Foreign Language Anxiety, Motivation and Intercultural Communication Competence of Chinese Top University Students

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Abstract
The study explored the relationship between foreign language anxiety, motivation and intercultural communication competence of Chinese university students in top-notch programs. 223 undergraduate students from a leading university in China participated in the study by filling in a battery of questionnaire including the modified versions of Gardner's Classroom Anxiety Scale and Attitude towards English, Noels et al.'s Language Learning Orientations Scale, Chen and Starosta's intercultural sensitivity scale, and Portalla and Chen's intercultural effectiveness scale. 10 of the participants then joined in the follow-up interviews, sharing their personal experience of English learning and intercultural communication. Results indicated that: (1) these students experienced a low-to-medium level of anxiety, and a medium-to-high level of motivation in general, in which intrinsic motivation appeared to be at a higher level than the extrinsic motivation; (2) there was a statistically significant negative correlation between their English use anxiety and English learning motivation; (3) they have experienced a low level of interaction confidence and interaction enjoyment in intercultural communication, and they had also expressed medium to high level in other aspects, for example interactant respect and interaction attentiveness; (4) as for the relationship with intercultural communication competence, the English use anxiety had statistically significant negative correlations with most aspects, while different aspects of English learning motivation had a statistically significant positive correlation with each other. Implications for future research and teaching were also discussed.

1 Introduction

Facing the upsurge of globalization, university students in China are now experiencing different kinds

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of intercultural communication, ranging from casual talks with international students on campus to participating in academic conferences with scholars all over the world. Compared to intracultural communication, the intercultural context can be more challenging for the students, not only because cultural differences between interlocutors may lead to difficulty of message interpretation (God & Zhang, 2019), but to use a second language for information exchange can also lead to inaccurate or limited expressions. College students from different disciplines are therefore encouraged to gain a high level of foreign language proficiency, especially in English. In some leading universities, special programs are established with the goal of cultivating talents with global competence and visions, and to join the programs, students need to excel in both their own majors and English skills. Such programs are rather new but developing very fast among Chinese top universities, and few studies have been conducted to examine how well students in these top-notch programs cope with the increasing and inevitable demand of using English in intercultural interactions. The current study invited a group of undergraduate students in a leading university of China to discuss their foreign language anxiety and learning motivation in questionnaires and interviews. At the same time, two aspects of their intercultural communication competence, intercultural effectiveness and intercultural sensitivity, were also evaluated and discussed in relation to anxiety and motivation.

2 Literature Review

2.1 Foreign language anxiety and motivation

Foreign language anxiety (FLA) is the feeling of tension when learning a foreign language in class (Horwitz et al., 1986) or using the foreign language in other communicative contexts outside the classroom (MacIntyre & Gardner, 1991). The negative reactions induced by anxiety can interfere the learning process of a foreign language, including language input, processing and output (MacIntyre & Gardner, 1994; MacIntyre, 2007; Dewaele & Ip, 2013). Foreign language anxiety can be related to three other kinds of negative feelings that may occur in language classrooms: communication apprehension, test anxiety and fear of negative evaluation (Horwitz et al., 1986). Firstly, learners who experience communication apprehension find it hard to conduct interpersonal interactions, mostly in a verbal way, and such reluctance will hinder learners' willingness to practice using a foreign language, leading to a less satisfying learning result (Huang, 2018). The Willingness to Communicate (WTC) model raised by MacIntyre and his colleagues (1998) clearly demonstrated that different levels of second language (L2) confidence helps an individual's decision on either speaking up or holding back. L2 learners who are more confident with less anxiety are usually more willing to participate in conversations, though their language proficiency may not necessarily be superior to the anxious ones. Secondly, test anxiety describes how learners are afraid of failing in tests, and it may bring even more mental stress to the test-taking process, which then influence their confidence in learning and eventually foreign language proficiency (Zheng & Cheng, 2018). In Gardner and MacIntyre's (1993) research on French L2 learners, they found that learners who experienced more anxiety tended to have less confidence in themselves, which were reflected from their low expectations on the test results, as well as language proficiency in general. As a result, learners who are anxious about language learning may encounter more obstacles in using the language for communication across cultures. Lastly, the fear of negative evaluation focuses more on others' comments, especially those from the teacher or the peer learners, and this kind of fear may both affect the learner's attitudes towards themselves and towards the learning process (Shabani, 2012). Worrying about whether they will be laughed or criticized by others, foreign language learners may find it even harder to memorize new words or sentence structures, and they will inevitably perform less well in using the language (Onwuegbuzie et al., 1999).

Different from anxiety, motivation is widely considered as a positive attitude towards language learning (Kormos et al., 2011; Saito et al., 2017; Ushioda, 2016), for it helps the learners to locate a goal, continuously put full effort into related actions to reach the goal, and stay optimistic when faced with problems (Gardner, 1985). Dörnyei (2005) also emphasized on the necessity and significance of motivation in his study of language learner's psychology, and he pointed out that a learner without motivation would fail to gain as much as expected from the learning experience, no matter how much assistance he/she had been provided with. Cognitive studies of L2 learning motivation have divided motivation into the intrinsic ones and the extrinsic ones. The intrinsic motivation can come from an individual's desire for new information (IM-Knowledge), for realizing a set goal (IM-Accomplishment) and for the excitement of solve the problems in a piece of work (IM-Stimulation) (Noels et al., 2000), while the extrinsic motivation usually appears in the form of regulations considering its close relations with instrumental purposes. Depending on how determined the learner is, these forms of regulations can be classified into external, introjected and identified ones (Noels et al., 2000). Researchers believe that to stay motivated throughout the learning process can weaken the negative effect of anxiety (Alico, 2016; Gardner, 1985; MacWhinnie & Mitchell, 2017), and therefore improve the learning experience, as well as the learning results. Also, a major difference between learning a language and learning other subjects is that language learning cannot be independent from understanding the related cultural and social knowledge, and the practical use of a language in interpersonal and intercultural communications is part of the learning results. Therefore, besides motivated by the learning materials and atmosphere, language learners' motivation can be affected by their attitudes towards the culture and their intention of joining in related interactions. At the same time, scholars who examined motivation in a social psychological way have also proved that language learning motivation could strengthen cultural interactions for motivated learners are more likely to have a better language proficiency (Gardner & Lambert, 1972) and less anxiety about using the second language (Huang, 2018).

2.2 Intercultural communication competence

Intercultural communications can occur in both global and domestic situations, and to tell if a certain intercultural interaction is successfully accomplished, various aspects and qualities should be taken into consideration, for example intercultural communication competence, intercultural effectiveness and intercultural sensitivity. Some studies considered intercultural competence and intercultural sensitivity as two parallel concepts, and strong intercultural sensitivity can boost better intercultural competence (Hammer et al., 2003). Others used intercultural communication competence and intercultural effectiveness as two interchangeable concepts (Hammer et al., 1978). To clarify the differences among these items, Chen and Starosta (1996) raised the idea that both intercultural sensitivity and intercultural effectiveness are part of intercultural competence, which was later adapted by multiple articles (Portalla & Chen, 2010; Özdemir, 2017). Based on such categorization, intercultural communication competence (ICC) refers to a person's capability of carrying out the purpose of communication "while effectively and appropriately utilizing communication behaviors to negotiate between the different identities present within a culturally diverse environment" (Portalla & Chen, 2010, p. 23). In this way, intercultural sensitivity is the ability to tell the difference between cultures based on specific actions and values (Hammer et al., 2003), while intercultural effectiveness indicates the capability of reaching the goal during communications (Portalla & Chen, 2010).

To tell how interculturally sensitive one can be, five elements are included in the evaluation (Chen & Starosta, 2000). To start with, participants' willingness and activeness in the experience are recorded under the name "interaction engagement", then the "respect for culture differences" elements focus on how they deal with and respect different cultures and views reflected by the other people. Also, given the intercultural background, the interlocutors' level of confidence and enjoyment are

also observed and labeled "interaction confidence" and "interaction enjoyment", respectively. Lastly, "interaction attentiveness" measures how devoted the participant is while comprehending the details of the communications.

Similarly, positive verbal or nonverbal behaviors related to the following five aspects may contribute to performing well in intercultural effectiveness (Portalla & Chen, 2010): (1) message skills –identity others' messages and present their own views using the language of different culture; (2) interaction management – know when to start, end and join in the conversations based the other interlocutors' needs; (3) behavioral flexibility – choose the appropriate ways of conveying information by observing the other participants and adapting to the context; (4) identity management – keep the cultural identities that may occur and change during the interactions for all parties involved; and (5) relationship cultivation – construct certain relationships in the process for a better result of communication.

Previous studies have indicated how learners' attitudes towards foreign language learning may affect the development of intercultural communication competence (Byram, 2012). Learners with a high level of language use anxiety may feel over-sensitive and resist intercultural communication (Sevinç & Backus, 2019) or the results of their interactions with people from other cultures might be negative (Lou & Noels, 2020). Also, learners' willingness to communicate could affect their motivation to be a member of intercultural communication (MacIntyre et al., 1998), and thus can be treated as an indirect predictor of intercultural communication competence (Munezane, 2021). The national guidelines in China has emphasized on the inclusion of developing intercultural communication competence into the teaching objectives of foreign language education (Wang & Kulich, 2015), and besides practicing ICC in English courses, students from the top-notch programs in leading universities in China are expected to participate in such interactions more frequently. With the outstanding performance in their own academic fields, these students are more likely to interact with students, teachers and researchers from different cultural backgrounds for academic purposes. On most occasions, such intercultural communications are conducted using English, a foreign language for these students, therefore, they have to deal with complicated situations caused by both using foreign language and the intercultural context. This study therefore addresses to the following questions:

1. What is the general profile of Chinese top university students' foreign language anxiety and motivation?
2. What do these students think of their intercultural communication competence, in terms of intercultural sensitivity and intercultural effectiveness?
3. How are these learners' factors related to different elements of intercultural communication competence?

3 Methodology

3.1 Participants

Undergraduate students from the top-notch programs of a leading university in Beijing were invited to participate in the current study, and 223 of them completed and submitted their answers of the questionnaires. However, two responses were considered invalid for successively selecting the same number in over 30 questions. Eventually, 221 responses were adopted, including 166 from male participants, and 55 from females, with an average age of 19.68 (SD=1.062). Ranging from freshman to senior students, the youngest of them was 16 years old, and the oldest was 22. Two weeks after, 10 of the participants took part in the follow-up interview, with 8 of them answered questions online and 2 met with the interviewer on campus.

Disciplines of these participants included artificial intelligence, biology, chemistry, clinical medicine, computer science, English language and literature, information science, mathematics, mechanics, life science, philosophy and physics. There are two main differences between the top-notch programs and other regular programs in the university. Firstly, to join the programs, these students must rank among the top either in the college entrance examination or the additional tests after they entered university. Also, the top-notch programs provide more chances of international and intercultural communication for the students, so the students are expected to have better foreign language skills, specifically English. Therefore, they generally spend more time learning and using English on campus.

3.2 Instruments

In this mixed-method research, quantitative data were collected by a battery of questionnaires (Appendix A) to depict the general profile of the participants, and qualitative information about individual opinions and experiences were collected via a semi-structured interview (Appendix B).

The questionnaires consisted of three sections: Basic Information (Item 1 – 4), Learners' Factors (Item 5 – 44) and Intercultural Communication Competence (Item 45 – 88). The first four questions helped to build up the profile of the participants, including their age, gender, major and year of study. In Section 2, learner's factors, including English use anxiety and motivation, were collected using adapted versions of the French Classroom Anxiety Scale of Gardner (1985), the Writing Strategies for Self-Regulated Learning Questionnaires of Teng and Zhang (2016) and the Language Learning Orientations Scale of Noels et al. (2000). The 44 items in the last section were adopted from the Intercultural Communication Sensitivity Scale of Chen and Starosta (1996) and the Intercultural Effectiveness Scale of Portalla and Chen (2010).

To further explore different features of the participants, these items could then be subdivided in the following way: Item 5 – 12 evaluated these L2 learners' anxiety of using English; Item 13 – 17 demonstrated the participants' motivational self-talk towards English; Item 18 – 25 recorded how self-motivated these participants could be, and for Item 26 – 44, these participants' level of motivation were evaluated from perspectives of external regulation (Item 26 – 29), introjected regulation (Item 30 – 32), identified regulation (Item 33 – 35), knowledge (Item 36 – 38), accomplishment (Item 39 – 41) and stimulation (Item 42 – 44). Similarly, in the Intercultural Communication Sensitivity Scale, Item 45, 55, 57, 65, 66, 67 and 68 are for interaction engagement; Item 46, 51, 52, 60, 62 and 64 are for respect for cultural differences; Item 47 – 50 and Item 54 are for interaction confidence; Item 53, 56 and 59 are for interaction enjoyment, and Item 58, 61 and 63 are for interaction attentiveness. As for the Intercultural Effectiveness Scale, the subdivisions are behavioral flexibility (Item 70, 72, 82 and 86), interaction relaxation (Item 69, 71, 79, 81 and 87), interactant respect (Item 77, 83 and 88), message skills (Item 74, 78 and 80), identity maintenance (Item 76, 84 and 85) and interaction management (Item 73 and 75).

In the semi-structured interview, participants were asked to provide detailed information about their English learning experiences, the influence of English learning on their own majors, intercultural interactions and how they felt about the goal of becoming talents with global competence required by the top-notch programs.

3.3 Data collection and analysis

The questionnaires were sent to the participants online in Chinese, the online interviews were conducted and recorded via Tencent Meeting, and the offline interviews were organized in a café on campus, also in Chinese. For each subdivision in the questionnaires, the scores of related items were averaged for further

analysis. Using SPSS 25, means and standard deviations of each factor and subdivision were calculated, and their relations were then explored based the results of correlation analysis. The effect size was also measured to show the effect of the results from an objective perspective without the influence of the sample size (Wei et al., 2019), and in this study, the co-efficient *r* was used as the index of effect size. The contents of the interviews were transcribed for comparison and analysis.

4 Results

4.1 Descriptive statistics

Table 1

Statistics of Learner's Factors on the Scale of 1-5

		Mean	SD	Skewness	Reliability
English Use Anxiety		2.96	.85	.190	.878
Motivational Self Talk		3.56	.87	-.681	.876
Extrinsic motivation	External regulation	2.86	.71	.057	.489
	Introjected regulation	2.14	.90	.562	.822
	Identified regulation	3.71	.89	-.444	.760
Intrinsic motivation	Knowledge	3.11	1.08	.001	.894
	Accomplishment	3.32	.99	-.187	.875
	Stimulation	3.70	1.06	.240	.863

Table 2

Statistics of Intercultural Communication Competence on the Scale of 1-5

		Mean	SD	Skewness	Reliability
Intercultural Communication Sensitivity	Interaction Engagement	3.36	.57	.309	.780
	Respect for Cultural Differences	3.18	.52	-.093	.800
	Interaction Confidence	2.88	.64	.026	.778
	Interaction Enjoyment	2.43	.76	.100	.818
	Interaction Attentiveness	3.43	.64	.162	.652
Intercultural Communication Effectiveness	Behavioral Flexibility	3.15	.55	.305	.390
	Interaction Relaxation	3.10	.65	-.129	.797
	Interactant Respect	3.69	.65	.016	.659
	Message Skills	2.99	.70	-.264	.670
	Identity Maintenance	2.95	.45	.239	.089
	Interaction Management	3.14	.77	.005	.819

Table 1 recorded participants' responses to the English Use Anxiety Scale and the Language Learning Orientations Questionnaire, with the latter one separated into two sections and six factors. The data indicated that the participants have experienced a low-to-medium level of introjected regulation (mean=2.14, SD=.90), a medium-to-high level of anxiety (mean=2.96, SD=.85), external regulation (mean=2.86, SD=.71), knowledge (mean=3.11, SD=.89) and accomplishment (mean=3.32, SD=.99), as well as a high level of identified regulation (mean=3.71, SD=.89) and stimulation (mean=3.70, SD=1.06). There is also a preference of conducting motivational self-talk (mean=3.56, SD=.87). With every value of skewness lower than 1, the data of each scale were distributed normally. Most sections had a high reliability, ranging from .760 to .894, except for the scale of external regulation, in which only four items were included, and all were adapted and translated into Chinese before added to the questionnaire of the current study.

Table 2 provided the statistics of participants' intercultural communication competence. In the evaluation of their intercultural communication sensitivity, the participants showed a low-to-medium level of interaction enjoyment (mean=2.43, SD=.76), a medium-to-high level of interaction confidence (mean=2,88, SD=.64), respect for cultural differences (mean=3.18, SD=.51) and interaction engagement (mean=3.36, SD=.57), and a high level of interaction attentiveness (mean=3.43, SD=.64). As for their intercultural communication effectiveness, the data indicated a medium-to-high level in all five aspects of behavioral flexibility (mean=3.15, SD=.55), interaction relaxation (mean=3.10, SD=.65), message skills (mean=2.99, SD=.70), identity maintenance (mean=2.95, SD=.45) and interaction management (mean=3.14, SD=.77), and a high level of interactant respect (mean=3.69, SD=.65). All data were distributed normally (skewness<1), and nine sections had a rather high reliability from .652 to .819. Some sentences in the sections "interaction attentiveness" and "identity maintenance" were adapted during translation into Chinese so that the participants could comprehend the items better, which led to a much lower reliability than the original design.

4.2 Correlation analysis

Table 3

Correlations between English Use Anxiety and English Learning Motivation

	EUA	MST	ER	IntroR	IdenR	Kno	Acc	Sti
EUA	1	.040	.020	.179**	-.120	-.222**	-.077	-.151*
MST		1	.336**	.263**	.579**	.526**	.615*	.493*
ER			1	.463**	.363**	.270**	.330**	.374**
IntroR				1	.179**	.256**	.274**	.439**
IdenR					1	.698**	.681**	.510**
Kno						1	.732**	.686**
Acc							1	.691**
Sti								1

Note. ** = $p \leq .01$, * = $p \leq .05$;
EUA= English Use Anxiety; MST = Motivational Self-Talk; ER = Extrinsic motivation – External Regulation, IntroR = Extrinsic motivation – Introjected Regulation, IdenR = Extrinsic motivation – Identified Regulation, Kno = Intrinsic Motivation – Knowledge, Acc = Intrinsic Motivation – Accomplishment, Sti = Intrinsic Motivation – Stimulation.

Table 3 demonstrated the correlation between the participants' English use anxiety and English learning motivation. Data of English use anxiety had a statistically significant positive correlation with extrinsic

introjected motivation (*r*=.179) and statistically significant negative correlations with the intrinsic motivation of knowledge (*r*=-.222) and stimulation (*r*=-.151). Also, the results of the motivational self-talk were statistically significantly correlated with all six factors of the Language Learning Orientations Scale, with the coefficient range of .263 to .615.

Table 4

Correlations between English Use Anxiety and Intercultural Communicative Sensitivity

	EUA	IEng	RCD	IC	IEnj	IA
EUA	1	-.375**	-.144*	-.576**	-.393**	-.294**
IEng		1	.594**	.566**	.472**	.702**
RCD			1	.168*	.504**	.383**
IC				1	.437**	.466**
IEnj					1	.229**
IA						1

Note. ** = $p \le .01$, * = $p \le .05$;

EUA= English Use Anxiety; IEng = Interaction Engagement; RCD =Respect for Cultural Differences, IC = Interaction Confidence, IEnj = Interaction Enjoyment, IA = Interaction Attentiveness

Table 5

Correlations between English Use Anxiety and Intercultural Communicative Effectiveness

	EUA	BF	IRel	IRes	MS	IMai	IMan
EUA	1	.384**	-.451**	-.223**	.473**	.103	-.519**
BF		1	-.294**	.112	.553**	.434**	-.228**
IRel			1	.374**	-.245**	.048	.657**
IRes				1	-.108	.060	.413**
MS					.111	.391**	-.319**
IMai						1	.146*
IMan							1

Note. ** = $p \le .01$, * = $p \le .05$;

EUA= English Use Anxiety; BF = Behavioral Flexibility; IRel = Interaction Relaxation, IRes = Interactant Respect, MS = Message Skills; IMai = Identity Maintenance; IMan = Interaction Management.

Table 4 & Table 5 introduced the relationship between English use anxiety and different factors of intercultural communication competence. In the scale of intercultural communication sensitivity, all factors (Interaction Engagement, Respect for Cultural Differences, Interaction Confidence, Interaction Enjoyment, and Interaction Attentiveness) had a statistically significant negative correlation with English use anxiety (the coefficient range is from -.576 to -.144), but in the scale of intercultural communication effectiveness, only Interaction Relaxation (*r*=-.451), Interactant Respect (*r*=-.223) and Interaction Management (*r*=-.519) had statistically significant negative correlations with EUA, while Message Skills (*r*=.473) and Behavioral Flexibility (*r*=.384) had statistically significant positive correlations with EUA, and the correlation between Identity Maintenance and EUA was not statistically significant.

Table 6

Correlations between English Learning Motivation and Intercultural Communicative Sensitivity

	IEng	RCD	IC	IEnj	IA
MST	.060	.031	.003	-.074	.125
ER	.159*	-.039	.117	-.164*	.186**
IntroR	-.017	-.197**	-.053	-.289**	.053
IdenR	.481**	.307**	.247**	.069	.471**
Kno	.483**	.267**	.294**	.100	.493**
Acc	.455**	.239**	.212**	.002	.476**
Sti	.381**	.069	.264**	-.041	.455**

Note. ** = $p \leq .01$, * = $p \leq .05$;

MST = Motivational Self-Talk; ER = Extrinsic motivation – External Regulation, IntroR = Extrinsic motivation – Introjected Regulation, IdenR = Extrinsic motivation – Identified Regulation, Kno = Intrinsic Motivation – Knowledge, Acc = Intrinsic Motivation – Accomplishment, Sti = Intrinsic Motivation – Stimulation; IEng = Interaction Engagement; RCD =Respect for Cultural Differences, IC = Interaction Confidence, IEnj = Interaction Enjoyment, IA = Interaction Attentiveness.

Table 7

Correlations between English Learning Motivation and Intercultural Communicative Effectiveness

	BF	IRel	IRes	MS	IMai	IMan
MST	.045	.053	.037	.064	.015	-.015
ER	.144*	.120	.054	.116	.261**	.129
IntroR	.237**	.009	-.156*	.207**	.249**	-.030
IdenR	.188**	.355**	.326**	-.012	.222**	.197**
Kno	.148*	.390**	.318**	-.095	.179**	.256**
Acc	.248**	.268**	.263**	.009	.226**	.206**
Sti	.179**	.357**	.173**	.014	.275**	.277**

Note. ** = $p \leq .01$, * = $p \leq .05$;

MST = Motivational Self-Talk; ER = Extrinsic motivation – External Regulation, IntroR = Extrinsic motivation – Introjected Regulation, IdenR = Extrinsic motivation – Identified Regulation, Kno = Intrinsic Motivation – Knowledge, Acc = Intrinsic Motivation – Accomplishment, Sti = Intrinsic Motivation – Stimulation; BF = Behavioral Flexibility; IRel = Interaction Relaxation, IRes = Interactant Respect, MS = Message Skills; IMai = Identity Maintenance; IMan = Interaction Management.

Similarly, the relationship between English learning motivation and intercultural communication competence was also examined, as shown in Table 6 & Table 7. Among the six categories of motivation, ER had a statistically significant positive correlation with IEng (r =.159), IA (r =.186), BF (r =.144) and IMai (r=.261), and a statistically significant negative correlation with IEnj (r =-.164). IntroR had a statistically significant positive correlation with BF (r =.237), MS (r =.207) and IMai (r =.249), and a statistically significant negative correlation with RCD (r =-.197), IEnj (r =-.289) and IRes (r =-.156). For IdenR, Kno and Acc, there were also statistically significant positive correlations with most of the intercultural communication competence factors (with a coefficient range from .148 to .493), except for IEnj and MS. Lastly, Sti had statistically significant positive correlations with all factors but three: RCD, IEnj and MS, and the coefficient range was between .173 and .455.

4.3 Interview

The 10 interviewees were from the top-notch programs of physics, mathematics and English language and literature. They were encouraged to provide detailed examples and opinions to answer the questions the interviewer had raised, so the length of each interview varied from 15 minutes to over 90 minutes. Based on the interview, the following features were generalized:

4.3.1 English use anxiety

None of the interviewees had reported severe anxiety of using or learning English, especially in reading literatures, writing emails, accomplishing assignments or taking part in lectures. However, at the same time, they also showed certain concerns of expressing themselves orally in English. Here, the 2 interviewees from the program of English language and literature were apparently more comfortable with giving speeches or having conversations using English, while the other 8 interviewees from the science departments admitted that their speaking proficiency was much weaker than the other three skills of English. Most interviewees believed that oral English was important if they'd like to pursue further education abroad or present their work in international conferences, but two held a different opinion – as science students, speaking English well did not matter. One interviewee from the program of mathematics mentioned his TOEFL score, which was as high as 111/120. He pointed out that 8 out 9 points that he lost in the test was because of the speaking section, and "it was not a big deal for math students":

"In our conference, no scholars pay attention to your English skills, but they only focus on your experiments. You can say sentences as simple as 'this plus this equal this', and the professors will still like your work if it itself is excellent."

4.3.2 English learning motivation

The most common reasons to motivate English learning, which were mentioned by all the interviewees, were (1) reaching to more academic resources, for instance, reading literatures and contacting with scholars abroad and (2) getting prepared for standardized tests, including the College English Test in China and the international tests as TOEFL, IELTS or GRE. Due to the features of their program, the two interviewees learning English language and literature were still passionate about acquiring new knowledge of linguistics, cultures and literatures, for in their perspectives the goal of English learning had gone beyond practical use of English. The other eight interviewees tended to consider English as a piece of tool for them to better delve into their own academic field, which then led to a further discussion of their attitudes towards the English courses provided by the university. One interviewee argued that English courses on campus were mostly taught by lectures with profound knowledge of liberal arts instead of natural sciences, therefore the materials and practices may sometimes not helpful in the way science students used English for. In this way, some interviewees rather signed up for exam-oriented extracurricular courses to improve their English skills.

4.3.3 Intercultural communication competence

All interviewees had previous experience of intercultural communication of multiple forms, but none of them considered themselves an active participant in such activities. The most common scenario is the group discussions or group assignments of specific courses, in which they had to communicate with international students. Other examples included contacting professors abroad, joining the voluntary

program on campus to help new international students to get familiar with the university and one rare occasion of helping foreigners out of school. As the participants recalled, they had not encountered any culture-related conflicts with the interlocutors, and they did not feel uncomfortable in these conversations because they were talking to a foreigner. As for the language they chose for such intercultural communication, one student from the physics program mentioned that most of the international students he had met on campus were from non-English speaking countries, and sometimes their English skills could not support a rather academic discussion. Therefore, they would use both Mandarin and English (sometimes images and body gestures as well) to communicate. Similarly, an interviewee from the English language and literature program described her experience of signing up as a volunteer to help international students on campus. Her intention at first was to find a native speaker of English, so that her English skills could be improved when she provided help. However, the international students who were assigned to her were not English native speakers, which was quite common among all volunteers.

5 Discussions

5.1 English use anxiety and English learning motivation

Students of the top-notch programs were experiencing a medium-to-high level of anxiety, and a medium-to-high level of motivation in general. There was a statistically significant negative correlation between their English use anxiety and learning motivation, and the learners who felt more anxious tended to perform less motivated in the learning experience, which corresponded to the results of previous researches (Alico, 2016; Gardner, 1985; Huang, 2018). Based on the interviews, these students had experienced test anxiety the most, as part of the language use anxiety (Horwitz et al., 1986) for the test scores of College English Test Band 4/6 are one of the criteria for local companies and universities to evaluate applicants' English proficiency, and those of GRE/TOEFL/IELTS are used for application of universities abroad. Also, they demonstrated anxious feelings in another subsection – willingness to communicate (MacIntyre et al., 1998), especially in the verbal way. The interviewees all showed less confidence in their speaking proficiency than the other skills, so they sometimes felt reluctant to initiate and join in conversations in English, and they tended to explore if the foreigner they were about to talk to spoke Mandarin to avoid using English. Among all six types of motivation, they are mostly motivated by the extrinsic identified regulation and the intrinsic motivation of stimulation, which required strong involvement of self-regulation and the satisfaction of accomplishment (Noels et al., 2000). As top students in a leading university, these participants were usually considered the best learners by people around, and they were provided with abundant opportunities by the university to choose from, so it was hard for them to be more motivated by extrinsic incentive than their own determination of studying English well. Also, as the interviewees mentioned, their current knowledge of vocabulary and grammar was already enough to cope with the requirement of their own majors, so what they were more interested is not how to memorize more words but to be more practical and fluent in English use. Therefore, their intrinsic motivation came more from stimulation and accomplishment instead of knowledge (Noels et al., 2000).

5.2 Intercultural communication competence

The data of both intercultural communication sensitivity and intercultural communication effectiveness indicated that the participants did not always feel comfortable with intercultural communications, for they demonstrated a rather low level of interaction enjoyment, interaction confidence, interaction relaxation and behavioral flexibility. At the same time, however, they also showed their effort to

engage in the interaction, respect the interactants, and put full attention to the interaction. In the other ways, the participants, though less confident and secure in the process of intercultural communication competence, were able to show their respect towards the conversation, the different cultures, and the people they were talking to, because it was not the cultural differences that made them feel worried (Chen & Starosta, 2000; Portalla & Chen, 2010), but what they were talking about and in what ways they were talking. Data from the interview are in line with this point of view. On the one hand, most intercultural communications for the participants were academic-related, so they needed to comprehend the knowledge provided by their interlocutors and make responses accordingly; on the other hand, using a second language required them to think twice before generating each sentence, and their anxiety of English use might add up to their uncomfortable feeling. Meanwhile, the interviewees also demonstrated how their motivation of learning English can boost their interest in intercultural communication, for they were willing to help international students for improving English skills. The results of the correlation analysis also have proved a statistically significant negative correlation between anxiety and most factors of intercultural effectiveness and intercultural sensitivity, as well as a statistically significant positive correlation between the six types of learning motivation and most factors of intercultural communication competence. Therefore, the learners' attitude towards learning a second language can affect their intercultural communication competence when using the language, and the learners who are less anxious and more motivated can present a stronger intercultural communication competence (Byram, 2012; Gardner & Lambert, 1972; Wang & Kulich, 2015).

6 Conclusion

This study examined the learner's factors and intercultural communication competence of undergraduate students from the top-notch programs of leading university in China. The results of the questionnaires and interviews suggested that these top students had experienced a medium-to-high level of anxiety and at the same time motivated by all six types of motivation, with their extrinsic identified regulation and the intrinsic motivation of stimulation being the most influential. Learners who are less anxious of using English tended to be more motivated in the process. At the same time, though the learners showed less confidence and enjoyment in intercultural communication, they had expressed medium to high respect towards their intercultural counterparts, and they were willing to get involved, stay attentive and convey their messages as clear as possible. Therefore, this study raised the possibility that English use anxiety could be a reason for the participants to feel less comfortable in intercultural communication, and the English learning motivation can also encourage the learners to become a part of the communication.

Individual factors of each L2 learner may lead to different learning results even in the same learning environment. Learners' anxiety and motivation in general can be a guidance for teachers to adjust their teaching methods and maximize the teaching efficiency. Students of the top-notch programs are considered the ones with the most outstanding learning achievements, and studying their learning attitudes can help to improve individualized design of teaching methods based on different features of the learners, especially students in similar programs of other universities. Learners' suggestions as the gap between English courses taught by liberal arts teachers and the English needs of science students could be considered for future researches and course designs as well. Also, as required by the objectives of top-notch programs, intercultural communication is a critical part and ability for the students, thus the results of current studies could also help to reveal the obstacles current students are dealing with on their way of becoming talents with global competence.

The current study has the following limitations. Firstly, the correlation analysis was adopted in the study to show relations between different variables, which may lead to inflated effect sizes compared to multivariate analysis. Therefore, future studies on similar topics may conduct multivariate analyses to

examine the influence of multiple factors on the process of second language learning. Secondly, only interviewed 10 out of 221 participants, which was a rather limited sample size, and they only covered three programs instead of all seven. Also, some of the items in the questionnaire did not present a high reliability in the process of translating and adapting, so the future studies can continue to design and develop better questionnaire items suitable in the Chinese context.

Appendix A: The Questionnaire

Top Students' English Learning Factors and Intercultural Communication Competence

Section One: Basic Information

1. Your age: _____
2. Your gender: _____
3. Your major/program: _____
4. Your year of study: _____

Direction: The next two sections contain a series of statements concerning your attitudes towards your own English learning experience and intercultural communication. Please choose the option that fits your condition the most. There are no right or wrong answers. Thank you for your cooperation!

Section Two: Learner's Factors

(1= strongly disagree, 2 = disagree, 3 = not sure, 4 = agree, 5 = strongly agree)

5. I don't usually get anxious when I have to respond to a question in English. (   )
6. I am always afraid that the other students would laugh at me if I speak up in English. (   )
7. I always feel that the other students are more at ease than I am in English learning. (   )
8. I am never embarrassed to volunteer answers in English. (   )
9. I am generally tense whenever participating in activities in English. (   )
10. I never understand why other students are so nervous when using English. (   )
11. I usually feel relaxed and confident when participating in activities in English. (   )
12. Whenever I have to answer a question in English, out loud, I would get nervous and confused. (   )
13. Learning English is important for Chinese. (   )
14. I hope to speak good English. (   )
15. Learning English is enjoyable. (   )
16. I like learning English very much. (   )
17. I plan to learn as much English as possible. (   )
18. I tell myself that I need to keep studying to improve my English competence. (   )
19. I persuade myself to keep on learning English to find out how much I can learn. (   )
20. I tell myself that I should keep on learning English to become good at it. (   )
21. I remind myself about how important it is to get good grades in English. (   )
22. I tell myself that it is important to practice English to outperform my peers. (   )
23. I believe I have the ability to learn a language successfully. (   )

24. I believe I have the ability to get the score I am trying for in my next English test. ( )
25. I believe I know how to find an effective way to learn English. ( )
26. I learn English because it is a required class. ( )
27. I learn English because I want to have high GPA. ( )
28. I learn English because I want to study abroad later. ( )
29. I learn English because I want to travel in English-speaking countries. ( )
30. I learn English because I want to prove I am a good student. ( )
31. I learn English because if I do poorly in it, I will feel I lose face. ( )
32. I learn English because my friends all learn English well. ( )
33. I learn English because it is important to my future development. ( )
34. I learn English because I want to master a foreign language. ( )
35. I learn English because I want to be someone who is good at English. ( )
36. I learn English for the pleasure I experience in learning. ( )
37. I learn English for the good feeling I get in learning it well. ( )
38. I learn English for the satisfied feeling I get in knowing new things of English. ( )
39. I learn English for the pleasure I experience when I do well in English. ( )
40. I learn English for the enjoyment I experience when having a high score in exams. ( )
41. I learn English for the satisfied feeling when I master difficult words. ( )
42. I learn English for the good feeling when I hear English spoken by other people. ( )
43. I learn English for the good feeling when I speak English. ( )
44. I learn English for the pleasure I get from knowing a difficult English words around me. ( )

Section Three: Intercultural Communication Competence

(1= strongly disagree, 2 = disagree, 3 = not sure, 4 = agree, 5 = strongly agree)
45. I enjoy interacting with people from different cultures. ( )
46. I think people from other cultures are narrow-minded. ( )
47. I am pretty sure of myself in interacting with people from different cultures. ( )
48. I find it very hard to talk in front of people from different cultures. ( )
49. I always know what to say when interacting with people from different cultures. ( )
50. I can be as sociable as I want to be when interacting with people from different cultures. ( )
51. I don't like to be with people from different cultures. ( )
52. I respect the values of people from different cultures. ( )
53. I get upset easily when interacting with people from different cultures. ( )
54. I feel confident when interacting with people from different cultures. ( )
55. I tend to wait before forming an impression of culturally-distinct counterparts. ( )
56. I often get discouraged when I am with people from different cultures. ( )
57. I am open-minded to people from different cultures. ( )
58. I am very observant when interacting with people from different cultures. ( )
59. I often feel useless when interacting with people from different cultures. ( )
60. I respect the ways people from different cultures behave. ( )

61. I try to obtain as much information as I can when interacting with people from different cultures. (   )

62. I would not accept the opinions of people from different cultures. (   )

63. I am sensitive to my culturally-distinct counterpart's subtle meanings during our interaction. (   )

64. I think my culture is better than other cultures. (   )

65. I often give positive responses to my culturally different counterpart during our interaction. (   )

66. I avoid those situations where I will have to deal with culturally-distinct persons.

67. I often show my culturally-distinct counterpart my understanding through verbal or nonverbal cues.

68. I have a feeling of enjoyment towards differences between my culturally-distinct counterpart and me. (   )

69. I find it is easy to talk with people from different cultures. (   )

70. I am afraid to express myself when interacting with people from different cultures. (   )

71. I find it is easy to get along with people from different cultures. (   )

72. I am not always the person I appear to be when interacting with people from different cultures. (   )

73. I am able to express my ideas clearly when interacting with people from different cultures. (   )

74. I have problems with grammar when interacting with people from different cultures. (   )

75. I am able to answer questions effectively when interacting with people from different cultures. (   )

76. I find it is difficult to feel my culturally different counterparts are similar to me. (   )

77. I use appropriate eye contact when interacting with people from different cultures. (   )

78. I have problems distinguishing between informative and persuasive messages when interacting with people from different cultures. (   )

79. I always know how to initiate a conversation when interacting with people from different cultures. (   )

80. I often miss parts of what is going on when interacting with people from different cultures. (   )

81. I feel relaxed when interacting with people from different cultures. (   )

82. I often act like a very different person when interacting with people from different cultures. (   )

83. I always show respect for my culturally different counterparts during our interaction. (   )

84. I always feel a sense of distance with my culturally different counterparts during our interaction. (   )

85. I find I have a lot in common with my culturally different counterparts during our interaction. (   )

86. I find the best way to act is to be myself when interacting with people from different cultures. (   )

87. I find it is easy to identify with my culturally different counterparts during our interaction. (   )

88. I always show respect for the opinions of my culturally different counterparts during our interaction. (   )

This is the end of the questionnaire. Thank you very much for your participation.

If you are interested in participating in the follow-up interview, please leave your contact information here: mobile phone: _____ or email: _____.

Appendix B: The Semi-Structured Interview

The interviews were guided and expanded based on the following questions:

1. Do you like learning English? Why or why not?

2. What is your main reason of learning English? Can you give any examples?

3. How many hours per day do you speak, read, listen to or write in English? What is the main purpose of using English?

4. What is the relationship between English learning and your own major? How does English learning help with your own major? Please explain in details.

5. How do you evaluate your English proficiency, for example, your comprehensive ability or your speaking, reading, listening, or writing skills? Are you confident, anxious or happy? Why do you feel this way?

6. Do you use English often in your own major? In what ways (for example, present your reports, participate in lectures or write papers)?

7. Do you feel confident when you use English in your study? Why or why not?

8. How do you evaluate your English proficiency when you use English in activities concerning your own major? Are you confident, anxious or happy? Why do you feel this way?

9. How often do you communicate with others in English every week? In what ways (oral communications, emails, WeChat conversations, phone calls or official letter)?

10. How often do you communicate with people from other countries or cultures? In what language? What topics do you talk about? Can you give any examples?

11. How do you feel about interacting with people from other countries or cultures? Do you feel comfortable, nervous, or worried? Can you give any examples?

12. Is it easy for you to have intercultural communications? Why or why not? Can you give any examples?

13. What attitude do you hold during intercultural communication? Do you feel superior or biased? Have you felt your culture is better in any intercultural communication?

14. What do you think of people from other countries or cultures? Can you give any examples?

15. How do you understand cultural differences? Can you give any examples?

16. Have you learned anything from intercultural communications?

17. Have you ever participated in international communication or research activities in English? Can you provide some details?

18. What do you think of the requirements of excelling in both your own major and English proficiency in the top-notch programs?

19. What is your expectation of yourself as a member of the top-notch program? What is the role of English in your expectation?

20. What do you think are talents with global competence? Will you become a talent with global competence?

21. How many foreign friends have you made in university? How does the friendship affect your language learning? How does it help with your development to become a talent with global competence?

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