



## **Extraversion-Introversion Tendencies and their Relationship with ESL Proficiency: A Study of Chinese Students in Vellore, India**

**Zafar, S.<sup>1\*</sup>, Khan, Z. A.<sup>2</sup> and Meenakshi, K.<sup>3</sup>**

<sup>1</sup>*Centre for Languages and Comparative Literature, Central University of Punjab, Bathinda, 151001 Punjab, India*

<sup>2</sup>*Adesh University, Bathinda, 151009 Punjab, India*

<sup>3</sup>*Department of English, School of Social Sciences and Languages, VIT University, Vellore, 632014 Tamil Nadu, India*

### **ABSTRACT**

This study investigates the relationship between the personality traits of extraversion-introversion and English as a Second Language (ESL) proficiency among 145 undergraduate Chinese students at VIT University, Vellore, India. It is one of the few studies in the subject area that is conducted in Asia and focuses on Chinese students studying in India. The data were collected using the Eysenck Personality Questionnaire (EPQ), Student Information Questionnaire (SIQ) and scores from the English Bridge Course (EBC) for Chinese students. After analysing the data using correlation coefficient and ETA values, it was found that extraversion-introversion had a significant relationship with different language learning skills. Students who scored high on extraversion were likely to score better in speaking skills and reading skills, whereas introverts tended to perform better in listening skills. Writing skills did not correlate strongly with either of the personality traits. While the results refute the claim that ESL academic superiority rests solely with extraverts, as proven by the higher listening scores of introverts than their extraverted counterparts, they also refute the conclusions drawn by psychologists and support the applied linguists' argument that extraversion is a positive trait for language learning. The paper concludes by suggesting that ESL instructors modify their teaching strategies, keeping in mind the various strengths of extraverted and introverted learners.

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##### *E-mail addresses:*

shahela.zafar@gmail.com (Zafar, S.),

khan.zaved@gmail.com (Khan, Z. A.),

k.meenaakshi@vit.ac.in (Meenakshi, K.)

\* Corresponding author

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## INTRODUCTION

Eysenck and Eysenck (1985) defined extraversion and introversion as personality traits that lie on a continuum and have a profound effect on human behaviour. The two traits, according to Skehan (1989), are crucial for L2 acquisition as well. Many language teachers will vouch for the fact that one of the major hindrances that they face during their interactions with students is the shy behaviour or introverted nature of some students, whereas extraverted students are found to be a pleasure to work with. This has led to the assumption that an introverted student is a slow learner of a second language (L2). Keeping in mind this assumption, the present study focuses on the presumed introverted nature of Chinese students and its relationship with ESL proficiency. The need for this study also arose out of the fact that most of the established studies (Busch, 1982; Carrell, Prince & Astika, 1996; van Daele, 2005; Berry, 2007) on the given relationship are based on Western subjects and cultures. Very few studies (Kiany, 1998; Wakamoto, 2007; Souzandehfar et al., 2014; Tehrani et al., 2014) focus on Eastern learners of a second language. The focus of the present study on the much neglected Eastern scenario in general and on Chinese students studying in India in particular, makes it different.

## BACKGROUND OF THE STUDY

### Extraversion- Introversion and the Chinese Culture of Learning

A globally stereotype still prevalent is that of the extraverted Westerner and the

introverted Easterner. Eastern cultures, for example, Chinese culture, are generally considered to promote introversion and shyness (Kumaravadivelu, 2003). In Western individualistic culture, according to Chen et al. (1998), children are encouraged to be assertive, self-reliant and autonomous, whereas in Chinese culture, children who are sensitive, cautious, vigilant and behaviourally restrained are called “guai,” (‘good’ or ‘well-behaved’). It has been suggested that modern Western culture has extraverted inclinations, whereas Chinese culture has introverted inclinations because of the influence of Confucian values (Yip, 2005), which, according to Rao (1996), include collectivism, socialisation for achievement and high acceptance of power and authority. Konstabel, Realo and Kallasmaa (2002) found that cultural groups, like the Chinese, scored high on collectivism and scored lower on extraversion and agreeableness compared to a normative American sample.

### ESL Learning and China

For the last couple of decades, there has been clear recognition of the English language as an important resource that China can harness in its drive towards modernisation (Cortazzi & Jin, 1996). English is perceived as key to promoting international exchange, acquiring scientific knowledge and technological expertise, fostering economic progress and participating in international competition etc. (Ross, as cited in Hu, 2002). However, irrespective of this promotion of the English language, ESL learning and teaching has not

produced the desired results. Some put the blame on ineffective teaching methodologies (both the Grammar-Translation Method and Communicative Language Teaching [CLT]). Hu (2002) argued that CLT has failed to make the expected impact on ELT in China partly because some of its most important tenets and practices clash with expectations of teaching and learning that are deep rooted in Chinese culture with regards to learning. It is often implicitly or explicitly claimed that the learning culture of the Chinese is strongly influenced by Confucianism (Flowerdew, 1998; Nelson, 1995; Oxford, 1995), which expects students to respect their teachers by listening attentively and sitting acquiescently in class; participation in class is not particularly stressed. Rather, their reserved nature can be seen as an asset by instructors and peers, as they can concentrate and exert effort on their individual studies and strive for academic excellence (Chen et al., 1998). Sharp (2004) quoted three related studies conducted in China (Huang & Huang, 1992; Yao, 1993; Broer & McCarly, 1999) that concluded that introversion dominated over extraversion.

However, in a second language class, where students are required to speak or respond in the target language, introversion may not be desirable and can hold back a learner's progress in improving language skills. Therefore, to be successful in a second language class, an introverted learner may need to adapt to the communicative nature and demands of the course by possibly altering his or her learning strategies. Bearing this in mind, the current study

will examine if the Chinese participants of the study were actually introverted in nature as proposed by different studies on Chinese culture, and if they were, whether introversion obstructed or facilitated their language learning.

### **Extraversion-Introversion and SLA: The Psychologists vs. the Linguists**

The question of whether introversion, in the present case the perceived introversion of the Chinese students, helped or hindered in learning a second language has been a matter of debate for psychologists and linguists for many years. Many psychologists, including Eysenck et al. (1981), Kiany (1998), Matthews and Deary (1998) and Cook (2002), were of the opinion that extraversion is rather a drawback when it comes to learning a language. This assumption is based on a strong biological foundation (Skehan, 1989, p.101). According to Eysenck's theory of personality (Eysenck et al., 1981), extraverts have a lower level of cortical arousal and are more easily inhibited, which causes them to be more susceptible to mental distraction. They also have a limited long-term memory compared with introverts who benefit from possessing long-term memory. These biological differences cause both groups to have different behavioural tendencies.

Linguists in general, on the other hand, have regarded extraversion as the preferred and helpful trait for language learning. In the 1970s it was hypothesised by some applied linguists (Naiman, Fröhlich, Stern, & Todesco, 1978; Skehan, 1989) that

extraverts in comparison with introverts were better language learners. For many in applied linguistic research “the desirable end of the extraversion-introversion continuum has been taken to be extraversion” (Skehan, 1989, p.101). Moreover, many investigators (Naiman et. al., 1978; McDonough, 1981, Dewaele & Furnham, 1999) have suggested that more sociable learners would be more inclined to talk and more likely to participate in practice activities and accordingly, more likely to increase language-use opportunities through which they gain input. Zafar and Meenakshi (2012) also suggested that an extrovert with an outgoing personality and higher tolerance for risk would be a better language learner than the more introverted personality who was more conservative and more self-conscious.

## LITERATURE REVIEW

An overview of the literature on extraversion-introversion showed that it has tended to be overlooked in L2 research and has been considered an “unloved” variable (Dewaele & Furnham, 1999). Moreover, available research on the issue showed mixed results. These studies investigated the effect of extraversion-introversion on language learning strategies (Imanpour, 2005; Fazeli, 2012; Ameri, 2013; Kayaoglu, 2013), relationship between introversion-extraversion and English grammaticality judgement among Iranian EFL learners (Razmjoo & Shaban, 2008), relation between affective variables and speaking skill (Doˆrnyei & Kormos, 2000; Kormos

& Trebits, 2012; Tehrani et al., 2014; Souzandehfar et al., 2014; Chen et al., 2015), influence of personality factors on reading skill (Li & Chingell, 2010), impact of extraversion-introversion on vocabulary learning (Carrell, Prince, & Astika, 1996; Saemian, 2001; van Daele, Housen, Pierrard, & Debruyn, 2006; MacIntyre, Clément, & Noels, 2007), effect of extraversion-introversion on evaluation of writing (Carrell, 1995), relation between affective variables and listening skill (Alavinia & Sameei, 2012) and relation between personality and academic performance (Rindermann & Neubauer, 2001; Chamorro-Premuzic & Furnham, 2003; Pulford & Sohal, 2006).

Pazhuhesh (1994) found that introverted students were more successful than their extraverted counterparts in his study, which explored the relation between extraversion-introversion and reading comprehension among EFL Iranian students. Busch (1982) in her study involving a group of adult Japanese learners of English in Japan found that the hypothesis that extraverts would perform better than introverts on a variety of ESL proficiency tests was not confirmed. In a study undertaken by Carrell et al. (1996), the statistically significant difference between introverts and extraverts indicated that the former considerably outscored their extraverted peers when it came to the end-of-course composite grades. Kayaoglu (2013) concluded that introverted learners used a greater range of metacognitive and cognitive strategies than did extroverted

learners. Chen and Tsai argued that no claims could be made that extroverts were better L2 learners than introverts.

Daneshvari (1996), who examined the role of extraversion introversion in ESL listening comprehension in Iran, concluded that extraverts were better at listening strategy compared with introverts, whereas Alavinia and Sameei (2012) found introverted individuals to be at an advantageous position in acquiring listening skills. Kiany (1998) in his study found that while introverts might have an advantage when it came to written tests, extraversion had no bearing at all on listening proficiency. Karbalaei (2008) also reached a similar conclusion. He found that the extraversion-introversion personality trait had no significant effect on ESL learners' use of listening strategies. Wakamoto (2007) also could not confirm any impact of extraversion on listening proficiency.

The role of extraversion on L2 speaking proficiency studied by van Daele (2005) in an important longitudinal study on 25 Dutch-speaking adult learners of English revealed that, contrary to expectations, extraversion turned out to have "little effect on the speech production" (2005, p.108).

Berry (2007) tried to investigate how extreme introverts and extreme extraverts interacted with each other both in groups and in homogeneous or heterogeneous pairs. She found that introverted learners obtained better scores for accuracy. Extraverts, on the other hand, scored higher on the fluency component. The differences

between these two personality dimensions were most visible when students worked in heterogeneous pairs (Berry, 2007, p.95). She concluded the study by saying that "when an appropriate instrument [the EPQ] is used to assess personality, and when theoretically sound hypotheses derived from the psychological literature are tested, significant differences can be observed in the responses of extraverts and introverts on particular speaking test tasks" (Berry, 2007, p.195).

Gan (2011) examined the relation of extraversion and introversion with L2 oral performance with respect to fluency, accuracy and complexity in task performance. He concluded that there was no significant relation between the degree of extraversion- introversion and "assessment scores" and "discourse-based measure" (Gan, 2011, p.1259-1267) Similarly, Chen (2013), in a study exploring the relationship between extraversion and introversion, foreign language anxiety and participants' oral communication performance, found no significant correlation between extraversion and introversion and oral proficiency scores.

As for writing skills, Widyastuti's study (2012) found that extraversion correlated with not only learners' writing ability, but also with their vocabulary power. A significant positive correlation was also reported between extraverted learners' vocabulary strength and their writing ability. Mansourinejad, Bijami and Ahmadi (2012) and Alavinia and Hassanlou (2014) found no significant correlation between the participants' personality types and their

writing performance. On the other hand, Boroujeni, Roohani and Hasanimanesh (2015) found that introverts outperformed their counterparts in writing.

Thus, the literature review clearly indicates that research done so far is not conclusive and requires further examination, especially in the Asian context. Thus, the present study examines the relationship between extraversion-introversion and English language proficiency, as represented by listening, speaking, reading, writing and overall scores of adult Chinese learners of English as a second language.

## **METHODOLOGY**

### **Participants**

The participants of the study consisted of a sample of 145 undergraduate Chinese students studying English at VIT University, Vellore, in India. These students were selected through convenient sampling as they came to VIT University for at least two years to study different courses in Computer Science, Computer Animations and Finance through an exchange programme between different universities of China and VIT University, Vellore, Tamil Nadu, India. All the students were between 18 and 21 years of age. Before they started their regular semester, the students had to take the English Bridge Course (EBC) 101 for one semester. EBC 101 facilitated the students' learning in the different ESL skills. These students had already attained a moderate level of proficiency in the basics of ESL in China, and thus had opted for improving their performance in the four subject areas,

namely listening, speaking, reading and writing, through the EBC 101 at VIT. The students gave permission to collect data through signed Informed Consent Forms.

### **Instruments**

To collect data about extraversion-introversion and language proficiency, a Student Information Questionnaire, the Eysenck Personality Questionnaire and scores of the English Bridge Course 101 were used. For data analysis, SPSS16 was used.

#### **Student Information Questionnaire (SIQ).**

The Student Information Questionnaire (SIQ) was used to collect personal data such as name, registration number and gender. The SIQ also included items pertaining to the students' linguistic background and exposure to ESL.

#### **Eysenck Personality Questionnaire (EPQ).**

The Eysenck Personality Questionnaire (EPQ) is a widely used instrument for self-report personality inventory created by HJ Eysenck in 1975. The view that the EPQ is reliable and valid, and is one of the most commonly researched psychological instruments, has been supported by different researchers (Dewaele & Furnham, 1999; Berry, 2007). The selection of the Eysenck Personality Questionnaire was on the basis of the following four key components: (1) it has shown exceptional reliability when used in an academic context over the last 35 years: (2) it takes a relatively short amount of time to complete: (3) its yes-no answer

format and relatively uncomplicated grading render it ESL-friendly; and (4) it avoids cross-cultural bias through questions which could confuse and/or mislead students and thereby skew measurement of extraversion and introversion. Three personality factors can be measured by the questionnaire: extraversion, neuroticism and psychoticism. From this questionnaire, 21 items related to extraversion were selected and given to the participants. It was found that the questionnaire was appropriate for the study and did not need any adaptation. The EPQ already has been found to be valid in many countries of the world including India and China. Using the data set from 34 countries, including Hong Kong, India, Japan, Korea, Singapore and Sri Lanka, the cross-cultural factorial similarity of its factors, Psychoticism (P), Extraversion (E) and Neuroticism (N), was supported (Barrett, Petrides, Eysenck, & Eysenck, 1998).

**Scores from the English Bridge Course for the Chinese.** The English Bridge Course for the Chinese, as mentioned earlier, is a course offered to the Chinese students of VIT University before they move on to take their regular courses in Computer Sciences, Commerce and Computer Animations. The course is taught using the CLT method supplemented with the use of technology. The course comprises six modules, namely, listening, speaking, reading, writing, grammar and vocabulary. Each component is primarily dealt with in the class with a view of making students

comfortable with English used in the academic and professional courses of VIT University.

The subjects of the present study were tested on their listening, speaking, reading and writing skills through quizzes, assignments, two Continuous Assessment Tests (CATs) and a Term-End exam conducted during the course. Data collection with regard to subject proficiency was done by means of the scores mentioned above as determined and recorded in the four subject areas of reading, writing, speaking and listening and overall achievement in ESL.

### Procedure

The questionnaires were pilot tested by administering it to 15 students randomly selected from the sample of students involved in the study. After having noted their comments and suggestions, some modifications were made to the SIQ as it was found that some pieces of information were not required. Later, the questionnaires were distributed to the participants in their class. Two hours of class time was required for students (1) to complete the Eysenck Personality Questionnaire for measuring extraversion-introversion and (2) to fill out a Student Information Questionnaire for information pertaining to demographic and experiential data. To provide translations of words and phrases that some students found difficult to understand, for example, a phrase like “happy-go-lucky” in question no. 10 of the EPQ, we accepted the help of a senior Chinese student who was proficient in both Chinese and English.

The collected data were transferred to SPSS 16. Descriptive statistics for each measurement tool were calculated to analyse the characteristics of the obtained data. This was followed by the inferential statistics, in which correlation coefficients were calculated for all the data to account for the relationship between the variables. In addition, correlation analysis using the ETA coefficient was employed to view how variables related to one another in a non-linear way. ETA is a coefficient of non-linear association. For linear relationships, ETA equals the correlation coefficient (Pearson's  $r$ ). For non-linear relationships it is greater; hence, the difference between ETA and  $r$  is a measure of the extent of non-linearity of relationship.

## RESULTS

### Extraversion/ Introversion Total Count

An evaluation of the EPQ as given in the table below shows that out of the total 145 subjects, 68 (47%) were introverts, 51 (35%) were extraverts and 26 (18%) showed no major tendency towards either extraversion or introversion. These data are in accordance with the general belief that people raised in a Confucian culture are dominantly introverts. Still, there is a significant population of extraverts that can be used for data analysis.

Table 1  
*Extraversion/introversion total count*

	Introversion	No Major Tendency	Extraversion
<i>N</i>	68	26	51

*N*= number of students

### Descriptive Statistics and Correlation

Descriptive statistics, including central tendencies and dispersion of scores indicators, were calculated for each instrument individually. With the available data, the correlation between extraversion-introversion and language proficiency was determined. The following are the results obtained in the main study:

**General Language Proficiency.** The research question was whether there was a relationship between extraversion-introversion and English language proficiency. The results indicated that extraverts and introverts tended to score differently depending on the ESL subject. Based on the data collected the following four observations, supported by high  $r$  and ETA coefficient, can be made:

**Listening Proficiency.** Here, introverts had higher mean listening scores (77.97) than extraverts (50.84) as shown in Table 2. The mean difference was statistically significant ( $p < 0.001$ ; see Table 3 for the results of the  $t$ -test). Extraversion had a strong negative correlation with the listening score as depicted by ETA and  $r$  values ( $r = -0.747$ ,  $ETA = 0.883, 0.795$ ) (see Table 4). Thus, the

Table 2  
*Descriptive statistics (Listening score)*

	Listening Proficiency Score	
	Mean	Std. Deviation
Introversion	77.97	9.047
No Major Tendency	52.58	11.72
Extraversion	50.84	10.89



Table 3  
Independent samples t-test for equality of means of the introverts and extraverts' listening scores

t	df	Sig. (Two-Tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
					Lower	Upper
14.828	117	0.0001	27.13	1.83	23.50663	30.75337

Table 4  
Correlation coefficients (listening score)

Correlation			
		Extraversion score	Listening score
Listening score	Pearson's r	-0.747*	1
	ETA	0.883	0.795

\*Correlation is significant at the 0.01 level (two-tailed)

introverts seemed to be better at listening proficiency than the extraverts.

Eta= 0.663, 0.64) (see Table 7). The high speaking score of the extraverts showed that the extraverts were better L2 speakers.

**Speaking Proficiency.** The extraverts had much higher mean speaking scores (75.98) than the introverts (57.38) (see Table 5). The mean difference was statistically significant ( $p < 0.001$ ; see Table 6 for the results of the t-test). The correlation between extraversion and speaking was also strong ( $r = 0.629$ ,

Table 5  
Descriptive statistics (Speaking score)

Speaking Proficiency Score		
	Mean	Std. Deviation
Introversion	57.38	9.641
No Major Tendency	62.69	11.51
Extraversion	75.98	10.2

Table 6  
Independent samples t-test for equality of means of the introverts and extraverts' speaking scores

t	df	Sig. (Two-Tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
					Lower	Upper
10.1591	117	0.0001	-18.6000	1.831	-22.22593	-14.97407

Table 7  
Correlation coefficients (Speaking score)

Correlation			
		Extraversion score	Speaking score
Speaking score	Pearson's r	0.629*	1
	ETA	0.663	0.64

\*Correlation is significant at the 0.01 level (Two-Tailed)

**Reading Proficiency.** The relation between extraversion and reading was strong as shown by the Pearson’s coefficient and ETA values ( $r=0.625$ ,  $ETA= 0.712$ ,  $0.631$ ) (see Table 10). Extraversion was also positively correlated to reading skills ( $r=0.625$ ). The extraverts had higher mean reading scores (73.16) than the introverts (54.91) as depicted in Table 8. The mean difference was statistically significant ( $p<0.001$ ; see

Table 9 for the results of the t-test). Thus, the extraverts appeared to be better at reading skills than the introverts.

Table 8  
*Descriptive statistics (Reading score)*

Reading Proficiency Score		
	Mean	Std. Deviation
Introversion	54.91	10.86
No Major Tendency	67.08	12.06
Extraversion	73.16	8.622

Table 9  
*Independent samples t-test for equality of means of the introverts and extraverts’ reading scores*

<i>t</i>	df	Sig. (Two-Tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
					Lower	Upper
9.8864	117	0.0001	-18.25000	1.846	-21.90584	-14.97407

Table 10  
*Correlation coefficients (Reading score)*

Correlation			
		Extraversion score	Reading score
Reading score	Pearson’s r	0.625*	1
	ETA	0.712	0.631

\*Correlation is significant at the 0.01 level (Two-Tailed)

**Writing Proficiency.** Both the extraverts and introverts showed no major differences in writing proficiency, though the extraverts appeared to score slightly higher (66.55) than the introverts (59.69) (see Table 11). The mean difference was statistically significant though ( $p<0.001$ ; see Table 12 for the results of t-test). However, as per the Pearson’s coefficient and ETA values, the relationship between extraversion and writing was weak ( $r=0.209$ ,  $ETA=0.374$ ,

$0.233$ ) (see Table 13). This led us to conclude that extraversion was not a major factor affecting writing proficiency.

Table 11  
*Descriptive statistics (Reading score)*

Writing Proficiency Score		
	Mean	Std. Deviation
Introversion	59.69	15.07
No Major Tendency	59.31	15.89
Extraversion	66.55	11.41

Table 12  
Independent samples t-test for equality of means of the introverts and extraverts' reading scores

t	df	Sig. (Two-Tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
					Lower	Upper
2.7177	117	0.0076	-6.8600	2.524	-11.8591	-1.8609

Table 13  
Correlation coefficients (Writing score)

Correlation			
		Extraversion score	Writing score
Writing score	Pearson's r	0.209*	1
	ETA	0.374	0.233

\*Correlation is significant at the 0.01 level (Two-Tailed)

**Comprehensive Language Proficiency.** Comprehensive language proficiency was calculated by studying the relationship between extraversion scores and the Term-End Exam (TEE) scores. As can be seen in Table 14, the extraverts had higher mean TEE scores (69.59) than the introverts (56.31). The mean difference was statistically significant ( $p < 0.001$ ; see Table 15 for the results of the t-test). The relationship between the extraversion

scores and total scores was strong ( $r = 0.596$ ,  $ETA = 0.72$ ,  $0.603$ ) (see Table 16). Thus, the extraverts were expected to score better in comprehensive language proficiency.

Table 14  
Descriptive statistics (Term-End exam scores)

Term-End Exam Scores		
	Mean	Std. Deviation
Introversion	56.31	7.185
No Major Tendency	60.58	7.601
Extraversion	69.59	9.113

Table 15  
Independent samples t-test for equality of means of the introverts and extraverts' Term-End exam scores

t	df	Sig. (Two-Tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
					Lower	Upper
8.8886	117	0.0076	-13.28000	1.494	-16.23890	-10.32110

Table 16  
Correlation coefficients (Term-End exam scores)

Correlation			
		Extraversion score	TEE score
TEE score	Pearson's r	0.596*	1
	ETA	0.72	0.603

\*Correlation is significant at the 0.01 level (Two-Tailed)

## DISCUSSION AND CONCLUSION

The results of the study, as shown by the Pearson correlation coefficients and the ETA values, indicate that an important relationship exists between extraversion-introversion tendencies and English language proficiency. The accepted theory that a relationship between personality and ESL proficiency exists was confirmed by the results obtained in this study. In particular, statistically significant relationships were found when the scores for the listening, speaking and reading skills were correlated with the independent variables of extraversion/introversion.

The data confirmed the results of some previous studies concluding a general tendency for extraverts to score higher in ESL speaking tests (McDonough, 1981; Swain, 1984; Long, 1985). As suggested by Oxford (2006), face-to-face communication tasks might be viewed as easier by an individual learner with an extroverted learning style than by someone with an introverted learning style. In addition, contrary to Ehrman and Oxford's (1995) conclusion, extraverts, rather than introverts, seemed to do better at reading probably because as Wakamoto (2000) explained, extraverts tended to use "functional practice strategies" and learn by focusing more on meaning rather than on the form of the text, and in reading, meaning is as important as form (Andriyani, 2016). The results obtained in this study showing extraverts to hold higher average proficiency scores, as shown in Table 14, appeared to confirm the results documented by Rossier (1975), which

Ehrman (1990) claimed may have been due to the extraverts' increased willingness to take conversational risks. While introverts are less likely to attempt such risks, it seems as if those from Confucian-based societies would be even less inclined to do so, given the aforementioned bias against extravert-type behaviour in Chinese culture.

At the same time, correlations drawn from the data collected in this study point towards several important exceptions to the popular trend, the most important being the tendency for introverts to score higher than extraverts in listening proficiency, as shown in Table 2. This contradicts results obtained by Naiman et al. (1978), Swain (1984) and Long (1985) that seemed to claim ESL academic superiority rested solely with extraverts. The higher scores may be indicative of the typical introvert's ability to focus and concentrate on listening exercises much more effectively than their extraverted counterparts, as discussed by Ehrman (1990) and Ausubel (1968). In addition, according to Brown (2000), introverts typically possess a great deal of the following characteristics, all of which can potentially improve ESL and listening skills: territoriality, concentration, depth, internal-orientated, intensive, limited relationships and a general conservation of energies.

While both personality groups stand out as having strengths and weaknesses in various ESL subjects, it must be noted that the data indicated these differences to be relatively small in some cases. For example, writing proficiency scores among extraverts

and introverts showed very little variation. Hence, neither of the two personality traits seems to bring any advantage to the learner in this case. However, overall, the results from this study contradict the conclusions reached by many psychologists (Rolfhus & Ackerman, 1999; Sanchez-Marin et al., 2001; Chamorro-Premuzic & Furnham, 2003) that introverts would have an advantage over extraverts with respect to overall academic performance (as cited in Furnham et al., 2003, p.61).

In the present study, conducted with Chinese tertiary level students studying for various courses in India, though the introverted students outnumbered the extraverted students, the extraverted students scored better than the introverted students in most of the language skills, including overall language proficiency. This supports the applied linguists' argument that extraversion is a positive trait for language learning. Further investigation of these theories with larger sample sizes would prove more conclusive. At the same time, theories that contradict this conventional wisdom and shed light on reasons why introverts may, in certain conditions, outperform extraverts in ESL reading, writing, speaking and listening proficiency also deserve closer examination.

Additionally, a pedagogical implication might find ESL teachers varying teaching methods, given the results introduced from this study. Specifically, teachers could organise practical lesson plans designed to maximise both communication and learning in the classroom. Given the results of this study, ESL instructors might combine the

more outgoing, extraverted students with introvert-type pupils so as to gradually encourage the latter group to participate more actively in class. Similarly, extraverted students may acquire better concentration skills as a result of working with introverts.

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