

ORIGINAL RESEARCH PAPER

EXTROVERSION AND INTROVERSION IN SECOND LANGUAGE ACQUISITION

Mirela Alagić 

International Burch University, Sarajevo, Bosnia and Herzegovina

Correspondence concerning this article should be addressed to Mirela Alagić, International Burch University, Sarajevo, Bosnia and Herzegovina. E-mail: mirela.alagic@gmail.com

ABSTRACT

One of the most important factors influencing second language learning is proven to be personality which can be divided into subsets of traits. Extroversion-introversion is the most researched and studied personality trait for it not only affects the learners' success in acquiring a language, but it also influences the personality adopted during that process. Knowing the affect one's personality has on their L2, it leaves an opportunity for teacher to adapt their teaching methods in favour of students, which could possibly improve their language knowledge. In this paper the relationship between personality and second language acquisition (SLA) is tested in two parts. The trait of extroversion-introversion is tested through the NERIS Type Explorer and the proficiency with International English Language Testing System (IELTS). The results of the study showed no significant difference between introverted and extroverted students in English proficiency; however, some variations in scoring were noticeable. This research is expected to provide teachers with the insight into how students with different personality types score in different segments of L2 tests. Moreover, it allows them to polish and further their knowledge to reach the best of their capabilities.

Keywords: second language acquisition, MBTI, introversion, IELTS, and extroversion

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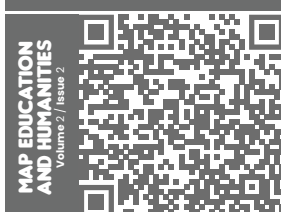
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Introduction

Second language (L2) refers to the language a person learns after acquiring the first or native language (L1). Research showed that the success or proficiency in L2 differed despite the circumstance in which they obtained the language were the same (Ellis, 2008). The reasoning behind it narrows down to variables which influence the L2 learning process, which are divided into cognitive, affective and personality variables (Johnson, 2001). Cognitive variables are the representation and information processing; affective consist of anxiety and motivation; personality is often linked with several traits different for every person. Ellis (2008) stated that individual differences are factors which influence the time it takes for one to learn a language and how proficient they might be. There are many classifications of individual differences (Cohen & Henry, 2010; Dörnyei & Skehan, 2003). Ellis (1994) gave his taxonomy which consisted of seven categories: age, language aptitude, motivation, learning style, beliefs, affective states, and personality. This paper examines the relationship between a personality type and L2 learning.

Funder (2007) refers to personality as “an individual’s characteristic patterns of thought, emotion, and behaviour, together with the psychological mechanisms, hidden or not, behind those patterns” (p. 5). In other words, personality affects choices, preferences and ideas which means that it will also leave a mark on the process of learning a language. Moreover, personality dictates how one will learn a language and the content one will learn (McCaulley & Natter, 1980). Therefore, Ellis (1985) concluded that as much as personality impacts the L2 learning, the L2 learning process impacts one’s personality for they acquire a new version of themselves when learning a language.

There are several traits which we link to personality: anxiety, self-esteem and extroversion or introversion. The concept of personality and its traits has been considered difficult because it can be hard to measure and define. They are diverse individual characteristics of a learner and compared with previous research they have not gained enough attention until recently (Ellis, 1994). One aspect of it which affects the L2 the most and has been considered an unpleasurable field to research is extroversion – introversion (Dewaele, 1999). To measure this personality trait there are three viable instruments: Eysenck Personality Questionnaire (EPQ) (Eysenck, 1975), Myers-Briggs Type Indicator

(MBTI) (Myers & Briggs, 1962), The Big Five (Fiske et al, 1949), and NERIS Type Indicator.

Extroversion and introversion are the most researched traits of personality (Zhang, 2008), describing how one sees or relates to the outside of the world (Jung, 1921/1971). Thus, extroverts seek extra stimulation from engaging in conversation and energize from social gatherings while introverts seek enjoyment within their comfort and thoughts (Myers, 2003). Consequently, extroverts are defined as the ones who live in the moment and introverts as the ones who try to firstly understand things before living them out (Myers, 2003).

Studies focusing on the correlation between introversion-extroversion and L2 showed various results. It has been claimed that extroverts have a better short-term memory and are unaffected by stress thus seeking richer opportunities to use their L2 (Furnham & Dewaele, 1999). On the other hand, introverts achieve a higher richness and more explicit language when under stressful situations (Furnham & Dewaele, 1999). Ellis (1994) stated that extroverts will have better basic interpersonal communication skills while introverts will have better cognitive academic abilities. Although research showed a connection between L2 and this personality trait (Bush 1992; Thorne 1987), a few showed no correlation (Ehrman & Oxford, 1989; Naiman, 1978; Wakamoto 2000). Therefore, there is a need for further studies to provide us with new insight into the matter. Knowing which group has an advantage in certain aspects of the language gives a new opportunity for teachers to strengthen the students’ L2 with teaching methods suitable for their type. Moreover, teachers can make an environment which suits students the best and lets them thrive.

In this paper, the correlation between introversion-extroversion will be tested through the usage of the NERIS Explorer Type Indicator and a standardized English test. It was inspired by Moody’s (1988) and Sharp’s (2003) research using similar instruments.

Literature review

The connection between personality types and the hemisphere of the brain could describe the root of differences in acquiring the language (Chen, 2020). Studies showed that left-brain dominants are mostly introverts while right-brain dominants are extroverts (Crossman & Polich, 1989). Addition-

ally, introverts end up needing more time to retrieve long-term information compared to extroverts (Eysenck, 1981). The reasoning behind this, says Eysenck, lies in the overstimulation of the brain that occurs in introverts putting them at disadvantage. Also, introverts seem to have their attention divided into two parts (task-related cognition and self-related cognition) because of their anxiety forming when put under pressure. Another research done by Matthews (1992) showed how extroverts are better at storing multiple verbal inputs which means they outperform introverts in stressful situations. Eysenck (1991) adds that extroverts are not easily swayed under pressure which keeps their attention better allowing them to focus on one task at a time devoting their time and giving better performance.

There have been many studies done on the topic of the correlation between personality traits and L2 proficiency. Rossier (1975) found a positive correlation between extroversion and oral English influence much like Robinson et al. (1994), Hassan (2001) and Sulimani (2014). The explanation for that was presented by Hurd's (2002) assessment that extroverts tend to participate more in classroom interactions, worry less about their accuracy and tend to risk with their language. Ehrman and Oxford (1989) explained that the reasoning behind introverts not initiating any sort of communication lies in their fear of meaning and context followed by possible mistakes and fear of punishment. Swain and Burnaby (1976), Sharp (2009) and Tehrani et al. (2014) argued in favour of introverts with the explanation that introverts performed better in pronunciation. Ellis (1994) stated that introverts are better language learners as they have developed cognitive academic ability which was later explained through Zafara and Meenakshi's (2011) statement that because of those abilities, introverts learn language more at ease.

On the other hand, Ellis (1994), Bush (1975), and Carrel et al. (1975) found no correlation between personality and English proficiency although there was a weak negative correlation between extroversion, grammar, and vocabulary. Wakamoto (2000) much like previously conducted studies found no correlation between personality and English proficiency in Japanese students.

When viewing the previously conducted studies it can be said that the results are contradictory. Newer data is needed to assess whether there is a statistical difference between the traits and English proficiency. Especially when taking into

consideration different aspects which influence one's L2 and the changes that each new generation brings.

When it comes to research of similar scale done in Bosnia and Herzegovina, there is a study of Obrlić and Mulalić (2017). They used The Big Five model for personality analysing a connection between the traits and their choice for language learning strategies. However, they did not analyse the traits and their English proficiency. Another study was done by Saračević et. al (2021) where anxiety, neuroticism, and the personality trait of extraversion were explored. The data showed that extraversion is not necessarily a trait that guarantees English proficiency. Additionally, they found out that extraversion is a positive predictor for self-reported EFL knowledge (p. 152). Therefore, this study holds a significance because it will not only add to the small number of same studies conducted in Bosnia, it will also enable professors and researchers to see how personality impacts the L2 of Bosnian students.

Present study

The study was designed to examine the relationship between extroversion/introversion and English proficiency through a standardized English test and the NERIS Type Explorer personality model.

Research questions

1. Is there a statistically significant difference between the trait of extroversion-introversion and each aspect of the English test?

Hypothesis

1. There is a statistically significant difference between extroverts and introverts in the listening segment of the English proficiency test.
2. There is a statistically significant difference between extroverts and introverts in the reading segment of the English proficiency test.
3. There is a statistically significant difference between extroverts and introverts in the writing segment of the English proficiency test.
4. There is a statistically significant difference between extroverts and introverts in the speaking segment of the English proficiency test.

Participants

The study was carried out with 50 high schooler students from 2 gymnasiums in Sarajevo, Bosnia and Herzegovina. The age of the participants ranged from 17 to 19 with 9 participants being 17, 35 participants 18, and 6 participants 19. The majority of the students were male with the number being 34 and 16 were female. 45 participants declared Bosnian as their L1, 1 person stated Serbian, 3 participants wrote Croatian, and 1 person stated English as their L1. 8 students wrote that they only study English besides their L1. 45 students exclaimed they study one more language (mostly German) next to English and L1 and 9 students confessed to studying one more language besides their L1, L2 and L3.

participants were given 20 minutes to solve them. Instead of two essays, the writing was shortened to one for and against essay for which they had 30 minutes to write. In total, the adapted version of IELTS took an hour and 10 minutes to finish.

When it comes to the grading criteria for each segment of the IELTS excluding speaking and writing each question earns the participant one point which amounts to 40 raw points in total. To stay in the IELTS grading scale and CEFR system, in the adapted version of IELTS each question scored the participant 2 points so that in the end the scores would still amount to 40 (Table 1).

Table 1:
IELTS score converting

B.Score	9	8.5	8	7.5	7	6.5	6	5.5	5	4.5	4	3.5	3
CEFR	C2	C1	C1	C1	C1	B2	B2	B2	B1	B1	B1-A1	A2	A2
Listening	40-39	37-38	36-35	32-34	30-31	26-29	23-25	18-22	16-17	13-15	11-12	12-14	9-11
Reading	40	39	37-38	36	34-35	32-33	30-31	27-29	23-26	19-22	15-18	12-14	9-11

When it comes to their grades, 23 participants reported they had an A in English, 17 said their final grade in English was B, 7 stated they had a C as their grade and 2 wrote D. One person did not enter the grade. All of them were either in their 3rd year or 4th year of high school meaning their proficiency level in English should be according to the Common European Framework of References for Languages (CEFR) B1/B2 level.

Instruments

The study was conducted through two tests: NERIS Type Explorer and International English Language Testing System (IELTS). The NERIS Type Explorer was used to determine the personality trait of participants, whether they were extroverted or introverted. For this research, the European version of the test was used. It was done through an online site called 16Personalities and it consisted of 88 questions. IELTS (Academic version) was used to see their proficiency in four segments of the English language: listening, reading, writing, and speaking.

IELTS is a test made by the British Council for non-native English language speakers. For this study, the IELTS test was shortened by half due to time limitations. This version had 20 questions for listening for which they had 15 minutes and were only able to listen to the recording once. The reading part of the test also had 20 questions and the

Procedure

The targeted high schools were chosen because of their success in various English competitions. The researcher contacted the director and the administrative staff of the high school by phone and before the testing paid a visit to walk the director and English teacher through the details. After the approval of the director, the teacher, and the researcher also gained the approval of the Ministry of Education of Canton Sarajevo to conduct the test without any legal issues. At the end of December 2021, 28 randomly selected students were summoned into the classroom to start the testing. The testing took three days, from Monday to Wednesday 29th. On Monday the students were given the NERIS Type Explorer personality test together with the IELTS test containing the listening, reading, and writing section. The testing took an hour and a half. Due to lack of time and other obligations, the speaking part was conducted in the next two days. On Tuesday schoolers have taken the oral exam and the testing took 3 hours. In February 2022, the researcher conducted the same testing in the second gymnasium with a sample of 22 students. Due to the obligation students had to attend and the many tests they needed to take; the listening segment of the test was not tested.

Results

The gathered sample was analysed using Statistical Package for Social Sciences (SPSS) version 26. To be able to compare who scored higher or lower for the test, the option compare means was used where the trait I-E was selected as the independent variable and the IELTS test parts as a dependent. Additionally, to see whether there is a statistically significant difference between the trait and the English proficiency, an Independent T-test was used to show the results.

The number of extroverts (31) was higher than introverts (19). As seen in Table 2, extroverts performed better in every segment of the test. When it comes to listening, introverts showed lower results with $M = 30.35$ and $SD = 6.61$. Likewise, in reading extroverts were better ($M = 19.83$, $SD = 8.17$) than introverts ($M = 19.72$, $SD = 6.56$). Writing scores showed the same results as previous test segments where introverts had lower scores ($M = 27.70$, $SD = 8.75$). Lastly, speaking results had the same outcome, introverts were worse ($M = 29.20$, $SD = 10.89$)

On the other hand, the highest score for the extrovert trait was higher compared to the highest score for the introvert trait.

Table 2:
I-E and IELTS score

	E	I	E	I	E	I	E	I
	M		SD		Min		Max	
Listening	30.35	30.05	5.90	6.61	14	18	40	38
Reading	19.83	19.72	8.17	6.56	4	8	36	32
Writing	29.82	27.70	10.45	8.75	0	14	40	40
Speaking	29.24	29.20	8.9	10.89	10	7	40	40

Table 3 presents the results of the Independent T-test. To be able to state that there is a difference between traits and proficiency, the significance level needs to be lower than .05. The results show that there is no statistically significant difference between the trait of extroversion-introversion in English proficiency ($p > .05$).

Table 3:
Introversion and extroversion significance value

	p	t	df
Listening	.30	.16	47
Reading	.22	.05	47
Writing	.65	.07	44
Speaking	.31	.01	38

Discussion

The studies on personality traits of extroversion and introversion having an impact on SLA proved to be divided, as some have found some correlation others have found none. Based on the studies that did find some it is said that extroverts would be better at reading and speaking while introverts would be better at listening and writing. To find possible similarities with other studies or any new findings, the research hypothesis must be analysed.

When engaging in a discussion with them before speaking exam most introverts showed interest in tv series, shows and video games which turned out to be their main source of English input excluding school. Furthermore, all of them said to use English when communicating with their friends

despite all of them being Bosnian L1 users. This has been confirmed by other studies exploring the presence of English in this particular setting (Ahmetović & Dubravac, 2021; Brdarević-Čeljo, Bećirović & Dubravac, 2021; Brdarević-Čeljo & Dubravac, 2022; Dubravac & Skopljak, 2020; Ribo & Dubravac, 2021). They explained the reason for this being that they felt less awkward when speaking about personal problems or issues and also felt more confident in their English or L2 than in their L1.

Much like Bush (1975), Carrel et al. (1975), Ellis (1994), and Wakamoto (2000), this study showed that there is no significant difference between in-

troversion-extroversion and English proficiency in this study. The reason for this could lie in the changes that new generations carry with themselves, meaning that with each generation that comes, their behaviour changes. Thus, shyness which was considered a setback when acquiring a language and which tends to be common to introverts (Ehrman & Oxford, 1989) do not matter today. The reasoning behind this could be seen in the advance of different media through which they could come in contact with English more than for example in a school setting. Additionally, it has been questioned whether a person needs to be put into a box and labelled as an extrovert or introvert. A new term arose among researchers and that is ambivert a person who adapts to their setting. This could explain the reasoning behind the results seeing as some people are extroverted on one occasion however when put under pressure or not sure about their knowledge could “switch” to introverts. It should be also taken into consideration that this might not be the case for everyone.

The hypothesis that there is a significant difference between extroverts and introverts in the listening segment of the English proficiency test has been disproved by the results ($p > .05$). Despite no statistical difference, extroverts were better than introverts. The results could be explained through the curriculum. Usually, students when having a listening exam are allowed to listen to the recording twice. However, that was not the case in this study which could be the reason why both traits scored almost similarly.

The results of the reading test disconfirmed the hypothesis that there is a statistically significant difference between extroverts and introverts in the listening segment of the English proficiency test. However, despite the notion that introverts would have higher scores in reading because of their inclination towards books, extroverts showed better knowledge. During the testing, many introverts displayed performance anxiety because of the time limitation whereas extroverts showed no nervousness.

The hypothesis that there is a statistically significant difference between extroverts and introverts in writing and speaking has been refuted by the data. Another reason for such results could be the number of extroverts and introverts who could not be controlled. The speaking part could be explained through Hurd's (2002) statement. He said that extroverts will be better at speaking because

they tended to seek out opportunities to use their L2. Additionally, he claimed extroverts are risk-takers with no regard for accuracy, unlike introverts. During the oral part of the exam, introverts who were surrounded by their peers displayed weak pronunciation skills and often stuttered. However, once in a more private setting, many of them outperformed extroverts just as Swain and Burnaby (1976), Sharp (2009) and Tehrani et al. (2014) stated.

Conclusion

The conducted study argued in support of a relationship between personality and L2. The data collected in Sarajevo, however, revealed that there is no significant difference between introversion-extroversion and English proficiency based on the trait. However, some segments can be taken into consideration.

Extroverts showed greater knowledge with higher scores in all parts of the test. However, they expressed a lack of patience during the reading segment of the test and skimmed over the text leaving more time for the writing part. Additionally, a larger number of participants with extroversion traits showed a lack of motivation for learning a new language. Some, during a discussion, numbered difficulty and lack of interesting material as the reason for no motivation. Introverts, despite posing a better range of vocabulary, when recorded refused to use it because of the fear which hindered their scores. Furthermore, they expressed the same fear to be the obstacles they faced during the writing part of the exam. The lack of knowledge was not the main reason for their lower scores which should be taken into consideration when such a group is examined.

What one should bear in mind is that scores on the test are often influenced by many things besides personality. There is other individual difference which could play a role in how high a participant scores on the test. Another thing which should be mentioned is that some participants exhibited stress and other signs which could affect their scores. All of this should a teacher take into consideration when grading their pupils.

Certain limitations arose during the collection of data which could interfere with the results. Among the most significant one is the number of participants and the time to collect the data. Due to the number of students participating in this research, the speaking part of the exam was impossi-

ble to be tested therefore leaving a gap in whether extroverts perform better than introverts because of their outgoing nature. To further explain, the research is conducted in high schools with a limited number of free times which they are willing to offer to conduct the test. Furthermore, the willingness of participants and their current state of mind while working on the test could affect the overall results. Seeing as some participants refused to be recorded during the speaking exam leaving the researcher to grade based on what was heard during the interview, this leaves space for a possible error in grading. Another limitation is seen in the personality test which not be accurate seeing as some of the participants had different scores when attempting the test, a couple of times.

Suggestions for further research are the effect of video games on one's L2.

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