ARECLS, VOL. 17, 2020, P.60-115

An Investigation to Influence and Perception of Language Attitude towards English accent: A Sociolinguistics Perspective on Chinese Postgraduate Students' Willingness to Communicate

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Abstract

The aim of this study is to explore the Chinese postgraduate students' language attitude towards their peers' accents and the influence of language attitude on their willingness to communicate in the higher education setting. The current study conducted a quantitative investigation, which utilised the match-guided technique (MGT) and questionnaires, to examine 25 Chinese postgraduate students' language attitude towards three different accents, namely, standard English, French-accented English and Chinese-accented English. The influence of language attitudes on willingness to communicate (WTC) in the multilingual university setting was explored as well. The findings indicate that the native English accent is preferable than the non-native English accent, especially for the Chinese accent. Nevertheless, the findings show that the non-native accent is favourable as well, such as the French accent. Moreover, language attitudes have no influence on the Chinese postgraduate students' WTC in a subject-learning context. However, the intelligibility towards accents is considered as the possible main reason that influence their WTC. Therefore, it could be inferred from the findings that the stereotypes towards a native accent and the social categorisation to ethnicities influence the language attitude. Further, ESL students tend to ignore the lingual issue in the subject-knowledge learning setting, which might support the advantage of applying the Content and Language Integrated Learning (CLIL) in language teaching.

Acknowledgement

I offer my deepest respect and gratitude to my supervisor, Dr. Peter Sercombe. He patiently provided clear guidance and answered all the queries in my journey of conducting this research project.

I would like to thank all my teachers, friends and classmates at Newcastle University, especially Hannah Richardson, Lindsay Sundin, Nataliya Thomson, Richard Jackson, Vicky Yu and Wendy Cao. With their support, I had a terrific learning and living experience in Newcastle, United Kingdom.

Finally, I am extremely grateful to my country, Taiwan (R.O.C.) and to my parents for all their support and love.

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1. Introduction

Communication is essential in facilitating better understanding and improved social interactions. In communication, accent is a salient cue that can help make an impression towards certain interlocutors, which might generate multifaceted issues during social interaction. However, accent should not be merely restricted to regional varieties within the first language (L1). Given that English has become a global language (Scales et al., 2006; Guilherme, 2007) in recent years, accented English makes the communication process more complex.

Accent perceptions have been widely discussed as language attitudes in the field of sociolinguistics (Grimes, 1985), which has investigated related issues, such as stereotypes (Dragojevic and Goatley-Soan, 2020), accent perceptions (Ikeno and Hansen, 2007; Dewaele and McCloskey, 2014) and identities (Ahmed et al, 2014; Sung, 2016, Kircher and Fox, 2019). However, the ability to detect different accents remains a controversial topic, as this might be more difficult for second language (L2) users and must be ensured before further investigating language attitudes (Scales et al., 2006; Ahmed et al, 2014). In addition, the perceptions influencing language attitude, such as fluency, are still being investigated by several researchers (Dragojevic and Giles, 2016; Dragojevic et al., 2017; Dragojevic and Goatley-Soan, 2020). Hence, given that accent is an inevitable impression in communication, language attitude is a vital factor influencing speakers' willingness to communicate (WTC) (Dragojevic et al., 2017).

Studies on WTC aim to investigate issues in L1 and L2. The possible influences on WTC have been discussed in the fields of cross-cultural communication research and language teaching and learning (MacIntyre, 1994; MacIntyre et al. 1998; Lu and Hsu, 2008; Munezane, 2013; Oz, 2014). Recent studies have investigated WTC towards L2 learning research in order to explore the possible solutions for overcoming the L2 learning barrier (Peng and Woodrow, 2007; Cao, 2014). However, the influence variables related to WTC are complex (Cao, 2014), and these involve various factors, including context influence, linguistic competence and psychological influence, which are still being debated upon by

researchers.

Past studies discussing the language attitudes related to the WTC through the perspective of native speakers (NSs) towards both NSs and non-native speakers (NNSs) remain limited. In the case of Chinese students, they tend to have a low degree of WTC, as their learning behaviours may be influenced by Confucianism (Wen and Clément, 2003; Liu and Jackson, 2011). Therefore, the aim of the current study is to investigate how perceptions towards their peers' accents can influence Chinese postgraduate students' WTC in a university classroom setting by employing the match-guised technique (MGT) and WTC questionnaire approach.

The rest of the paper is organized as follows. The current chapter briefly introduces the issues regarding language attitude and WTC in relation to English as a second language (ESL). Chapter 2 provides a review of current studies on language attitude and WTC. Chapter 3 illustrates the methodology employed in this research. Chapter 4 analyses the collected data and addresses all the research questions presented. Chapter 5 discusses the significant findings regarding language attitudes and their influence on WTC. The final chapter summarises the key findings; discusses the implications, significance and the limitations of this study; and provides suggestions for further research.

2. Literature Review

2.1. Language attitude

'Language attitude' refers to perceptions and evaluative reactions towards different language varieties or speakers; it looks into the relationship between linguistics and sociology, which would mainly be categorised in status and solidarity dimensions (Garrett, 2010; Brewer, 2013; Dragojevic et al., 2017). Hence, people would perceive, react and judge by the varieties of language. In the study of cross-cultural communication, issues of identity and stereotypes are typically discussed with language attitude (Grimes, 1985; Ahmed et al, 2014; Sung, 2016).

The study of language attitude could be traced back to the 1930s (Garrett, 2010). However, it only gained traction among researchers when Agheyisi and Fishman (1970) published their work, which reviewed previous research about attitude-forming and various investigation methods towards language attitude (ibid.). The types of research can be categorised as direct approach and indirect approach (Garrett, 2010; Kircher, 2016). The former refers to surveys and questionnaires (e.g. Dewaele and McCloskey, 2014), and the latter refers to the MGT (e.g. Dragojevic and Goatley-Soan. 2020). MGT explores accent perception towards various traits without asking direct questions (Garrett, 2010; Kircher, 2016). This was first introduced by Lambert et al. (1960), who investigated Canadians' language attitudes by rating various traits related to French and English. However, as defined in the MGT, the traits identified were based on the authors' assumptions or stereotypes, which may have led to biased or inaccurate results. Utilising the same approach but in a different context, Giles (1970) found that UK secondary school students can identify the accent differences between regional and foreign accented English, concluding that receivable pronunciation (RP) is preferable than other accents due to the distinction and ideology of standard language and social status. However, merely using three dimensions to identify the language varieties might be restrictive (Garrett, 2010).

Although the MGT has been criticized because of its limitations (see Preston, 1996; Garrett, 2010), it is still the most commonly used approach in investigating language attitude (Giles and Marlow, 2011). Scales et al. (2006) explored the language attitudes of NS and NNS students towards seven English accents and reported that NNS students could not identify accent differences. Nevertheless, the small sample size may have reduced the reliability of their results. On the contrary, Ahmed et al. (2014) argued that Malaysian ESL students' language attitudes and ability to identify non-native and native English accents does not influence their comprehension of the contents discussed in the classroom. Although their sample size is bigger than that employed in Scales et al. (2006), the variations in contexts and language learning backgrounds may have led to different results. Hence, before conducting language attitude research, participants' ability to identify the accent difference should first be examined.

Further, past research have considered the fluency of interlocutors' accent as an influencing factor in language attitude. For example, Dragojevic and Giles (2016) conducted an insightful MGT research and added white noise to accent stimuli to represent the interruption in communication as an influencing factor in fluency. They proposed that using fluency to evaluate the intelligibility of accented English would cause negative influence on language attitude via negative stereotype. Nevertheless, using white noise to represent the interruption in accent might not be convincing enough, as it might be different to authentic accent, and fluency and intelligibility might not be the same concept for NNSs. Hence, using different accent strength stimuli, Dragojevic et al. (2017) replicated the previous research and supported the notion that disruption in fluency leads to a negative language attitude which, in turn, can reduce WTC. However, in both research, most of the participants are NSs of White ethnicity (Dragojevic and Giles, 2016; Dragojevic et al., 2017). Moreover, the numbers and backgrounds of participants in the two experiments varied, thus reducing the reliability. Finally, the interference might be limited in terms of inducing disruption in accent. Therefore, whether this issue would influence NNSs should be further investigated.

Following the previous studies, Dragojevic and Goatley-Soan (2020) reported that not all forms of accented-English are perceived in negative attitude based on fluency difference. This finding suggests that social categorisation is another issue influencing language attitude. This represents the idea that both fluency in accent and stereotype toward nationality can influence language attitude. At the same time, the issue of generalising in NNSs should be investigated as well.

2.2. L2 willingness to communicate

WTC is defined as a self-governed, stable predisposition toward interpersonal communication behaviour, which is influenced by a speaker's personality traits (McCroskey and Baer, 1985; McCroskey and Richmond, 1990). In the early stage of research in this field, researchers mainly focused on L1 WTC (McCroskey and Richmond, 1990; MacIntyre and Charos, 1996). McCroskey and Bear (1985) reviewed the different factors that can affect WTC and proposed the first scale for

measuring WTC. Since the study of Barraclough et al. (1988), the WTC literature has addressed the issue of cross-cultural communication, eventually gaining support from McCroskey and Richmond (1990).

Further studies have proposed different models and investigated other variables related to the influence of L2 on WTC and the reasons behind them; to date, researchers continue to debate on these topics (MacIntyre, 1994; MacIntyre et al. 1998; Lu and Hsu, 2008; Munezane, 2013; Oz, 2014). Among others, MacIntyre (1994) proposed an L2 WTC model, which posited that perceived competence at communication and language anxiety for L2 can influence WTC. This model suggests that L2 has different components influencing WTC by examining the psychological factors affecting external behaviours; however, this might ignore the impact of external context in changing people's behaviours. MacIntyre et al. (1998) proposed a new pyramid WTC model, which features more specific details than MacIntyre's (1994) research. Their proposed model of WTC features six layers of different factors containing 12 variables, such as cognition and motivation influences, to name a few (Appendix A). This model has inspired more researchers to investigate this issue (Subtirelu, 2014; Lee, 2018; Khatib and Nourzadeh, 2015).

Meanwhile, recent studies have investigated the L2 WTC in relation to L2 learning issues (Peng, 2007; Cao, 2014). For example, Ghanbarpour (2016) conducted a questionnaire-based quantitative research and suggested that L2 self-confidence towards English proficiency can be a significant predictor, thus supporting the L2 WTC model of MacIntyre (1994). However, it rejects the influence of L2 anxiety. Aside from L2 self-confidence, external influence has also been studied. For example, Lee (2018) investigated 69 bilingual Korean college students and found that short-term overseas study experience reduces L2 anxiety and enhances WTC. Based on this study, it is insightful to consider the influence of learning background on L2 WTC without cultural influence; however, its small sample size might have reduced the reliability of that study.

Both internal and external effects are considered in past studies that used

qualitative approaches. For instance, Cao (2014) adopted interviews, observations and journal entries in investigating six Chinese students studying an EAP course, arguing that ESL learners' WTC is dynamically influenced by language, the environment and personal variables. Although the sample size was small, the context in a subject-based L2 classroom is a valuable contribution to the literature. Zarrinabadia and Khodarahmib (2017) employed a qualitative method and focused on accent perception within the linguistic variable. Their results indicated that five perceptions toward NNS peers' accent influenced WTC in a language learning context. However, their findings may be limited, because they used a sample of Iranian ESL students enrolled at a private language learning centre, and the interlocutors consisted only of NNSs. Accordingly, the variables influencing WTC are complex (Cao, 2014). Although past research mostly investigated L2 WTC issues in a language learning setting, relatively fewer studies have related WTC with language attitude in a multilingual subject knowledge learning situation. This is an interesting direction for further exploration.

To date, only a few studies have investigated the integration of language attitude and WTC from the perspectives of NNSs towards both NSs and NNSs. One example is the work of Zarrinabadia and Khodarahmib (2017), who employed the qualitative method in their work and called for further research investigating this issue in a multilingual environment. Meanwhile, the MGT is a common research method used in language attitude research. It has been used by past studies to investigate language attitude and WTC together. It would be interesting to utilise the quantitative method, including MGT and questionnaires, to explore this issue in the context of multilingual university education with a focus on Chinese international students, who comprise an enormous portion of interactional students in the UK (UKCISA, 2020). Therefore, the current research employs the MGT and WTC questionnaire to investigate how perceptions towards peers' accent affect Chinese postgraduate students' WTC whilst attending classroom activities.

2.3. Research questions

This study aimed to address the following research question: How do Chinese postgraduate students' language attitudes towards their peers' accents affect their WTC during classroom discussions at Newcastle University?

To address the main research question, the following sub-questions are examined:

1) Are Chinese postgraduate students aware of the differences amongst different accents?

2) How do Chinese postgraduate students perceive their NNS and NS peers' accents during classroom discussions?

3) Do Chinese postgraduate students have issues about the WTC in classroom discussions based on the influence of accent perception?

3. Methodology

The current research conducted a quantitative research based on objectivist ontology and positivistic epistemology, which assumes that the phenomena of the world could be measured, and the rules to generalise the human world can be produced (Bryman, 2016; Clark et al., 2019). Hence, to answer the research questions about language attitude and WTC, the current study employed the MGT and questionnaire, which are direct and indirect methods in investigating language attitudes, respectively.

3.1. Participants and sampling

This research recruited 25 (8 males, 17 females) Chinese postgraduate students from Newcastle University. The snowball sampling method was chosen to reach a broad group of possible target participants by extending social networks from the author's friends (Bryman, 2016). Hence, in order to obtain sufficient number of participants from different courses, thus generalising the overall situation for the target group, the link for the online research instrument was disseminated by using WeChat, a popular social networking platform amongst Chinese students.

Students from 13 different master's degree courses in Newcastle University joined this study, of whom 92% had ages ranging from 21 to 30 years old. All the participants cited Mandarin and English as their native and second languages, respectively. In terms of their English proficiency, 80% of the participants were classified as CEFR B2 (independent user) and 20% were CEFR C1 (proficient user) (Council of Europe, 2020). All the participants claimed that they have been studying in the UK for over 6 months (See Appendix E).

3.2. Data collection

3.2.1. Match-guised technique

To investigate the participants' language attitudes, the MGT was used as an indirect method to minimise the extra lingual influences from speech content (Lambert et al., 1960). The aim was to specifically explore the participants' subconscious perceptions and reactions toward various accents, which could be attributed to various traits (Kircher, 2016; Garrett, 2010).

However, the original MGT requirement of a single speaker performing various accents is difficult to reproduce. Hence, numerous research employing the MGT have adapted the verbal guise technique (VGT) to overcome this problem (e.g. Dragojevic and Goatley-Soan, 2020). The difference is that VGT aims to utilise different people's speaking samples rather than those made by a single person (Kircher, 2016), thus enhancing the feasibility of conducting research via this approach. Hence, the VGT with MGT was employed in this study.

However, in using VGT, the speakers' tone and personal style of speaking might influence the participants' accent evaluation (Kircher, 2016). To reduce this bias, the accent stimuli were limited to a certain age range and gender. When the accents were obviously different, the participants were informed to focus on the accent, which was still helpful in discovering their awareness and perceptions towards different accents (ibid.).

In this research, three accent stimuli were selected from The Speech Accent Archive (2020) housed by George Mason University, USA, for the purpose of

linguistics research. Standard English (SE), French-accented English (FAE) and Chinese-accented English (CAE), which were performed by males with ages ranging from 20 to 40 years old, were chosen as stimuli, thereby representing the NNP and NP English accent with identical differences. Furthermore, the reason for choosing Chinese-accented English was that it might generate particular perceptions amongst NNPs with the same ethnic NNP, as mentioned in the literature review.

Meanwhile, the MGT traits were adapted from De Klerk and Bosch (1995) for foreign language attitude. However, to answer the research questions and fit the specific context, more traits about WTC and perceptions in the classroom context, such as showing off and proficiency, were elaborated from the study of Zarrinabadia and Khodarahmib (2017).

3.2.2. Questionnaire

On the one hand, a questionnaire is a useful research instrument that is frequently used in social science research; it helps researchers to efficiently collect participants' responses regarding their personal information, opinions and attitude by asking research-related questions (Young, 2016; Bryman, 2016). This instrument is also commonly adopted in language attitude studies and is considered a direct method (Kircher, 2016; Agheyisi and Fishman, 1970). On the other hand, the MGT, which is an indirect method (Kircher, 2016), can be easily integrated with other direct methods, such as a questionnaire, thus allowing the researchers to extract information on participant's language attitudes from two different perspective. Therefore, the WTC questionnaire was incorporated with MGT tasks in this research.

However, this method still has its limitations, including rater's bias. This means that respondents might try to predict the researchers' preference, thus leading to unreliable results (Garrets, 2010; Bryman, 2016). Therefore, leading or emotional words were not used in framing the questions (Bryman, 2016), and open-ended questions were used in asking the reasons for certain responses to ensure that participants answered the questions honestly (Brewer, 2013).

The questionnaire used in this study contained three main sections: demographic information, MGT tasks and WTC questionnaire. The whole questionnaire utilised seven-point Likert scales, and MGT tasks were incorporated with WTC and open-ended questions to investigate the influence of accent on WTC. The WTC questionnaire was adapted from Khatib and Nourzadeh (2015), who tested the reliability of this instrument in their research. The original questionnaire investigated WTC in L2 classrooms using six factors. For this study, the questions were revised so that they focused on identifying how accents influence WTC in accordance with the objectives of this research (Appendices C).

3.3. Data analysis

3.3.1. Statistical analysis

The collected numerical data from the questionnaire were statistically analysed using the SPSS 26 statistical software. Three types of statistical tests were utilised to investigate the statistical meanings of the participants' responses: descriptive statistics, repeated measures ANOVA and Pearson correlation. First, demographic data were analysed by descriptive statistics to calculate the number of components within various variables, such as age, gender and language proficiency, thus revealing the participants' personal background information. Second, to examine whether the participants could identify the differences of traits and perceptions related to three accents in MGT task, the repeated measures ANOVA was employed to check the different means and statistical significance values.

3.3.2. Content analysis

The open-ended questions in the questionnaire were analysed by content analysis, with the aims of categorising and classifying the information in a quantitative manner (Bryman, 2016; Clark et al., 2019). Four steps were executed in this analysis. In step one, numerical values were assigned to individual responses after examining their contents. When the words were repeated or when opinions were similar, these were marked with the same number for coding. In step two, the codings with the same numbers were grouped, and these were labelled with different themes, thus producing a new coding manual. In step three, the responses

were re-examined using the numbers in the new coding manual to code the data again. In step four, the number of responses in each theme was calculated and the percentage values were identified.

3.4. Validity and reliability

In terms of the validity of the research questions, one potential controversy is that MGT might not focus on certain contexts, and it might have limited validity in answering the second research question. However, accent perception may not be influenced by certain contexts (Gerratt, 2010), which means that MGT still has validity in addressing the question.

Furthermore, the open-ended questions in each stimulus could support this question and can be utilised to compare with the MGT trait ranking to determine whether MGT traits can represent accent perceptions. The samples in the accent archive were performed using the same daily communication transcription by speakers, who were selected from the same gender and age group, thus reducing the possible evaluation bias.

This research focused on a specific context with a small sampling. To ensure reliability, the statistical significance must be examined during the analysis so that they could be generalised to a broader context (Bryman, 2016). As the questionnaire design might generate different responses from participants, it could yield different results when other researchers reproduce this design, influencing the reliability of this research (ibid.). Thus, the statistical test of Cronbach's alpha values on all questions was conducted to check the internal reliability. The Cronbach's alpha values of the MGT task and WTC questionnaire (0.833 and 0.919, respectively) are higher than 0.7, indicating the high reliability of the research design.

3.5. Ethical issue

The research instrument was built on an online survey website, as it was difficult to send and receive physical copies of the information sheet and consent form. Therefore, the research information was shown in the landing page of the website

to replace both documents. If the participants understand the information and agree to join the research, they could move on to next page to start the research tasks. They must voluntarily finish the online research instrument, although they have the right to stop answering anytime if they had any concerns. The confidentiality of their personal information and responses were guaranteed, and the collected data were only used in this study.

4. Data analysis

4.1. Awareness of accent difference

In Table 1 and Table 2, repeated measures ANOVA results demonstrate the participants' accent awareness of 13 traits within three different accents. The ranking of total mean of traits vary amongst three accents. SE (M_{SE}=5.31, SD=.7202) has a higher rating than FAE (M_{FAE}=4.20, SD=.9395) and CAE (M_{CAE}=2.89, SD=.7970). The ANOVA revealed statistically significant differences (F=64.394, p=0.000<.0.05.) amongst the three types of accented English. Similar to the work of Ahmed et al. (2014) on accent awareness, the results indicate that the participants are aware of the accent differences between NS and NNS. Their reactions towards different accent stimuli could mean that they have different language attitudes towards various accents.

Table 1 Mean and standard deviation values obtained from the evaluation

Traits	Chinese-accented English (CAE) Mean (SD) (N=25)	French-accented English (FAE) Mean (SD) (N=25)	Standard English (SE) Mean (SD) (N=25)
Reliable	2.84 (1.281)	3.96 (1.274)	5.48 (1.046)
Honest	3.68 (1.282)	4.08 (1.077)	4.88 (1.092)
Friendly	4.00 (1.225)	4.52 (1.229)	4.92 (1.152)
Intelligent	2.88 (1.092)	4.32 (1.145)	5.32 (.945)
High Social class	2.68 (1.114)	3.88 (1.166)	5.36 (1.150)
Attractive	2.08 (.954)	3.80 (1.291)	5.20 (1.080)
Competent	2.80 (1.155))	4.44 (1.044)	5.36 (.995)
Educated	3.24 (1.128)	4.44 (1.193)	5.52 (1.085)
Entertaining	2.76 (1.393)	3.80 (1.291)	4.32 (1.345)
Showing off	1.92 (1.038)	3.00 (1.384)	4.04 (1.670)
Understandable	3.64 (1.604)	4.88 (1.236)	6.28 (0.792)
Good Proficiency	2.56 (1.325)	4.52 (1.418)	6.16 (0.8)
Fluent	2.52 (1.661)	5.00 (1.323)	6.16 (0.8)
Total	**2.89 (.7970)**	**4.20 (.9395)**	**5.31 (.7202)**
WTC	3.72 (1.595)	5.00 (1.041)	5.16 (1.864)
Ability to identify accents	2.44	5.56	3.16
WTC in classroom	3.48 (1.661)	3.80 (1.826)	3.92 (2.499)
Influence of Chinese peer with this accent	2.56 (1.502)	4.04 (2.150)	4.04 (2.508)

Table 2 Significance values of differences in mean values from the evaluation

Traits	CAE (N=25) (Mean difference and Sig.[b])		FAE (N=25) (Mean difference and Sig.[b])		SE (N=25) (Mean difference and Sig.[b])	
	FAE	SE	CAE	SE	CAE	FAE
Reliable	-1.120*(.001)	-2.640*(.000)	1.120*(.001)	-1.520*(.000)	2.640*(.000)	1.520*(.000)
Honest	**-.400(.179)**	-1.200*(.008)	**.400(.179)**	-.800*(.013)	1.200*(.008)	.800*(.013)
Friendly	-.520*(.040)	-.920*(.025)	.520*(.040)	**-.400(.253)**	.920*(.024)	**.400(.253)**
Intelligent	-1.440*(.000)	-2.440*(.000)	1.440*(.000)	-1.000*(.002)	2.440*(.000)	1.000*(.002)
High Social Class	-1.240*(.000)	-2.720*(.000)	1.240*(.000)	-1.480*(.000)	2.720*(.000)	1.480*(.000)
Attractive	-1.720*(.000)	-3.120*(.000)	1.720*(.000)	-1.400*(.000)	3.120*(.000)	1.400*(.000)
Competent	-1.640*(.000)	-2.560*(.000)	1.640*(.000)	-.920*(.001)	2.560*(.000)	.920*(.001)
Educated	-1.200*(.000)	-2.280*(.000)	1.200*(.000)	-1.080*(.001)	2.280*(.000)	1.080*(.001)
Entertaining	-1.040*(.002)	-1.560*(.001)	1.040*(.002)	**-.520(.102)**	1.560*(.001)	**.520(.102)**
Showing off	-1.080*(.002)	-2.120*(.000)	1.080*(.002)	-1.040*(.001)	2.120*(.000)	1.040*(.001)
Understandable	-1.240*(.000)	-2.640*(.000)	1.240*(.000)	-1.400*(.000)	2.640*(.000)	1.400*(.000)
Good Proficiency	-1.960*(.000)	-3.600*(.000)	1.960*(.000)	-1.640*(.000)	3.600*(.000)	1.640*(.000)
Fluent	-2.480*(.000)	-3.640*(.000)	2.480*(.000)	1.160*(.000)	3.640*(.000)	1.160*(.000)
Total	-1.314*(.000)	-2.418*(.000)	1.314*(.000)	-1.105*(.000)	2.418*(.000)	1.105*(.000)
WTC	-1.280*(.001)	-1.440*(.011)	1.250*(.001)	**-.160(.071)**	1.440*(.011)	**.160(.071)**
Ability to identify accents	-3.120*(.000)	**-.720(.265)**	3.120*(.000)	2.400*(.009)	**.720(.265)**	-2.400*(.009)
WTC in classroom	**-.320(.465)**	**-.440(.388)**	**.320(.465)**	**-.120(.824)**	**.440(.388)**	**.120(.824)**
Influence of Chinese peer with this accent	-1.480*(.001)	-1.480*(.014)	1.480*(.001)	**.000(1.000)**	1.480*(.014)	**.000(1.000)**

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

4.2. Language attitudes towards the accents of students' NNS and NS peers

In Table 1 and Table 2, the repeated measures ANOVA results for 13 accent perception traits revealed that SE is more favourable than CAE and FAE, which also means NS peers' accents are perceived with a more positive attitude than that of NNS peers. Looking at the traits of SE, 'understandable' (M=6.28, SD=.792), 'good proficiency' (M=6.16, SD=.800) and 'fluent' (M=6.18, SD=.800) have much higher ratings than other traits and have statistically significant differences amongst three accents type ($p=.000<0.05$). Upon examining the traits in CAE, 'friendly' has the highest rating than other traits, although there is a statistically significant difference with SE, the mean difference is less than 1 point,

representing the smallest mean difference amongst 13 traits.

'Honest' is the only trait with no statistically significant difference between CAE and FAE (p=.179>0.05), but both accents have significant differences with SE; hence, NS can be considered to be more honest than NNS. Moreover, 'friendly' (p =.253> 0.05) and 'entertaining' (p=.520>0.05) are two traits that have no significant differences between SE and FAE.

These results are consistent with those of Dragojevic and Goatley-Soan (2020), who concluded that native accent English is more preferable than non-native accented English, but not all the non-native accents are less unfavourable.

4.3. Influence of language attitude on WTC

The repeated measures ANOVA results in Table 1 and Table 2 illustrate that the participants' language attitudes towards three accents have no influence on their WTC. The means in each accent do not exceed 4 in the 7-point Likert scale (M_{CAE}=3.48, SD=1.661; M_{FAE}=3.80, SD=1.826; M_{SE}=3.92, SD=2.499). Moreover, the ANOVA results reveal that there are no differences in the statistical significance of the three accents (F=0.431, p=0.641>0.05). This means that accent might influence the WTC; however, it might not be affected by differences in accent perception.

In Table 3, the repeated measures ANOVA for the WTC questionnaire reveals that accent has no strong influence on the factors affecting students' WTC. The differences amongst the factors has no statistical significance (p< .05). Therefore, the two approaches above yield consistent results, revealing that the influence of accent might not be very strong. Therefore, the results reject to those of Zarrinabadia and Khodarahmib (2017). The current study indicates that language attitudes toward NNS and NS have no significant differences in influencing WTC in the university learning setting.

Table 3 Values for mean, standard deviation and significance of WTC factors

Factors	Mean	SD		Sig.					
				1	2	3	4	5	6
Communicative Self-confidence	3.8880	1.20703	1	-	.316	.338	.081	.233	.430
Integrative orientation	3.6500	1.64253	2		-	.814	.246	.868	.947
Situational context of L2 use	3.7200	1.14864	3			-	.348	.561	.848
Topical enticement	3.4600	1.35339	4				-	.637	.446
Learning Responsibility	3.6000	1.16145	5					-	.207
Off-instruction communication	3.6700	1.38767	6						-

Based on estimated marginal means
*. The mean difference is significant at the .05 level.
b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

4.4. Reasons behind the language attitude's influence on WTC

In Table 4, the content analysis results of the open-ended questions indicate the three possible reasons on how accents can influence WTC, namely, 'communication process', 'intelligibility' and 'not being influenced by accent', which are mentioned with high frequency within and amongst the three accents investigated.

Examining the most frequent mentioned reasons, 'intelligibility' is the dominant reason amongst three accents. A high degree of intelligibility is the main response in SE (40%) and FAE (28%), and low degree of intelligibility dominates in CAE (44%). 'Positive communication process' is the highest response within SE (40%).

Another reason mentioned is 'not being influenced by accent', which means the students tend to focus on the speech content and less on discrimination (Appendix G). This is the second major response amongst FAE (24%), CAE (16%) and SE (12%). Especially in FAE, this reason is only 4% lower than the value for intelligibility.

These findings are similar to those of Dragojevic and Goatley-Soan (2020), who concluded that some, but not all, of the reasons correspond to the elements explaining how perceptions of accent influence WTC, as suggested by

Zarrinabadia and Khodarahmib (2017).

Table 4 Percentages for the influencing factors on WTC

Themes	CAE	FAE	SE
Communication process (Positive)	-	-	40%
Communication process (Negative)	8%	-	4%
Accent perception (Positive)	-	16%	-
Accent perception (Negative)	16%	4%	-
High degree of intelligibility	4%	28%	40%
Low degree of intelligibility	44%	12%	-
Not being influenced by accent	16%	24%	12%
Proficiency awareness	-	8%	-
Self-confidence	-	8%	4%
Closeness (familiar)	12%	-	-
Total	100%	100%	100%

5. Discussion

This study strived to explore how the participants' language attitudes might influence their WTC in a multilingual classroom setting. To achieve this aim, two steps were conducted. First, the accent awareness and language attitudes were examined. Second, this work examined how WTC can be influenced by accent so that it could investigate the reasons and perceptions of the students related to the research question.

5.1. Accent awareness and language attitude towards the accents of students' NNS and NS peers

The findings indicate that the participants are aware of the accent differences. These are in accordance with Ahmed et al. (2014), who argued that ESL students can identify accent differences between NSs and NNSs due to their immersion in a multilingual environment wherein English is the lingual franca. Hence, the language learning background can influence accent awareness (Dewaele and McCloskey, 2014). As mentioned earlier, the students in this study have been studying in the UK for over six months; hence, the experience of studying in an

English-speaking country may have possibly influenced their awareness and attitude towards the accents of NNSs.

Based on the first finding, we can infer that the participants have different language attitudes towards various accents, thus revealing that NS peers' English accent is more favourable than that of NNS peers. Especially for CAE, this finding shows that the participants have negative attitudes toward the same ethnic accent. Previous studies on language attitude have argued that a native accent is more preferable than non-native accented English (Gill, 1994; Dewaele and McCloskey, 2014; Sung, 2016). This might be related to the stereotype that having a native-like accented English is akin to having good English proficiency (Sung, 2016). Such a perception may have formed within a language education that promotes the goal of becoming a native speaker as a successful language learning outcome (McKenzie, 2008; Llurda, 2016). Hence, this might explain why the participants have a negative language attitude towards CAE.

In addition, compared to other traits of accent perception in the findings, 'understandable' (also defined as 'intelligibility') could be the major perception amongst the participants, which determine their language attitude towards different accents. This specific accent perception corresponds to past studies (Dragojevic and Goatley-Soan, 2020; Dragojevic and Giles, 2016), which argued that intelligibility is a vital criterion for evaluating language attitude. The purpose of communication is successful information transmission. When the information is difficult to understand, communication fails. Therefore, this is the reason why intelligibility is emphasised amongst the accent perception traits identified by the participants.

Unexpectedly, the NNS peers' English accent may lead to the formation of a positive attitude. The participants have a positive language attitude towards FAE, whose total rating is closer to SE than to CAE. This demonstrates that native accent does not dominate the positive attitude and that some of the non-native accents are favourable as well. Language attitudes towards certain non-native accents from particular countries could be classified under social categorisation,

which refers to the stereotype and stigma of preference towards people from certain countries, such as French and German (Dragojevic and Goatley-Soan, 2020). Therefore, language attitude might change and gain a positive preference based on this categorising stereotype toward certain ethnicities.

5.2. Influence of language attitude on WTC in the classroom

In order to explore whether language attitude towards peers' accented English can affect WTC in a multilingual higher education learning setting, the findings from both direct and indirect methods (see Sections 4.3 and 4.4, respectively) surprisingly reveal that language attitudes toward peers' accent do not influence WTC, which explains why the WTC influencing factors include 'unaffected by accent' and 'intelligibility' (see Section 4.3). This rejects the finding of Zarrinabadia and Khodarahmib (2017) that NNSs' accent perception towards other NNSs' accent in the classroom can influence their WTC in an English learning classroom. In the current research, the findings reveal that amongst NNSs in a multilingual subject knowledge-based learning setting, which includes NSs and NNSs, the influence degree of accent perception is reduced, and only intelligibility can be considered an influencing factor. Comparing the current finding with that of Zarrinabadia and Khodarahmib (2017), the setting of higher education and interlocutors with NSs and NNSs led to the different results in the current study.

5.2.1. Unaffected by accent

The findings indicate that the participants do not consider accent as an influencing factor on their WTC during classroom discussions, because of politeness and the importance of focusing on the speech content (see Section 4.3). The cultural influence could be seen in this result: the polite behaviour in Chinese culture is reflected by 'attitudinal warmth' which aims to show friendliness with the interlocutors (Peng, 2007; Zhu and Bao, 2010, p. 849). This might have encouraged the participants to communicate with peers during lectures or seminars, especially those from different cultural backgrounds. Furthermore, the influence of other factors could be explained by the WTC theoretical model

suggested by MacIntyre et al. (1998), who demonstrated that various factors in a certain context can influence WTC. Therefore, although accents might be one possible factor that can influence the WTC related to English proficiency, its impact can be mitigated by other potential factors, such as culture and interlocutors; hence, fully identifying the reasons affecting WTC is a difficult research task (Cao, 2014).

In addition, especially in an academic education context rather than just language learning setting, the transmission and sharing of knowledge interactively is more in lectures or seminars, so language issues may be ignored. This resonates with the finding of Ahmed et al. (2014), who found that university students in Malaysia have varying language attitudes towards different lecturers' accented English, but this does not affect their comprehension of the lecture content.

Therefore, the context of subject knowledge-based education setting has a positive influence for ESL on WTC inside a classroom. Applying this result on English language teaching practice could support the implementation of the Content and Language Integrated Learning (CLIL) teaching method (Richards and Rodgers, 2014). This can promote students' WTC in the classroom, because ESL speaking skills can be practiced without negative accent perception, as argued by Zarrinabadia and Khodarahmib (2017).

5.2.2. Intelligibility

Even though language attitude in the current research seems to have no influence on WTC, the findings demonstrate that intelligibility of accent can still be a major factor influencing the participants' WTC in the classroom. This is consistent with previous research (Dragojevic and Giles, 2016; Zarrinabadia and Khodarahmib, 2017). Dragojevic and Giles (2016) claimed that fluency, referring to intelligibility, can influence language attitude negatively amongst NNSs and NSs. Accordingly, the interference by accent impairs the communication with the interlocutors, because it would serve as 'noise' or 'disruptiveness' in the process (Dragojevic and Giles, 2016, p. 414; Zarrinabadia and Khodarahmib, 2017; 181). However, the author of the current work argues that intelligibility and fluency are

different concepts for NNSs, and these should be discussed separately. In addition, especially for ESL speakers, the barrier of intelligibility might cause their anxiety in using L2 (Ghanbarpour, 2016). Therefore, it is not surprising that intelligibility is a major influence on the participants' language attitudes and WTC in the classroom.

6. Conclusion

This study set out to investigate the influence of Chinese postgraduate students' language attitude towards the accents of their NNS and NS peers and its influence on their WTC in a university educational setting. This work employed qualitative methods, namely, the MGT and questionnaire survey, which are considered direct and indirect methods for language attitude exploration, respectively. The findings clearly indicate that NS's accent is favourable for the participants, based on the premise of having the ability to notice the differences in accents. Furthermore, intelligibility is the main perception influencing language attitude towards the accents of NS and NNS peers. The findings also reveal that the participants' language attitudes do not have a strong influence on their WTC in classroom, although the main reason for their accent perception and its influence on WTC is intelligibility. However, accent is unaffected because the students tend to focus more on the subject knowledge and the speech content in this specific setting.

Hence, the implication of this study is that it would be feasible to apply this idea on English language teaching, such as CLIL, to enhance ESL students' WTC to improve their L2 speaking skills. Moreover, the findings provide insights into whether the language attitude influence WTC in a university context. To the best of my knowledge, this would be the first study to utilise the MGT with questionnaire to investigate this issue.

However, a number of important limitations must be considered. The first limitation is that the sample size is insufficient in this study. The results from 25 students may not represent the overall situation of Chinese postgraduate students at Newcastle university. Second, similar to the issue of generalisation, the participants were from 13 majors, most of whom were cross-cultural

communication, applied linguistics and TESOL major students who had more language awareness than average students. Third, according to the participants' responses, they were still affected by the tone or speaking style from accent stimuli, and using only three stimuli to represent NSs and NNSs might be limited. Fourth, due to the small sample size, the issue of whether any demographic variables could influence the results was not addressed in this study. Fifth, the indirect method used in this study, WTC questionnaire, seems to have limited explanation power in addressing the research questions, which may have been influenced by insufficient sample size. Sixth, according to findings (see Section 4.4), the factors influencing WTC have slight differences amongst accents, but this was not addressed in this research. The limitations mentioned above might reduce the validity and reliability of this research.

Therefore, further research could recruit larger numbers of participants from various disciplines and replicate its method in examining the reliability and validity of the current findings. The numbers and varieties of MGT accent stimuli could also enhance a study's ability to produce more authentic scenarios. Moreover, to reduce the listeners' bias, accent stimuli featuring speakers' tone or speech style can be modified via a computer voice-adjusting programme. Further, the MGT could be combined with other quantitative methods, such as interviews or observations, to obtain more in-depth data. Finally, it would be interesting to explore the issue of accent influence within the same ethnic group (e.g. Chinese towards Chinese) on WTC and whether the geographic differences would have an influence on this issue.

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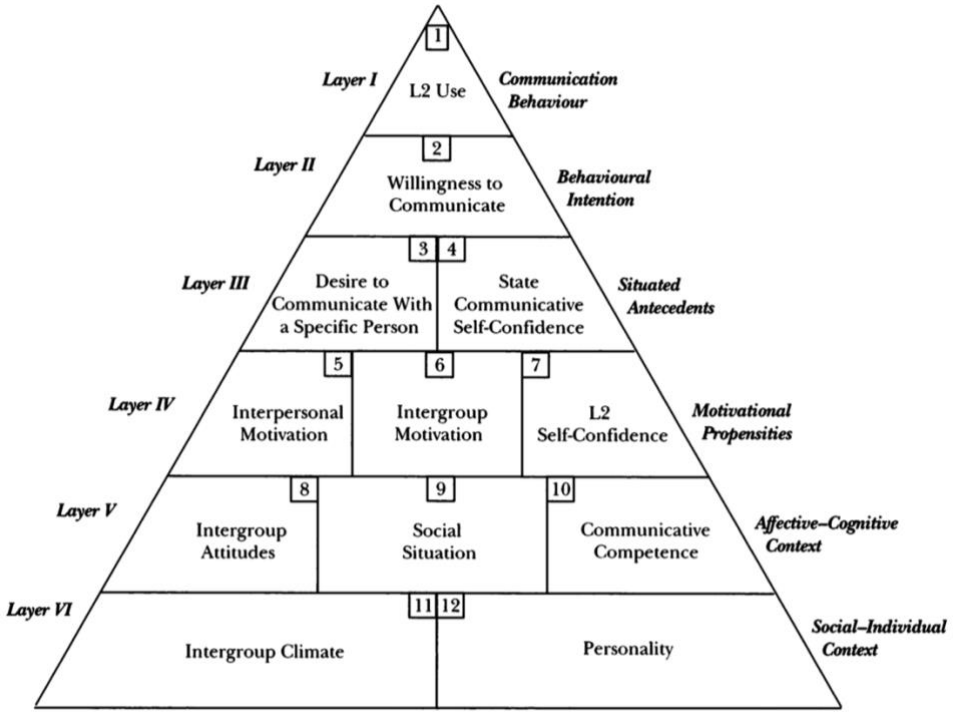
Appendices

Appendix A

Model of variable influencing L2 WTC (adopted from MacIntyre et al., 1998)



Appendix B

MGT stimuli will adopt six recordings from the accent archive of George Mason University (http://accent.gmu.edu/about.php).

Accent	**Region**	**Age**	**Gender**	**Time of using English**
Standard English (SE)	London, UK	20	Male	20
French-accented English (FAE)	Pézenas, France	28	Male	13
Chinese-accented English (CAE)	Henan, China	37	Male	12

Appendix C

Transcript

Please call Stella. Ask her to bring these things with her from the store: Six spoons of fresh snow peas, five thick slabs of blue cheese, and maybe a snack for her brother Bob. We also need a small plastic snake and a big toy frog for the kids. She can scoop these things into three red bags, and we will go meet her Wednesday at the train station.

Appendix D

MGT and WTC questionnaires

Demographic questionnaire

No.	**questions**	**Response**		
1	Age	☐21–25	☐26–30	☐31–35
2	Gender	☐Male	☐Female	☐Other
3	What's your major in postgraduate degree?	_____		
4	English Proficiency (IELT or TOEFL scores)	_____		
5	Do you finish your undergraduate degree in the English–speaking country?	☐Yes	☐No	

MGT questionnaire (Adapted from De Klerk and Bosch, 1995)

No.	Traits	Ratings							Traits
6	unreliable	1	2	3	4	5	6	7	reliable
7	dishonest	1	2	3	4	5	6	7	honest
8	unfriendly	1	2	3	4	5	6	7	friendly
9	unintelligent	1	2	3	4	5	6	7	intelligent
10	unattractive	1	2	3	4	5	6	7	attractive
11	incompetent	1	2	3	4	5	6	7	competent
12	uneducated	1	2	3	4	5	6	7	educated
13	boring	1	2	3	4	5	6	7	entertaining
14	Where do you think this speaker from? (nationality)	_____							
15	Would you like to speak with this person?	☐Yes						☐No	
16	When you hear this accent in the lecture or seminar, would this accent influence your willingness to join discussion?	☐Yes						☐No	
17	Why?	_____							
18	If a Chinese student speaks with this accent, would you like to talk with him or her?	☐Yes						☐No	
19	Why?	_____							

WTC questionnaire (adapted from Khatib and Nourzadeh, 2015)

7–point Likert scale will be employed in answering this questionnaire.

Factors	Item	*Does accent influence your willingness to...*
1.Communicative self–confidence	7	speak even if other students laugh at your accent
	15	speak even if you know your classmates are better than you at speaking English
	13	give a presentation in front of your classmates
	19	speak even if your language accent is frequently corrected by others
	6	talk in group-work language-learning activities
2. Integrative orientation	21	have a group discussion about the marriage tradition in English cultures
	22	talk about the lifestyle of English people in a whole class discussion
	8	talk to your classmates about the history of English countries
	14	talk to your teacher about English literature
3. Situational context of L2 use	23	speak more when a discussion is related to your own personal experiences
	24	speak more when you are in the class of the same language teacher over several terms
	4	find opportunities to speak no matter how crowded the classroom is
	11	speak even if you are seated at the back of the classroom
4. Topical enticement	3	talk to your classmates about movies and series
	12	talk about great artists you know in a group discussion
	10	talk to your classmates about computer games
	1	talk about your favourite sport in a whole-class discussion
5. Learning responsibility	20	ask another student to explain a knowledge point to you
	17	ask your teacher to repeat what he or she has just said if you did not understand it
	9	raise your hand to ask or answer questions
	18	talk to your classmates outside of the classroom
6. Off–instruction communication	5	talk to the student sitting next to you before the teacher enters the classroom
	2	talk to your classmates when the teacher leaves the classroom for a few moments
	16	talk with your classmates about your weekends

Appendix E

Demographic information

	Frequency	Percentage
Gender		
Male	8	32
Female	17	68
Total	25	100
Language Proficiency		
B2	20	80
C1	5	20
Total	25	100
Period of studying in the UK		
0.5-1 Year	10	40
1-1.5 Years	6	24
1.5-2 Years	9	36
Total	25	100
Undergraduate degree in English-speaking countries		
No	24	96
Yes	1	4
Total	25	100

Postgraduates Majors		
Majors	**Frequency**	**Percentage**
Applied Linguistics and TESOL	7	28.0
Banking and finance	1	4.0
Cross-cultural communication	1	4.0
Cross-cultural communication and Applied Linguistics	4	16.0

Cross-cultural communication and International Marketing	1	4.0
Cross-Cultural Communication and Media Studies	1	4.0
Education International perspective teaching and learning	3	12.0
Global Human Resources Management	1	4.0
International commercial law	1	4.0
International finance and investment management	1	4.0
International marketing	2	8.0
Mechanical engineering	1	4.0
Sustainable transport engineering	1	4.0
Total	25	100

Appendix F

Open-ended Questions (WTC Reasons towards CAE)

Q14	Q17	Q19
India	Not as fluent as the first one	We can communicate in English first. If we don't understand a word, say it in Chinese
China	Not very clear, I do not quite understand what he is talking about	Not very clear and understandable
China	我覺得這個人雖然說得不怎樣，但是由於他說的慢，不看字幕還是能夠理解的	我會失去耐心對於這種發音以及速度
不知道	聽著太難受了	就算是中國人這英語聽著我也很彆扭
The North of China	雖然這口音有點重，但每個單詞都很清晰地發出來（沒有連續），所以理解起來也不會太難。唯一影響意願的因素就是聽上去不太'好聽'，且速度較慢，長時間可能會令人覺得著急。	因為是華人所以在請求解析和重複的時候不會覺得不好意思，問問題也會較輕鬆，而且這個雖然口音重，但是單詞都較清晰地發出來。
中國	發音有點彆扭，但還可以聽懂	能理解
Asia	It's not easy to focus and understand.	It's not easy to focus and understand.
China	不太能聽懂在說什麼	因為大多時候不太能聽懂他想表達的意思
印度	聽不懂	難以溝通
印度	不影響	不影響
China	Same as the previous, everyone has accents.	Same as the previous, attitude has greater matters.
China	Because we are the same. I think more closer than	His accent is easy to understand than sample one.

	others	
India or some places	well, a little bit hard to follow	發音及流暢度會影響他人理解
印度	不會口音歧視	不會歧視
China	lack of closeness	it doesn't matter
中國	有口音，但是可以理解	口音相似，可以理解
China	It is very uncomfortable to hear and communicate.	It is easier for Chinese students to understand the Chinese accent, because we share the same first language and we've already used to this accent. But it is still uncomfortable to listen to this accent and communicate with such kind of accent.
Chinese	基本能聽懂但偶爾有點費勁	same
Mainland China	the accent is difficult to understand	the accent is difficult to understand
China, Japan, Korea	學術討論中，我贈愛意的是內容與深度，當然，如果語言留力度和口音可以更晚美也是好的。	同上
China	易懂，雖然亞洲口音明顯但不影響理解，親切	口音明顯但發音沒有錯誤，易懂
China	有點聽不太懂	還是會溝通
China	可以聽懂，所以交流沒問題，口音沒有第一個嚴重	可以聽懂，所以交流應該沒有問題
亞洲	可以理解大致內容，但是溝通有一點辛苦	不影響溝通，但是表達存在一點小缺陷
China	a little bit hard to understand I will be unsure whether I can respond to him	I will think he or she is brave and I should speak in the classroom as well

Appendix G

Coding manual		
Codes	**Themes**	content
1	Communication process (Positive)	willing to ask for repeating or explaining the sentence again, still communicate, no influence on communication
2	Communication process (Negative)	uncomfortable, hard to respond, change to speak Chinese, difficult to communicate
3	Accent perception (Positive)	Brave, fluent, friendly, attractive, clear, active, comfortable, perfect, good pronunciation, interesting, admire
4	Accent perception (Negative)	not fluent, lost patient, uncomfortable, arrogant, bad attitude, fake
5	High degree of intelligibility	understandable, weak accent, accepted, intelligible
6	Low degree of intelligibility	I don't understand, hard to follow,
7	Not being influenced by accent	no influence, everyone has accent, no discrimination, content of speech is more important, attitude is matter, accent doesn't matter
8	Proficiency awareness	English ability, Good enough for Chinese, proficiency, improve my proficiency
9	Self-confidence	Need to learn his accent, shy, higher scholar performance, my English is poor
10	Closeness (familiar)	We are the same, closer, closeness, understand Chinese accent

Appendix H

Descriptive Statistics
Chinese-accented English

Descriptive Statistics

	N	Mean	Std. Deviation
reliable	25	2.84	1.281
honest	25	3.68	1.282
friendly	25	4.00	1.225
intelligent	25	2.88	1.092
high social class	25	2.640	1.1136
attractive	25	2.08	.954
competent	25	2.80	1.155
educated	25	3.24	1.128
entertaining	25	2.76	1.393
showing off	25	1.92	1.038
understandable	25	3.64	1.604
Good English proficiency	25	2.56	1.325
fluent	25	2.52	1.661
Willingness to communicate	25	3.72	1.595
Identifying CAE	25	2.44	2.615
WTC in Lecture or seminar	25	3.48	1.661
WTC in Chinese peers with this accent	25	2.56	1.502
Valid N (listwise)	25		

French-accented English

Descriptive Statistics

	N	Mean	Std. Deviation
reliable	25	3.96	1.274
honest	25	4.08	1.077
friendly	25	4.52	1.229
intelligent	25	4.32	1.145
high social class	25	3.88	1.166
attractive	25	3.80	1.291
competent	25	4.44	1.044
educated	25	4.44	1.193
entertaining	25	3.80	1.291
showing off	25	3.00	1.384
understandable	25	4.88	1.236
Good English proficiency	25	4.52	1.418
fluent	25	5.00	1.323
Willingness to communicate	25	5.00	1.041
Identifying FAE	25	5.56	2.615
WTC in Lecture or seminar	25	3.80	1.826
WTC in Chinese peers with this accent	25	4.04	2.150
Valid N (listwise)	25		

Standard English

Descriptive Statistics

	N	Mean	Std. Deviation
reliable	25	5.48	1.046
honest	25	4.88	1.092
friendly	25	4.92	1.152
intelligent	25	5.32	.945
high social class	25	5.36	1.150
attractive	25	5.20	1.080
competent	25	5.36	.995
educated	25	5.52	1.085
entertaining	25	4.32	1.345
showing off	25	4.04	1.670
understandable	25	6.28	.792
Good English proficiency	25	6.16	.800
fluent	25	6.16	.800
Willingness to communicate	25	5.16	1.864
Identifying SE	25	3.16	2.939
WTC in Lecture or seminar	25	3.92	2.499
WTC in Chinese peers with this accent	25	4.04	2.508
Valid N (listwise)	25		

Repeated measures ANOVA

(1= CAE, 2= FAE, 3=SE)

Reliable

Tests of Within-Subjects Effects

Measure: Accent_trait

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Trait_Reliable	Sphericity Assumed	87.787	2	43.893	32.473	.000	.575
	Greenhouse-Geisser	87.787	1.905	46.091	32.473	.000	.575
	Huynh-Feldt	87.787	2.000	43.893	32.473	.000	.575
	Lower-bound	87.787	1.000	87.787	32.473	.000	.575
Error(Trait_Reliable)	Sphericity Assumed	64.880	48	1.352			
	Greenhouse-Geisser	64.880	45.711	1.419			
	Huynh-Feldt	64.880	48.000	1.352			
	Lower-bound	64.880	24.000	2.703			

Pairwise Comparisons

Measure: Accent_trait

(I) Trait_Reliable	(J) Trait_Reliable	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
1	2	-1.120*	.296	.001	-1.731	-.509
	3	-2.640*	.360	.000	-3.383	-1.897
2	1	1.120*	.296	.001	.509	1.731
	3	-1.520*	.327	.000	-2.195	-.845
3	1	2.640*	.360	.000	1.897	3.383
	2	1.520*	.327	.000	.845	2.195

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Honest

Tests of Within-Subjects Effects

Measure: Accent_trait

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Trait_honest	Sphericity Assumed	18.667	2	9.333	6.524	.003	.214
	Greenhouse-Geisser	18.667	1.617	11.543	6.524	.006	.214
	Huynh-Feldt	18.667	1.717	10.873	6.524	.005	.214
	Lower-bound	18.667	1.000	18.667	6.524	.017	.214
Error(Trait_honest)	Sphericity Assumed	68.667	48	1.431			
	Greenhouse-Geisser	68.667	38.810	1.769			
	Huynh-Feldt	68.667	41.204	1.667			
	Lower-bound	68.667	24.000	2.861			

Pairwise Comparisons

Measure: Accent_trait

(I) Trait_honest	(J) Trait_honest	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
1	2	-.400	.289	.179	-.996	.196
	3	-1.200*	.412	.008	-2.051	-.349
2	1	.400	.289	.179	-.196	.996
	3	-.800*	.300	.013	-1.419	-.181
3	1	1.200*	.412	.008	.349	2.051
	2	.800*	.300	.013	.181	1.419

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Friendly

Tests of Within-Subjects Effects

Measure: Accent_trait

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Trait_friendly	Sphericity Assumed	10.640	2	5.320	3.988	.025	.143
	Greenhouse-Geisser	10.640	1.610	6.609	3.988	.035	.143
	Huynh-Feldt	10.640	1.708	6.229	3.988	.032	.143
	Lower-bound	10.640	1.000	10.640	3.988	.057	.143
Error(Trait_friendly)	Sphericity Assumed	64.027	48	1.334			
	Greenhouse-Geisser	64.027	38.638	1.657			
	Huynh-Feldt	64.027	40.998	1.562			
	Lower-bound	64.027	24.000	2.668			

Pairwise Comparisons

Measure: Accent_trait

(I) Trait_friendly	(J) Trait_friendly	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
1	2	-.520*	.239	.040	-1.013	-.027
	3	-.920*	.383	.024	-1.710	-.130
2	1	.520*	.239	.040	.027	1.013
	3	-.400	.342	.253	-1.105	.305
3	1	.920*	.383	.024	.130	1.710
	2	.400	.342	.253	-.305	1.105

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Intelligent

Tests of Within-Subjects Effects

Measure: Accent_trait

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Trait_intelligent	Sphericity Assumed	75.227	2	37.613	31.801	.000	.570
	Greenhouse-Geisser	75.227	1.934	38.901	31.801	.000	.570
	Huynh-Feldt	75.227	2.000	37.613	31.801	.000	.570
	Lower-bound	75.227	1.000	75.227	31.801	.000	.570
Error(Trait_intelligent)	Sphericity Assumed	56.773	48	1.183			
	Greenhouse-Geisser	56.773	46.412	1.223			
	Huynh-Feldt	56.773	48.000	1.183			
	Lower-bound	56.773	24.000	2.366			

Pairwise Comparisons

Measure: Accent_trait

(I) Trait_intelligent	(J) Trait_intelligent	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
1	2	-1.440*	.306	.000	-2.071	-.809
	3	-2.440*	.332	.000	-3.125	-1.755
2	1	1.440*	.306	.000	.809	2.071
	3	-1.000*	.283	.002	-1.584	-.416
3	1	2.440*	.332	.000	1.755	3.125
	2	1.000*	.283	.002	.416	1.584

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

High social class

Tests of Within-Subjects Effects

Measure: Accent_trait

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Trait_AI	Sphericity Assumed	3.707	2	1.853	9.929	.000	.293
	Greenhouse-Geisser	3.707	1.777	2.086	9.929	.000	.293
	Huynh-Feldt	3.707	1.909	1.942	9.929	.000	.293
	Lower-bound	3.707	1.000	3.707	9.929	.004	.293
Error(Trait_AI)	Sphericity Assumed	8.960	48	.187			
	Greenhouse-Geisser	8.960	42.638	.210			
	Huynh-Feldt	8.960	45.806	.196			
	Lower-bound	8.960	24.000	.373			

Pairwise Comparisons

Measure: Accent_trait

(I) Trait_HSC	(J) Trait_HSC	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
1	2	-1.240*	.307	.000	-1.874	-.606
	3	-2.720*	.390	.000	-3.524	-1.916
2	1	1.240*	.307	.000	.606	1.874
	3	-1.480*	.289	.000	-2.077	-.883
3	1	2.720*	.390	.000	1.916	3.524
	2	1.480*	.289	.000	.883	2.077

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Attractive

Tests of Within-Subjects Effects

Measure: Accent_trait

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Trait_Attractive	Sphericity Assumed	122.107	2	61.053	53.064	.000	.689
	Greenhouse-Geisser	122.107	2.000	61.066	53.064	.000	.689
	Huynh-Feldt	122.107	2.000	61.053	53.064	.000	.689
	Lower-bound	122.107	1.000	122.107	53.064	.000	.689
Error(Trait_Attractive)	Sphericity Assumed	55.227	48	1.151			
	Greenhouse-Geisser	55.227	47.990	1.151			
	Huynh-Feldt	55.227	48.000	1.151			
	Lower-bound	55.227	24.000	2.301			

Pairwise Comparisons

Measure: Accent_trait

(I) Trait_Attractive	(J) Trait_Attractive	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
1	2	-1.720*	.303	.000	-2.345	-1.095
	3	-3.120*	.302	.000	-3.743	-2.497
2	1	1.720*	.303	.000	1.095	2.345
	3	-1.400*	.306	.000	-2.031	-.769
3	1	3.120*	.302	.000	2.497	3.743
	2	1.400*	.306	.000	.769	2.031

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Competent

Tests of Within-Subjects Effects

Measure: Accent_trait

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Trait_Competent	Sphericity Assumed	84.080	2	42.040	39.890	.000	.624
	Greenhouse-Geisser	84.080	1.583	53.127	39.890	.000	.624
	Huynh-Feldt	84.080	1.676	50.176	39.890	.000	.624
	Lower-bound	84.080	1.000	84.080	39.890	.000	.624
Error(Trait_Competent)	Sphericity Assumed	50.587	48	1.054			
	Greenhouse-Geisser	50.587	37.983	1.332			
	Huynh-Feldt	50.587	40.217	1.258			
	Lower-bound	50.587	24.000	2.108			

Pairwise Comparisons

Measure: Accent_trait

(I) Trait_Competent	(J) Trait_Competent	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
1	2	-1.640*	.264	.000	-2.184	-1.096
	3	-2.560*	.356	.000	-3.295	-1.825
2	1	1.640*	.264	.000	1.096	2.184
	3	-.920*	.237	.001	-1.410	-.430
3	1	2.560*	.356	.000	1.825	3.295
	2	.920*	.237	.001	.430	1.410

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Educated

Tests of Within-Subjects Effects

Measure: Accent_trait

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Trait_Educated	Sphericity Assumed	65.040	2	32.520	30.631	.000	.561
	Greenhouse-Geisser	65.040	1.725	37.712	30.631	.000	.561
	Huynh-Feldt	65.040	1.846	35.236	30.631	.000	.561
	Lower-bound	65.040	1.000	65.040	30.631	.000	.561
Error(Trait_Educated)	Sphericity Assumed	50.960	48	1.062			
	Greenhouse-Geisser	50.960	41.392	1.231			
	Huynh-Feldt	50.960	44.300	1.150			
	Lower-bound	50.960	24.000	2.123			

Pairwise Comparisons

Measure: Accent_trait

(I) Trait_Educated	(J) Trait_Educated	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
1	2	-1.200*	.252	.000	-1.719	-.681
	3	-2.280*	.344	.000	-2.990	-1.570
2	1	1.200*	.252	.000	.681	1.719
	3	-1.080*	.270	.001	-1.638	-.522
3	1	2.280*	.344	.000	1.570	2.990
	2	1.080*	.270	.001	.522	1.638

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Entertaining

Tests of Within-Subjects Effects

Measure: Accent_trait

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Trait_Entertaining	Sphericity Assumed	31.547	2	15.773	11.060	.000	.315
	Greenhouse-Geisser	31.547	1.753	18.000	11.060	.000	.315
	Huynh-Feldt	31.547	1.880	16.784	11.060	.000	.315
	Lower-bound	31.547	1.000	31.547	11.060	.003	.315
Error(Trait_Entertaining)	Sphericity Assumed	68.453	48	1.426			
	Greenhouse-Geisser	68.453	42.063	1.627			
	Huynh-Feldt	68.453	45.110	1.517			
	Lower-bound	68.453	24.000	2.852			

Pairwise Comparisons

Measure: Accent_trait

(I) Trait_Entertaining	(J) Trait_Entertaining	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
1	2	-1.040*	.303	.002	-1.665	-.415
	3	-1.560*	.396	.001	-2.378	-.742
2	1	1.040*	.303	.002	.415	1.665
	3	-.520	.306	.102	-1.152	.112
3	1	1.560*	.396	.001	.742	2.378
	2	.520	.306	.102	-.112	1.152

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Showing off

Tests of Within-Subjects Effects

Measure: Accent_trait

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Trait_ShowingOff	Sphericity Assumed	56.187	2	28.093	21.132	.000	.468
	Greenhouse-Geisser	56.187	1.824	30.811	21.132	.000	.468
	Huynh-Feldt	56.187	1.966	28.585	21.132	.000	.468
	Lower-bound	56.187	1.000	56.187	21.132	.000	.468
Error(Trait_ShowingOff)	Sphericity Assumed	63.813	48	1.329			
	Greenhouse-Geisser	63.813	43.766	1.458			
	Huynh-Feldt	63.813	47.175	1.353			
	Lower-bound	63.813	24.000	2.659			

Pairwise Comparisons

Measure: Accent_trait

(I) Trait_ShowingOff	(J) Trait_ShowingOff	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
1	2	-1.080*	.316	.002	-1.732	-.428
	3	-2.120*	.371	.000	-2.886	-1.354
2	1	1.080*	.316	.002	.428	1.732
	3	-1.040*	.286	.001	-1.630	-.450
3	1	2.120*	.371	.000	1.354	2.886
	2	1.040*	.286	.001	.450	1.630

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Understandable

Tests of Within-Subjects Effects

Measure: Accent_trait

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Trait_Understandable	Sphericity Assumed	87.227	2	43.613	41.231	.000	.632
	Greenhouse-Geisser	87.227	1.842	47.363	41.231	.000	.632
	Huynh-Feldt	87.227	1.988	43.886	41.231	.000	.632
	Lower-bound	87.227	1.000	87.227	41.231	.000	.632
Error (Trait_Understandable)	Sphericity Assumed	50.773	48	1.058			
	Greenhouse-Geisser	50.773	44.199	1.149			
	Huynh-Feldt	50.773	47.702	1.064			
	Lower-bound	50.773	24.000	2.116			

Pairwise Comparisons

Measure: Accent_trait

(I) Trait_Understandable	(J) Trait_Understandable	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
1	2	-1.240*	.307	.000	-1.874	-.606
	3	-2.640*	.316	.000	-3.291	-1.989
2	1	1.240*	.307	.000	.606	1.874
	3	-1.400*	.245	.000	-1.906	-.894
3	1	2.640*	.316	.000	1.989	3.291
	2	1.400*	.245	.000	.894	1.906

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Proficiency

Tests of Within-Subjects Effects

Measure: Accent_trait

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Trait_Proficiency	Sphericity Assumed	162.427	2	81.213	69.314	.000	.743
	Greenhouse-Geisser	162.427	1.979	82.071	69.314	.000	.743
	Huynh-Feldt	162.427	2.000	81.213	69.314	.000	.743
	Lower-bound	162.427	1.000	162.427	69.314	.000	.743
Error(Trait_Proficiency)	Sphericity Assumed	56.240	48	1.172			
	Greenhouse-Geisser	56.240	47.499	1.184			
	Huynh-Feldt	56.240	48.000	1.172			
	Lower-bound	56.240	24.000	2.343			

Pairwise Comparisons

Measure: Accent_trait

(I) Trait_Proficiency	(J) Trait_Proficiency	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
1	2	-1.960*	.297	.000	-2.573	-1.347
	3	-3.600*	.321	.000	-4.263	-2.937
2	1	1.960*	.297	.000	1.347	2.573
	3	-1.640*	.299	.000	-2.258	-1.022
3	1	3.600*	.321	.000	2.937	4.263
	2	1.640*	.299	.000	1.022	2.258

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Fluent

Tests of Within-Subjects Effects

Measure: Accent_trait

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Trait_Fluent	Sphericity Assumed	172.880	2	86.440	59.454	.000	.712
	Greenhouse-Geisser	172.880	1.779	97.183	59.454	.000	.712
	Huynh-Feldt	172.880	1.911	90.448	59.454	.000	.712
	Lower-bound	172.880	1.000	172.880	59.454	.000	.712
Error(Trait_Fluent)	Sphericity Assumed	69.787	48	1.454			
	Greenhouse-Geisser	69.787	42.694	1.635			
	Huynh-Feldt	69.787	45.873	1.521			
	Lower-bound	69.787	24.000	2.908			

Pairwise Comparisons

Measure: Accent_trait

(I) Trait_Fluent	(J) Trait_Fluent	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
1	2	-2.480*	.347	.000	-3.196	-1.764
	3	-3.640*	.387	.000	-4.438	-2.842
2	1	2.480*	.347	.000	1.764	3.196
	3	-1.160*	.281	.000	-1.740	-.580
3	1	3.640*	.387	.000	2.842	4.438
	2	1.160*	.281	.000	.580	1.740

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Total

Tests of Within-Subjects Effects

Measure: LA

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Traits	Sphericity Assumed	12386.747	2	6193.373	64.394	.000	.728
	Greenhouse-Geisser	12386.747	1.869	6626.739	64.394	.000	.728
	Huynh-Feldt	12386.747	2.000	6193.373	64.394	.000	.728
	Lower-bound	12386.747	1.000	12386.747	64.394	.000	.728
Error(Traits)	Sphericity Assumed	4616.587	48	96.179			
	Greenhouse-Geisser	4616.587	44.861	102.909			
	Huynh-Feldt	4616.587	48.000	96.179			
	Lower-bound	4616.587	24.000	192.358			

Pairwise Comparisons

Measure: LA

(I) Traits	(J) Traits	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
1	2	-17.080*	2.547	.000	-22.336	-11.824
	3	-31.440*	3.117	.000	-37.874	-25.006
2	1	17.080*	2.547	.000	11.824	22.336
	3	-14.360*	2.623	.000	-19.773	-8.947
3	1	31.440*	3.117	.000	25.006	37.874
	2	14.360*	2.623	.000	8.947	19.773

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Willingness to communicate

Tests of Within-Subjects Effects

Measure: Accent_trait

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Trait_WTC	Sphericity Assumed	31.147	2	15.573	6.624	.003	.216
	Greenhouse-Geisser	31.147	1.654	18.828	6.624	.005	.216
	Huynh-Feldt	31.147	1.761	17.685	6.624	.004	.216
	Lower-bound	31.147	1.000	31.147	6.624	.017	.216
Error(Trait_WTC)	Sphericity Assumed	112.853	48	2.351			
	Greenhouse-Geisser	112.853	39.702	2.843			
	Huynh-Feldt	112.853	42.269	2.670			
	Lower-bound	112.853	24.000	4.702			

Pairwise Comparisons

Measure: Accent_trait

(I) Trait_WTC	(J) Trait_WTC	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
1	2	-1.280*	.354	.001	-2.010	-.550
	3	-1.440*	.520	.011	-2.513	-.367
2	1	1.280*	.354	.001	.550	2.010
	3	-.160	.411	.701	-1.008	.688
3	1	1.440*	.520	.011	.367	2.513
	2	.160	.411	.701	-.688	1.008

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Ability to identify accent

Tests of Within-Subjects Effects

Measure: AIA

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
MGT	Sphericity Assumed	133.440	2	66.720	9.929	.000	.293
	Greenhouse-Geisser	133.440	1.777	75.110	9.929	.000	.293
	Huynh-Feldt	133.440	1.909	69.916	9.929	.000	.293
	Lower-bound	133.440	1.000	133.440	9.929	.004	.293
Error(MGT)	Sphericity Assumed	322.560	48	6.720			
	Greenhouse-Geisser	322.560	42.638	7.565			
	Huynh-Feldt	322.560	45.806	7.042			
	Lower-bound	322.560	24.000	13.440			

Pairwise Comparisons

Measure: AIA

(I) MGT	(J) MGT	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
1	2	-3.120*	.703	.000	-4.571	-1.669
	3	-.720	.631	.265	-2.023	.583
2	1	3.120*	.703	.000	1.669	4.571
	3	2.400*	.849	.009	.649	4.151
3	1	.720	.631	.265	-.583	2.023
	2	-2.400*	.849	.009	-4.151	-.649

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

WTC in classroom

Tests of Within-Subjects Effects

Measure: Accent_trait

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Trait_Classroom	Sphericity Assumed	2.587	2	1.293	.431	.652	.018
	Greenhouse-Geisser	2.587	1.890	1.368	.431	.641	.018
	Huynh-Feldt	2.587	2.000	1.293	.431	.652	.018
	Lower-bound	2.587	1.000	2.587	.431	.518	.018
Error(Trait_Classroom)	Sphericity Assumed	144.080	48	3.002			
	Greenhouse-Geisser	144.080	45.366	3.176			
	Huynh-Feldt	144.080	48.000	3.002			
	Lower-bound	144.080	24.000	6.003			

Pairwise Comparisons

Measure: Accent_trait

(I) Trait_Classroom	(J) Trait_Classroom	Mean Difference (I-J)	Std. Error	Sig.[a]	95% Confidence Interval for Difference[a]	
					Lower Bound	Upper Bound
1	2	-.320	.431	.465	-1.209	.569
	3	-.440	.500	.388	-1.472	.592
2	1	.320	.431	.465	-.569	1.209
	3	-.120	.533	.824	-1.221	.981
3	1	.440	.500	.388	-.592	1.472
	2	.120	.533	.824	-.981	1.221

Based on estimated marginal means

a. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

WTC on Chinese peers with certain accent

Tests of Within-Subjects Effects

Measure: Accent_trait

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Trait_Chinese	Sphericity Assumed	36.507	2	18.253	6.801	.003	.221
	Greenhouse-Geisser	36.507	1.668	21.884	6.801	.005	.221
	Huynh-Feldt	36.507	1.778	20.533	6.801	.004	.221
	Lower-bound	36.507	1.000	36.507	6.801	.015	.221
Error(Trait_Chinese)	Sphericity Assumed	128.827	48	2.684			
	Greenhouse-Geisser	128.827	40.037	3.218			
	Huynh-Feldt	128.827	42.671	3.019			
	Lower-bound	128.827	24.000	5.368			

Pairwise Comparisons

Measure: Accent_trait

(I) Trait_Chinese	(J) Trait_Chinese	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
1	2	-1.480*	.405	.001	-2.315	-.645
	3	-1.480*	.557	.014	-2.630	-.330
2	1	1.480*	.405	.001	.645	2.315
	3	.000	.412	1.000	-.851	.851
3	1	1.480*	.557	.014	.330	2.630
	2	.000	.412	1.000	-.851	.851

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

WTC questionnaires (Repeated measures ANOVA)

Descriptive Statistics

	Mean	Std. Deviation	N
Communicative_Self_confidence	3.8880	1.20703	25
Integrative_orientation	3.6500	1.64253	25
Situational_context_of_L2_use	3.7200	1.14864	25
Topical_enticement	3.4600	1.35339	25
Learning_reponsibility	3.6000	1.16145	25
Off_intruction_communication	3.6700	1.38767	25

Tests of Within-Subjects Effects

Measure: MEASURE_1

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
WTC_factors	Sphericity Assumed	2.481	5	.496	.625	.681
	Greenhouse-Geisser	2.481	3.212	.773	.625	.612
	Huynh-Feldt	2.481	3.766	.659	.625	.636
	Lower-bound	2.481	1.000	2.481	.625	.437
Error(WTC_factors)	Sphericity Assumed	95.294	120	.794		
	Greenhouse-Geisser	95.294	77.077	1.236		
	Huynh-Feldt	95.294	90.382	1.054		
	Lower-bound	95.294	24.000	3.971		

Pairwise Comparisons

Measure: MEASURE_1

(I) WTC_factors	(J) WTC_factors	Mean Difference (I-J)	Std. Error	Sig.[a]	95% Confidence Interval for Difference[a]	
					Lower Bound	Upper Bound
1	2	.238	.256	.361	-.289	.765
	3	.168	.172	.338	-.186	.522
	4	.428	.235	.081	-.056	.912
	5	.288	.236	.233	-.198	.774
	6	.218	.272	.430	-.342	.778
2	1	-.238	.256	.361	-.765	.289
	3	-.070	.295	.814	-.679	.539
	4	.190	.160	.246	-.139	.519
	5	.050	.297	.868	-.563	.663
	6	-.020	.299	.947	-.638	.598
3	1	-.168	.172	.338	-.522	.186
	2	.070	.295	.814	-.539	.679
	4	.260	.272	.348	-.301	.821
	5	.120	.204	.561	-.300	.540
	6	.050	.257	.848	-.481	.581
4	1	-.428	.235	.081	-.912	.056
	2	-.190	.160	.246	-.519	.139
	3	-.260	.272	.348	-.821	.301
	5	-.140	.293	.637	-.744	.464
	6	-.210	.271	.446	-.769	.349
5	1	-.288	.236	.233	-.774	.198
	2	-.050	.297	.868	-.663	.563
	3	-.120	.204	.561	-.540	.300
	4	.140	.293	.637	-.464	.744
	6	-.070	.207	.738	-.497	.357
6	1	-.218	.272	.430	-.778	.342
	2	.020	.299	.947	-.598	.638
	3	-.050	.257	.848	-.581	.481
	4	.210	.271	.446	-.349	.769
	5	.070	.207	.738	-.357	.497

Based on estimated marginal means

a. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Appendix I

Information and consent form

本研究指在探討華人研究生對於英語口音之語言態度其對溝通意願之影響。資料收集與保存遵守保密原則僅供研究目的使用。您的參與十分寶貴，但您有權隨時離開本研究，如有任何問題請與研究者聯繫。

The study aims to investigate Chinese students' language attitude towards English accent, exploring whether - and how- these perceptions would influence their willingness to communicate (WTC) in multilingual classrooms at Newcastle University.

Every effort will be made to keep all of the data collected confidential, and the data will only be used for research purposes. Whenever data from this study are

published, your identity will be kept anonymous All material gathered during the study will be treated as confidential and securely stored.

Your participation in this study is entirely voluntary. You have the right to leave the study at any time. You are free to withdraw your consent for the materials to be used at a later stage. In such a case, please contact the researcher.

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如果您同意上述內容並參與本研究請接續下一步。

Start this research if you agree to join this research.