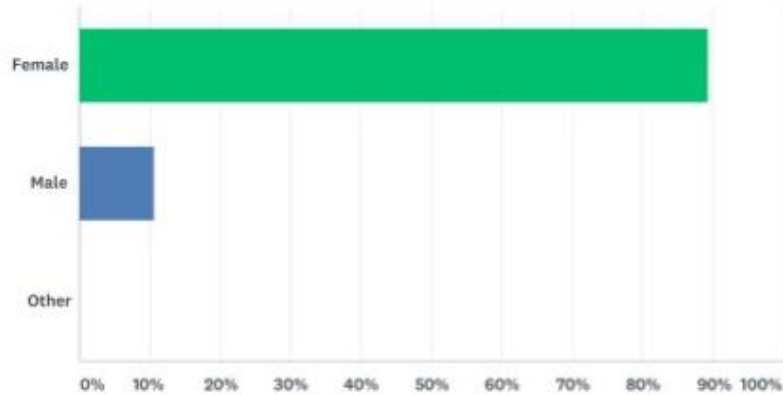
ANSWER CHOICES	RESPONSES	
Female	89.29%	25
Male	10.71%	3
Other	0.00%	0
TOTAL		28

Department: MMCCS Faculty of Arts

Q9 Are you a domestic student?

Answered: 28   Skipped: 22
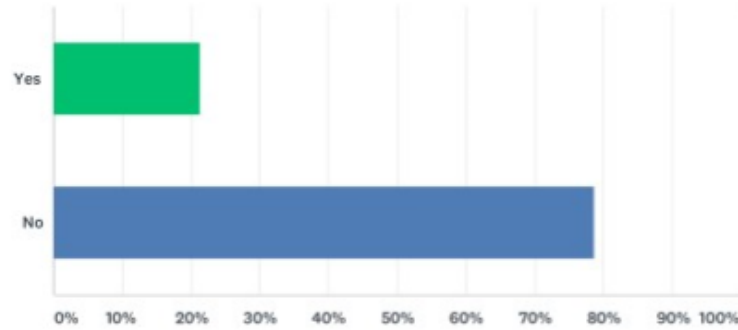
ANSWER CHOICES	RESPONSES	
Yes	21.43%	6
No	78.57%	22
TOTAL		28

Department: MMCCS Faculty of Arts

Q10 Where are you from?

Answered: 20   Skipped: 30

#	RESPONSES	DATE
1	England	10/26/2018 5:17 PM
2	England	10/26/2018 3:17 PM
3	England	10/26/2018 9:50 AM
4	Boston, Massachusetts, United States	10/15/2018 10:55 AM
5	Japan	10/12/2018 12:46 AM
6	Singapore	10/11/2018 6:00 PM
7	USA	10/11/2018 5:02 PM
8	HongKong	10/11/2018 4:25 PM
9	Taiwan	10/11/2018 3:16 PM
10	United States	10/11/2018 3:16 PM
11	China	10/11/2018 3:08 PM
12	China	10/11/2018 3:06 PM
13	China	10/11/2018 2:52 PM
14	taiwan	10/11/2018 2:26 PM
15	China	10/11/2018 2:23 PM
16	philippine	10/11/2018 2:19 PM
17	South Korea	10/11/2018 10:24 AM
18	Myanmar	10/11/2018 3:29 AM
19	Korea	10/11/2018 2:12 AM
20	China	10/11/2018 12:34 AM

Department: MMCCS Faculty of Arts

Q11 Is English your first language?

Answered: 26   Skipped: 24
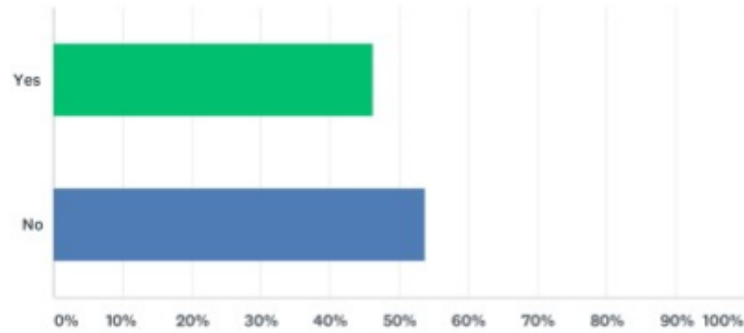
ANSWER CHOICES	RESPONSES	
Yes	46.15%	12
No	53.85%	14
TOTAL		26

Department: MMCCS Faculty of Arts

Q12 What is your first language?

Answered: 14   Skipped: 36

#	RESPONSES	DATE
1	Chinese	10/15/2018 10:55 AM
2	Japanese	10/12/2018 12:46 AM
3	Cantonese	10/11/2018 4:26 PM
4	Mandarin	10/11/2018 3:17 PM
5	Madarian	10/11/2018 3:08 PM
6	Chinese	10/11/2018 3:07 PM
7	Chinese	10/11/2018 2:52 PM
8	mandarin	10/11/2018 2:26 PM
9	Chinese	10/11/2018 2:23 PM
10	fookien	10/11/2018 2:19 PM
11	Korean	10/11/2018 10:24 AM
12	Burmese	10/11/2018 3:30 AM
13	Korean	10/11/2018 2:12 AM
14	Mandarin	10/11/2018 12:34 AM

Department: MMCCS Faculty of Arts

Q13 How old are you?

Answered: 26   Skipped: 24
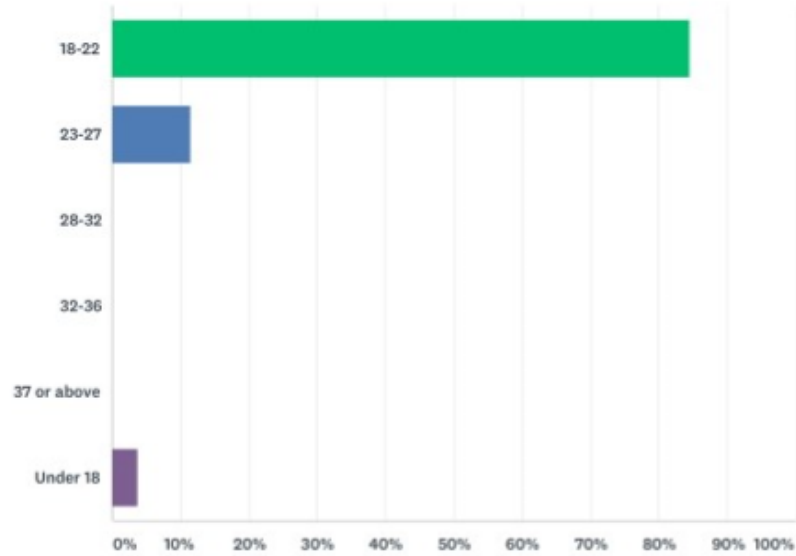
ANSWER CHOICES	RESPONSES	
18-22	84.62%	22
23-27	11.54%	3
28-32	0.00%	0
32-36	0.00%	0
37 or above	0.00%	0
Under 18	3.85%	1
TOTAL		26

Department: MMCCS Faculty of Arts

Q14 What do you study?

Answered: 26   Skipped: 24

#	RESPONSES	DATE
1	game design and development	10/26/2018 5:29 PM
2	Environmental Science	10/26/2018 5:18 PM
3	Natural Sciences	10/26/2018 3:17 PM
4	Ancient History	10/26/2018 2:14 PM
5	Environmental Science and Geography	10/26/2018 9:50 AM
6	Business	10/19/2018 1:28 PM
7	High School	10/15/2018 10:56 AM
8	Bachelor of Arts with a degree of Bachelor of Laws	10/13/2018 12:32 AM
9	Communication	10/12/2018 12:46 AM
10	Law	10/11/2018 7:30 PM
11	Economics	10/11/2018 6:00 PM
12	Linguistics	10/11/2018 5:02 PM
13	Applied finance	10/11/2018 4:26 PM
14	Environmental Science	10/11/2018 3:29 PM
15	Accounting	10/11/2018 3:17 PM
16	Computer Science	10/11/2018 3:16 PM
17	Finance	10/11/2018 3:08 PM
18	IT	10/11/2018 3:07 PM
19	Math	10/11/2018 2:52 PM
20	education	10/11/2018 2:27 PM
21	accounting	10/11/2018 2:23 PM
22	Professional accounting	10/11/2018 2:20 PM
23	Master of Translation and Interpreting	10/11/2018 10:24 AM
24	Master of international business	10/11/2018 3:30 AM
25	Marketing	10/11/2018 2:12 AM
26	Media	10/11/2018 12:34 AM

Department: MMCCS Faculty of Arts

Q15 What is your degree?

Answered: 26   Skipped: 24
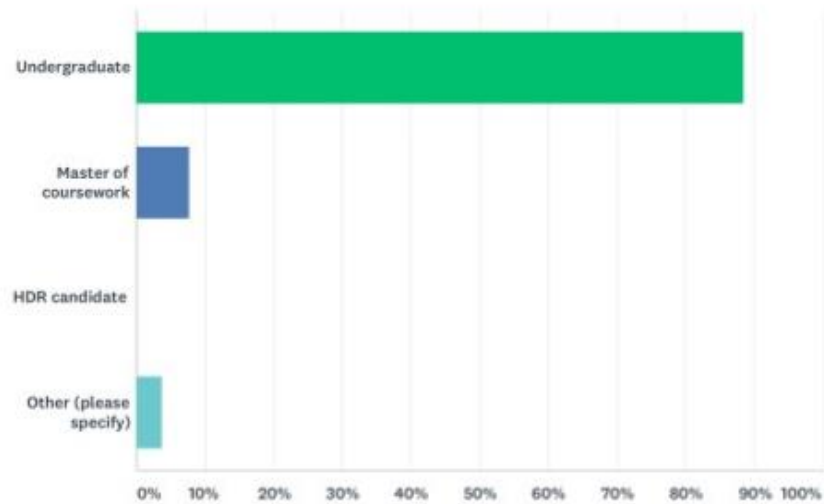
ANSWER CHOICES	RESPONSES	
Undergraduate	88.46%	23
Master of coursework	7.69%	2
HDR candidate	0.00%	0
Other (please specify)	3.85%	1
TOTAL		26

#	OTHER (PLEASE SPECIFY)	DATE
1	High School Student	10/15/2018 10:56 AM

Q16 In the second part of this study consists of 2 focus groups. If you decide to participate, you will be in a group of 6-8 students. After watching a short video (approx. 5mins), you will be invited to exchange your views on what you have seen in light of your personal experience. Overall, the session should take no more than 30 mins. If you would like to participate, please leave your preferred contact information below. If you agree to participate, you automatically be in a prize draw (separate from the one for this survey) for a movie ticket!

Answered: 4   Skipped: 46

#	RESPONSES	DATE
1	0410040473	10/26/2018 5:30 PM
2	amyduguid2@gmail.com	10/26/2018 3:18 PM
3	Laurenthomas1012@gmail.com	10/26/2018 9:51 AM
4	xxhanyixx@gmail.com	10/15/2018 10:56 AM

Q17 If you want to be in the draw for a movie ticket in the Event cinema, please leave your email below for the contact purpose.

Answered: 9   Skipped: 41

#	RESPONSES	DATE
1	justinjad@hotmail.com	10/26/2018 5:30 PM
2	jodierochford@outlook.com	10/26/2018 5:19 PM
3	amyduguid2@gmail.com	10/26/2018 3:18 PM
4	shannocollis@gmail.com	10/26/2018 2:15 PM
5	Laurenthomas1012@gmail.com	10/26/2018 9:51 AM
6	millyhawgood@gmail.com	10/19/2018 1:28 PM
7	kali.winn98@gmail.com	10/11/2018 5:03 PM
8	hsg8017@naver.com	10/11/2018 10:25 AM
9	hsu23waddy@gmail.com	10/11/2018 3:31 AM

Appendix 6 - Focus Group
Responds

MACQUARIE
University
SYDNEY·AUSTRALIA

Does the male speaker in the video has an accent?
1. (Yes)
2. No

What kind of accent does the speaker has?
1. Asian accent
2. Australian accent
3. American accent
4. Other (please specify): _____

How strong is the speaker's accent?
(0 as no accent, 100 as a very strong accent)

_____ 4 _____

How familiar are you with the accent?
(0 as never heard before, 100 as very familiar)

_____ 90 _____

How much can you understand the speaker's speech?
(0 as cannot understand, 100 as fully understand)

_____ 100 _____

What is the speaker's English competency?
(0 as very poor, 100 very good)

_____ 100 _____

Department: MMCCS
Faculty of Arts

MACQUARIE University
SYDNEY-AUSTRALIA

You are

1. Female
2. Male
3. Other

Are you a domestic student?

1. Yes
2. No

Where are you from?

England

What is your degree?

Undergraduate
Master of coursework
HDR candidate
Other (please specify)

What do you study?

Environmental Science.

MACQUARIE
University
SYDNEY·AUSTRALIA

Does the male speaker in the video has an accent?
1. (Yes)
2. No

What kind of accent does the speaker has?
1. Asian accent
2. Australian accent
3. American accent
4. Other (please specify): _____

How strong is the speaker's accent?
(0 as no accent, 100 as a very strong accent)

_____ 30 _____

How familiar are you with the accent?
(0 as never heard before, 100 as very familiar)

_____ 70 _____

How much can you understand the speaker's speech?
(0 as cannot understand, 100 as fully understand)

_____ 100 _____

What is the speaker's English competency?
(0 as very poor, 100 very good)

_____ 100 _____

Department: MMCCS
Faculty of Arts

MACQUARIE
University
SYDNEY·AUSTRALIA

You are

1. Female
2. Male
3. Other

Are you a domestic student?

1. Yes
2. No

Where are you from?

England

What is your degree?

Undergraduate
Master of coursework
HDR candidate
Other (please specify)

What do you study?

Natural Sciences

MACQUARIE
University
SYDNEY AUSTRALIA

Does the male speaker in the video has an accent?

1. (Yes)
2. No

What kind of accent does the speaker has?

1. Asian accent
2. Australian accent
3. American accent
4. Other (please specify): _____

How strong is the speaker's accent?
(0 as no accent, 100 as a very strong accent)

_____30_____

How familiar are you with the accent?
(0 as never heard before, 100 as very familiar)

_____30_____

How much can you understand the speaker's speech?
(0 as cannot understand, 100 as fully understand)

_____100_____

What is the speaker's English competency?
(0 as very poor, 100 very good)

_____100_____

MACQUARIE University
SYDNEY·AUSTRALIA

You are
1. Female
2. Male
3. Other

Are you a domestic student?
1. Yes
2. No

Where are you from?

Australia

What is your degree?
Undergraduate
Master of coursework
HDR candidate
Other (please specify)

What do you study?

Ancient History

MACQUARIE
University
SYDNEY·AUSTRALIA

Does the male speaker in the video has an accent?

1. Yes
2. No

What kind of accent does the speaker has?

1. Asian accent
2. Australian accent
3. American accent
4. Other (please specify): _____

How strong is the speaker's accent?

(0 as no accent, 100 as a very strong accent)

_____10_____

How familiar are you with the accent?

(0 as never heard before, 100 as very familiar)

_____80_____

How much can you understand the speaker's speech?

(0 as cannot understand, 100 as fully understand)

_____70_____

What is the speaker's English competency?

(0 as very poor, 100 very good)

_____95_____

Department: MMCCS
Faculty of Arts

MACQUARIE
University
SYDNEY·AUSTRALIA

You are
1. Female
2. Male
3. Other

Are you a domestic student?
1. Yes
2. No

Where are you from?

England

What is your degree?
Undergraduate
Master of coursework
HDR candidate
Other (please specify)

What do you study?

Environmental science
+ Geography

MACQUARIE University
SYDNEY · AUSTRALIA

Does the male speaker in the video has an accent?
1. Yes
2. No

What kind of accent does the speaker has?
1. Asian accent
2. Australian accent
3. American accent
4. Other (please specify): _____

Part Aus and part something else - not sure some American too

How strong is the speaker's accent?
(0 as no accent, 100 as a very strong accent)

_____75_____

How familiar are you with the accent?
(0 as never heard before, 100 as very familiar)

_____55_____

How much can you understand the speaker's speech?
(0 as cannot understand, 100 as fully understand)

_____100_____

What is the speaker's English competency?
(0 as very poor, 100 very good)

_____40_____

Department: MMCCS
Faculty of Arts

MACQUARIE University
SYDNEY AUSTRALIA

You are
1. (Female)
2. Male
3. Other

Are you a domestic student?
1. Yes
2. (No)

Where are you from?

England

What is your degree?
(Undergraduate)
Master of coursework
HDR candidate
Other (please specify)

What do you study?

Environmental Science

MACQUARIE
University
SYDNEY·AUSTRALIA

Does the male speaker in the video has an accent?

1. Yes
2. No

What kind of accent does the speaker has?

1. Asian accent
2. Australian accent
3. American accent
4. Other (please specify): _____

How strong is the speaker's accent?

(0 as no accent, 100 as a very strong accent)

_____20%_____

How familiar are you with the accent?

(0 as never heard before, 100 as very familiar)

_____100_____

How much can you understand the speaker's speech?

(0 as cannot understand, 100 as fully understand)

_____100_____

What is the speaker's English competency?

(0 as very poor, 100 very good)

_____100_____

Department: MMCCS
Faculty of Arts

MACQUARIE
University
SYDNEY·AUSTRALIA

You are

1. Female
2. Male
3. Other

Are you a domestic student?

1. Yes
2. No

Where are you from?

St marys NSW

What is your degree?

Undergraduate
Master of coursework
HDR candidate
Other (please specify)

What do you study?

Game design &
Development

Appendix 7 – HREA Approval

From: Faculty of Arts Research Office <artsro@mq.edu.au>
Sent: 15 May 2018 13:23:48
To: Sabine Krajewski
Cc: Arts Research Office; Mr Zhi Li
Subject: Final Approval - Issues Addressed_5201800287

Ethics Application Ref: (5201800287) - Final Approval

Dear Dr Krajewski,

Re: ('A Study of the Correlation between Accent Discrimination and Stereotypes')

Thank you for your recent correspondence. Your response has addressed the issues raised by the Faculty of Arts Human Research Ethics Committee. Approval of the above application has been granted, effective (15/05/2018). This email constitutes ethical approval only.

PLEASE NOTE: The committee has indicated that there is a typo in the Information and Consent form. Third paragraph - 'on longer' should be 'no longer'. Please correct this typo and email a copy of the final form to artsro@mq.edu.au for the file.

If you intend to conduct research out of Australia you may require extra insurance and/or local ethics approval. Please contact Maggie Feng, Tax and Insurance Officer from OFS Business Services, on x1683 to advise further.

This research meets the requirements of the National Statement on Ethical Conduct in Human Research (2007). The National Statement is available at the following web site:

http://www.nhmrc.gov.au/_files_nhmrc/publications/attachments/e72.pdf.

The following personnel are authorised to conduct this research:

Dr Sabine Krajewski
Mr Zhi Li

NB. STUDENTS: IT IS YOUR RESPONSIBILITY TO KEEP A COPY OF THIS APPROVAL EMAIL TO SUBMIT WITH YOUR THESIS.

Please note the following standard requirements of approval:

1. The approval of this project is conditional upon your continuing compliance with the National Statement on Ethical Conduct in Human Research (2007).

2. Approval will be for a period of five (5) years subject to the

provision of annual reports.

Progress Report 1 Due: 15th May 2019
Progress Report 2 Due: 15th May 2020
Progress Report 3 Due: 15th May 2021
Progress Report 4 Due: 15th May 2022
Final Report Due: 15th May 2023

NB: If you complete the work earlier than you had planned you must submit a
Final Report as soon as the work is completed. If the project has been
discontinued or not commenced for any reason, you are also required to
submit a Final Report for the project.

Progress reports and Final Reports are available at the following website:
https://www.mq.edu.au/research/ethics-integrity-and-policies/ethics/human-et
hics/resources

3. If the project has run for more than five (5) years you cannot renew
approval for the project. You will need to complete and submit a Final
Report and submit a new application for the project. (The five year limit
on renewal of approvals allows the Committee to fully re-review research in
an environment where legislation, guidelines and requirements are
continually changing, for example, new child protection and privacy laws).

4. All amendments to the project must be reviewed and approved by the
Committee before implementation. Please complete and submit a Request for
Amendment Form available at the following website:

https://www.mq.edu.au/research/ethics-integrity-and-policies/ethics/human-et
hics/resources

5. Please notify the Committee immediately in the event of any adverse
effects on participants or of any unforeseen events that affect the
continued ethical acceptability of the project.

6. At all times you are responsible for the ethical conduct of your
research in accordance with the guidelines established by the University.
This information is available at the following websites:

https://staff.mq.edu.au/work/strategy-planning-and-governance/university-pol
icies-and-procedures/policy-central
https://www.mq.edu.au/research/ethics-integrity-and-policies/ethics/human-et
hics/resources/research-ethics

If you will be applying for or have applied for internal or external
funding for the above project it is your responsibility to provide the
Macquarie University's Research Grants Management Assistant with a copy of
this email as soon as possible. Internal and External funding agencies will

not be informed that you have approval for your project and funds will not be released until the Research Grants Management Assistant has received a copy of this email.

If you need to provide a hard copy letter of approval to an external organisation as evidence that you have approval, please do not hesitate to contact the Faculty of Arts Research Office at ArtsRO@mq.edu.au

Please retain a copy of this email as this is your official notification of ethics approval.

Yours sincerely

Dr Mianna Lotz
Chair, Faculty of Arts Human Research Ethics Committee
Level 2, The Australian Hearing Hub
16 University Avenue
Macquarie University
NSW 2109 Australia
Mianna.Lotz@mq.edu.au