

# An Investigation of the Extraverts-Introverts Speaking Anxiety in English Classes

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## Abstract

*The present study aims at investigating the relationship between the extraversion level and speaking anxiety in the English as a Foreign Language (EFL) context on the one hand, and to testify the relationship between the extraversion degree and their speech fluency and speech accuracy, on the other hand. To this end, 60 advanced university students comprising 12 males and 48 females took part in the study at the quantitative phase, and 28 of them including 14 from the extraversion levels, and 14 from the introversion levels were observed on their oral performance at the qualitative phase. Based on Spearman's Rank Order Correlation using SPSS in the quantitative section, the findings revealed a strong negative correlation between the extraversion level and public speaking anxiety on the one hand, and a strong positive correlation between the extraversion degree and speech fluency in the qualitative phase on the other hand. Speech accuracy revealed not to have any significant correlation with the extraversion degree. Indeed, extraversion-introversion seems to be one of the major personality differences that has grabbed the attention of the psycholinguists, in particular (Dornyei, 2005); henceforth, it would be worthwhile to clarify the underlying characteristics of this construct to gain a more comprehensive view of this personality type indicator, respectively.*

## Keywords

*extraversion, public speaking anxiety, speech fluency, speech accuracy*

## 1. Introduction

### 1.1 Background

Individual Differences (IDs) can have a consequential effect not only on the most important process underlying Second Language Acquisition (SLA) but also they may affect various learning styles and rates as well as inducing strengths and weaknesses in acquiring our mother tongue (Dornyei, 2005). Eysenck (1994) has acknowledged that human beings differ from each other in numerous ways; however, some of these ways are of more importance to psychology than the others to be probed extensively, among which personality is of wider significance. Campbell, McCabe, Troup, and Davalos

(2011) pointed out that exploring facets of personality and individual differences can be even conducive to gaining a better insight into cognitive system; however, learner differences in second or foreign language learning can be interpreted not only by depending on the cognitive factors such as language aptitude and learning style, but also by hinging upon affective factors, such as motivation and anxiety (Tianjian, 2010).

Accordingly, Extraversion-Introversion (E-I) is one of the major personality differences that has grabbed the attention of the psycholinguists, in particular (Dornyei, 2005). Therefore, it would be worthwhile to clarify the underlying characteristics of this construct to gain a more comprehensive view of this personality type indicator, respectively.

Furnham (1990) highlighted the existence of numerous distinct common-sense relationships between (E-I) and language use to the point that with the relative ease, a reliable measure of this trait can be produced. For instance, regarding the oral production, extraverts are characterized by their talkativeness and fewer pauses, whereas introverts are marked by tending to utilize more formal speech with more careful grammatical constructions (Dornyei, 2005); however, acquisition and fluent production of foreign languages can be highly affected by Foreign Language Anxiety (FLA), too (Dewaele, Petrides, & Furnham, 2008; Andrade & Williams, 2008). Many students feel more anxious and distressed in the foreign language (FL) class than in any other classes (Campbell & Ortiz, 1991; Horwitz, Horwitz, & Cope, 1986; MacIntyre & Gardner, 1989), and their anxiety seems to stem predominantly from the speaking situation (Koch & Terrell, 1991; MacIntyre & Gardner, 1994; Price, 1991).

Consequently, since speech is one of the most natural and common way of exchanging information and it is widely considered as one of the prominent skills in foreign language learning classes contributing to the opening of numerous L2 discussions, maintenance of pairworks and groupworks, and promoting higher chances of self-expression.

Indeed, in as much as awareness of these personality differences as useful predictors for L2 achievement can make a big contribution to Second/Foreign language teachers' performance for adopting wiser and due strategies in dealing with individual differences, psycholinguists have mostly addressed the impact of these personality dimensions on the learners' natural communicative oral performance (e.g., Socan & Bucik, 1998; Dewaele & Furnham, 1999, 2000). Yet, it seems that conducting a research on the relationship between this personality trait and the learners' anxiety level while speaking English, in a mixed qualitative and quantitative method, has been comparatively neglected; henceforth, the present study aims at examining the relationship between the students' extent of extraversion and their speaking anxiety at a quantitative phase, and analyzing the speech fluency and accuracy across a number of extraverts and introverts at a qualitative phase, respectively. In sum, it focuses on investigating the relationship between the extroversion level and the speech anxiety level in the foreign language classes. In other words, the study attempts to examine the relationship between (E-I) and speaking anxiety in a mixed method approach.

### 1.2 Research Questions

The following research questions are posed and investigated in the study:

1. Is there any significant relationship between the students' speaking anxiety level and their extent of extraversion?
2. Is there any significant difference regarding the speech anxiety across highly extraverted, moderately extraverted, moderately introverted, and quite introverted individuals?
3. Is there any significant relationship between the extraversion level and speech fluency?
4. Is there any significant relationship between the extraversion level and speech accuracy?

## 2. Literature Review

Eysenck and Eysenck (1975), and Myers (1962) demonstrate that extraverts tend to be open to the strangers and get socially mixed whereas introverts are likely to keep aloof and tend not to keep a high profile. "Extraverts have found to be more talkative in triads or groups (Bem & Allen, 1974; Shaw, 1976, as cited in Thorne, 1987, p. 718) but not necessarily in dyads where findings are inconsistent" (Campbell & Rushton, 1987, as cited in Thorne, 1987, p. 718). Based on Yungian personality typology (1923, 1976) extraverts are generally outgoing, direct, energetic, and sociable and introverts are more reticent, bashful, thoughtful, sensitive, and inscrutable. Besides, he believes that extraverts prefer constructing a more inclusive and common space, whereas introverts tend to take a more exclusive and individual space. In fact, Gale (1969) defines extraverts as the ones who are more restless and energetic in the restricted environments.

Extraverts have proved to have outperformed introverts in faster doing of more complex tasks which calls for more response competition; however, the easiness of the task or the task which involves little response competition would deprive them of the favored advantage (Eysenck, 1974, 1976).

The distinction between extraverts and introverts regarding the complexity of the task has received a special attention by numerous researchers (e.g., Bone, 1971; McLaughlin & Eysenck 1967; Shanmugan & Santhanam, 1964). For instance, Eysenck (1976) has assumed an inverse relationship between optimal level of arousal and the task difficulty. Eysenck's theory is in line with the Yerkes-Dodson law which claims a curvilinear (inverted U) relationship between the level of "drive" and performance (Socan & Bucik, 1998).

Socan and Bucik (1998) confirmed that since the middle level of arousal results in the optimal performance, extraverts' performance on mental speech task should consequently be better in "high arousing" conditions while introverts would favor "low arousing" conditions. Besides, Campbell, McCabe, Troup, and Davalos (2011) also confirmed that there is an inextricable relationship between E-I and various levels of arousal to the stimuli based on differences in activation of the ascending reticular activating system. Dewaele and Furnham (1999) explained that introverts are more susceptible to higher pressure conditions since the arousal level exceeds their optimal level, which in turn hampers the automaticity of their oral production; therefore, they slide back to controlled serial processing

which would result in slower speech production, hesitation, and more errors. In addition, Dewaele and Furnham (2000) have attributed the inability of introverts in producing longer utterances to their lack of sufficient short-term memory capacity which would attenuate their speech fluency.

### **3. Methodology**

This section contains detailed information about the methodological implementation of the current study, the purpose of which is to assess two dimensions of the individual personality traits among which extraversion-introversion and speaking anxiety have been exclusively taken into account as the focus of this study.

#### *3.1 Participants and Setting*

A community sample of 60 advanced English students, studying at Imamreza University of Mashhad (Iran), with the average age of 19.22, ranging from 18 to 25, comprising 12 males and 48 females participated in this study with no expectation of rewards in the end. Besides, in the qualitative phase, 28 freshman females' speech including 14 extraverts and 14 introverts were audio recorded in the first semester of 2013, to analyze their speech fluency and accuracy, extensively.

#### *3.2 Instruments*

The employed instruments in the study included two questionnaires, with one containing items related to their level of extraversion, and the other containing items related to their public speaking anxiety.

##### *3.2.1 Myer-Briggs Type Indicator (MBTI) test*

The standardized Myer-Briggs Type Indicator (MBTI) test was utilized in this study consisting of 15 multiple choice questions with two choices of a, b devoted specifically for assessing the overall level of extraversion-introversion in the individuals. This scale produces a possible range of scores from zero to fifteen based on which the learners were categorized into four main dichotomies of 1 Quite introverted (if gained six and below) 2) Moderately introverted (seven or eight). 3) Moderately extraverted (between nine to twelve). 4) Quite extroverted (thirteen and above that) depending on the MBTI guidelines. Cronbach's alpha was computed with the score exhibiting the reliability coefficient of .79 for the extraversion-introversion trait.

##### *3.2.2. Public Speaking Classroom Anxiety Scale*

For the purpose of this study, Public Speaking Classroom Anxiety Scale (PSCAS) was utilized. The questionnaire consisted of 17 items, each on a 5-point scale ranging from strongly agree (scale point 5) to strongly disagree (scale point 1). The internal consistency coefficient of the completed questionnaires turned out to be .84.

#### *3.3 Data Collection*

The survey was conducted in the first semester of the 2013-2014 academic year. To find out the relationship between extraversion and public speaking anxiety, two questionnaires were administered to 60 university students. One containing the single scale for speaking anxiety and the other for extraversion level. Both were administered at the beginnings of normal English classes, with the former

taking about 12 minutes on average, while the latter about 8 minutes. Furthermore, in an attempt to study the differences between extraverts and introverts regarding their oral production in the EFL classroom context, 28 females' speech, at the advanced proficiency level based on the administered TOEFL exam score, comprising 14 from highly extraverted and moderately extraverted, and 14 from quite introverted and moderately introverted extraversion scale, were audio recorded during their panel discussion classes in five successive sessions each lasting for 90 minutes.

Depending on the university curriculum the students had to pass these four-credit panel discussion classes for two successive semesters as a compulsory course to gain the chance of making their way to the higher levels. To this end, the learners were provided with opportunities for having free interpersonal natural English discussions on agreed various everyday topics based on which they were meticulously scored on both their accuracy and fluency by their professor. Henceforth, their discussions were recorded in a relatively stressful interpersonal situation. In all seven and half hours of speech were recorded each having the opportunity of speaking around 16 minutes all during these sessions. Finally, for further analyses the recordings were transcribed by the researcher into orthographical English. These transcriptions were then coded at the word level based on their structural nature and for possible lexical or morphological errors.

### 3.4 Data Analysis

After collecting the data, it was entered into and processed with SPSS program. Considering the aim of this study is mainly two-fold, firstly it aims at investigating the relationship between extraversion and public speaking anxiety and secondly, it attempts at testifying the significant differences across the four dichotomies of extraversion scale regarding their speech anxiety level, Spearman correlation for the first and Kruskal-Wallis for the second were computed. Finally, to specify the location of differences between pairs of groups (highly extraverted, moderately extraverted, moderately introverted, quite introverted) Siegel & Castellan inequality formula was utilized.

## 4. Results and Discussion

To testify the relationship between the extent of extraversion and the speaking anxiety (SA), the nonparametric Spearman rank-order correlation coefficient was computed. The relationship between extraversion (as measured by the MBTI) and public speaking anxiety (as measured by PSCAS) was investigated using Spearman rank—order correlation coefficient. Preliminary analyses were performed to ensure there is no violation of the assumptions of normality, linearity and homoscedasticity. There was a strong, negative correlation between the two variables,  $\rho = -.94$ ,  $n = 60$ ,  $p < .0005$ , with high levels of extraversion associated with lower levels of speaking anxiety. Besides, the coefficient of determination of 88.36 per cent was calculated to determine the extent of the shared variance between the two variables which is quite a respectable amount of variance.

In order to detect the differences across the four dichotomies of highly extraverted ( $N = 7$ ) accounted for 11.7%, moderately extraverted ( $N = 22$ ) comprising 36.7%, moderately introverted ( $N = 9$ )

including 15%, and quite introverted ( $N = 22$ ) involving 36.7% of the total population, a nonparametric Kruskal-Wallis test was conducted (Table 1).

**Table 1. Kruskal-Wallis Test**

<i>Ranks</i>			
	Group	N	Mean Rank
SA	1	22	49.50
	2	9	33.83
	3	22	18.57
	4	7	4.00
	Total	60	
<i>Test Statistics<sup>a,b</sup></i>			
		SA	
Chi-Square		52.884	
Df		3	
Asymp. Sig.		.000	

Moreover, to obtain the median speaking anxiety values for each group Table 2 is presented.

**Table 2. Speaking Anxiety**

Group	N	Median
1	22	79.0000
2	9	57.0000
3	22	47.5000
4	7	27.0000
Total	60	53.0000

In fact, a Kruskal-Wallis Test revealed a statistically significant difference in the speaking anxiety levels across three different extraversion groups (Gp1,  $n = 22$ : quite introverted, Gp2,  $n = 9$ : moderately introverted, Gp3,  $n = 22$ : moderately extraverted, Gp4,  $n = 7$ : highly extraverted ),  $\chi^2 (3, n = 60) = 52.88$ ,  $p = .000$ . As a result, the quite introverted group recorded a higher median score ( $Md = 79$ ) compared to the other three groups based on which the recorded median value of moderately introverted is ( $Md = 57$ ), moderately extraverted is ( $Md = 47$ ), and highly extraverted is ( $Md = 27$ ), respectively. Therefore, speaking anxiety appears to take a decremental trend in as much as the

extraversion level is increasing. In other words, the more extraverted, the lower speaking anxiety occurs. In fact, the result of the present study is consistent with previous studies of Matthews and Deary (1988) who found introverts more anxious and less stress-resistant.

To specify which of the groups are statistically and significantly different from one another, a nonparametric post-hoc comparison between the groups (Siegel & Castellan, 1988, p. 213) was administered. Depending on Siegel & Castellan inequality formula for nonparametric post hoc test, the findings revealed significant results for the differences between the mean values of Gp1: quite introverted (49.50) and the mean value of Gp3: moderately extraverted (18.57) which exceeds the rate of 13.83, Gp1: quite introverted (49.50) and Gp4: highly extraverted (4.00) exceeding the rate of 19.99, and finally between Gp2: moderately introverted (33.83) and Gp4: highly extraverted (4.00) transcending 23.18. Hence, insignificant differences were found between other pairwise group comparisons of quite introverted and moderately introverted, moderately extraverted and moderately introverted, moderately extraverted and quite extraverted ones. To sum up, the differences between the two levels of extraversion, the two level of introversion, and the moderate levels of both, were not statistically significant.

To answer the third research question, regarding the relationship between extraversion level and speech fluency, the oral production of 28 participants were audio recorded and meticulously transcribed, coded, and scored with regard to Yaruss (1998) guidelines for speech fluency assessment based on which they were scored by their repetitions, prolongations, long pauses, blocks, revisions, and fillers. Consequently, the relationship between extraversion degree and speech fluency was investigated using Pearson product-moment correlation coefficient. Preliminary analyses were performed to ensure there is no violation of the assumptions of normality, linearity and homoscedasticity. There was a strong, positive correlation between the two variables,  $r = .64$ ,  $n = 28$ ,  $p < .0005$ , with higher levels of extraversion associated with higher levels of speech fluency. Besides, the coefficient of determination of 40.96 per cent was calculated to determine the extent of the shared variance between the two variables which is quite a respectable amount of variance.

This finding is in line with Dewaele and Furnham (1999) study in which they found a strong positive correlation between the extraversion degree and the speech rate since the introverts' speech exhibited more hesitation markers such as "er" and break downs. Besides, their findings suggest that more introverted speakers hesitate more when they are under pressure, which would assert the present research findings on the relationship between speaking anxiety and extraversion level. The findings also match with Dornyei (2005) who asserts that extraverts excel introverts depending on their speech fluency.

In response to the fourth question regarding their speech accuracy to be scored at the morpholexical level, their morphological and lexical errors were calculated. Based on Dewele and Furnham (2000) at the morphological level violation of gender and number, and for verbs, violations of tense and aspect, of mode and of person, were taken into account, whereas at the lexical level, the lexical violations

including lexical inventions (non-existing vocabularies) and superficially right but not fitting in context words were taken into account. Finally, the relationship between extraversion degree and speech accuracy was investigated using Pearson product-moment correlation coefficient. Preliminary analyses were performed to ensure there is no violation of the assumptions of normality, linearity and homoscedasticity. There was an insignificant positive correlation between the two variables,  $r = .21$ ,  $n = 28$  revealing no significant relationship between the extraversion level and speech accuracy which is consistent with Dewele and Furnham (2000) findings on the speech accuracy and extraversion level investigation.

## 5. Delimitations

Since numerous variables may be found to be affecting ESL proficiency, and consequently the L2 oral production, it is beyond the scope of the present study and also extremely difficult to consider all the potential variables that might account for the differences in how L2 learners develop higher proficiency in the areas of speaking in one study, intensively.

Therefore, the focus of the present study is to investigate the relationship between (E-I) and L2 verbal communicative language ability. Henceforth, further research on the impact of other confounding variables including teachers' effectiveness, motivation, gender, learning styles, willingness to communicate, and language learning strategies on developing L2 oral skill across extroverts-introverts is required.

Furthermore, the present study aims at merely addressing one language skill (speaking) exclusively; therefore, further studies are recommended to be conducted on the role of this personality type indicator on the L2 achievement in the area of listening, reading, and writing, as well.

## 6. Conclusion

The findings of the study suggest that there is a strong negative correlation between the extent of extraversion and public speaking anxiety. In other words, the more extraverted, the less public speech anxiety is noted. Moreover, the study reveals that there were significant differences regarding speech anxiety between the pairs of highly extraverted and quite introverted, highly extraverted and moderately introverted, and finally moderately extraverted and quite introverted groups. Besides, a strong positive correlation was found between the extraversion level and speech fluency. In the end, no significant relationship was detected between the extraversion degree and speech accuracy.

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