

12-2017

Assessing Introversion and Extroversion in a Second Language Setting

Caitlin Skellett
St. Cloud State University

Follow this and additional works at: https://repository.stcloudstate.edu/engl_etds

Recommended Citation

Skellett, Caitlin, "Assessing Introversion and Extroversion in a Second Language Setting" (2017). *Culminating Projects in English*. 110.
https://repository.stcloudstate.edu/engl_etds/110

This Thesis is brought to you for free and open access by the Department of English at theRepository at St. Cloud State. It has been accepted for inclusion in Culminating Projects in English by an authorized administrator of theRepository at St. Cloud State. For more information, please contact rswexelbaum@stcloudstate.edu.

Assessing Introversion and Extroversion in a Second Language Setting

by

Caitlin E. Skellett

A Thesis

Submitted to the Graduate Faculty of

St. Cloud State University

in Partial Fulfillment of the Requirements

for the Degree of

Master of Arts in

Teaching English as a Second Language

December, 2017

Thesis Committee:
Choonkyong Kim, Chairperson
John Madden
Masha Mikolchak

Abstract

This study aims to create a useful tool for assessing personality in the language classroom by testing a newly created personality test and comparing its results to a previously used and well-known tool. Participants in this study were 51 international students enrolled in the English for Academic Purposes program at a Midwestern university. They came from various L2 backgrounds including Chinese and Nepali. The new personality testing tool was created by simplifying the existing tool's language and adding context to each question on the test, so that students are tapping into their personality as a language learner instead of their general personality traits. Students took this newly created test, named the Extroversion/Introversion in Language Learning Test (EILLT), and the Myers-Briggs Type Indicator (MBTI) along with an oral language assessment. The researcher compared the results of the three tests looking for correlations. The study showed that the new tool was more effective at assessing personality in the language classroom because it provided statistically significant results when correlating with the language measure while the MBTI did not provide statistically significant results. It also confirmed that participants scored more introverted when they thought of their personality in the language classroom, than when they thought of their overall personality. The researcher recommends the EILLT be utilized by language teachers in the future who want to better understand their students' personalities so as to best support their students in the classroom.

Table of Contents

Chapter	Page
I: Introduction	7
II: Literature Review	9
Research on Introversion/Extroversion's effect on L2 Ability	9
Defining Constructs in SLA.....	9
Positive Correlation Found	12
No Correlation Found	14
Problems with Previous Methodology and Tools	18
Research Variables.....	18
Myers-Briggs Type Indicator and Other Personality Tests	20
Research Questions	22
III: Methods	23
Participants	23
Materials	23
Procedure	29
Analysis.....	30
IV: Results	31
V: Discussion	37
Pedagogical Implications	40
Future Research	41
Limitations	43
References.....	45

Appendices

A. Changes made from MBTI Test to EILLT49

B. Informed Consent Document.....50

List of Table

Table	Page
1.1 Summary of Studies Reviewed.....	16

List of Figures

Figure	Page
3.1 MBTI-Style Test	24
3.2 Extroversion/Introversion in Language Learning Test (EILLT)	27
4.1 Correlation between Total Speaking Test Score and Personality	32
4.2 Extroverts and Introverts Score on Speaking Test.....	33
4.3 MBTI Versus EILLT Personality Scores.....	35
4.4 Week 1 Versus Week 2 Personality Scores	36

I: INTRODUCTION

Numerous educators and researchers have created formal or informal hypotheses on the nature of the relationship between personality and language ability but rarely has an agreed upon consensus come from these hypotheses. Even someone outside of the academic field of TESOL might have an opinion when it comes to the question of personality's relation to language learning. Looking specifically at the personality traits of introversion and extroversion compared with oral language ability, numerous studies have been done (Chen, Jiang, & Mu, 2015; Dewaele & Furnham, 2002; Lestari, Sada, & Suhartono, 2015; Moyer, 2015; Sharp, 2008; Suliman, 2015; Van Daele, 2005) to examine any relationship between personality and language. Of these studies, the vast majority disagree in their results which begs the question of why this variation has occurred.

Examining the previous studies' methodology, one of the major areas in question is the use of the personality test. Sharp (2008) and Chen, Jiang, and Mu (2015) cite the personality tests' ineffectiveness in their limitations section. Similarly, psychological research findings (Nofle & Fleeson, 2015; Pittenger, 2005; Pomerance & Converse, 2013) promote the idea that personality test designs may be faulty. Using these tests in the previous research's methodology could be the reason why results have varied and questions have gone unanswered.

Current research shows that the very nature of constructs, such as personality, may need to be defined differently (Dornyei, Henry, & Muir, 2016). With the changing views on constructs, new tools to assess these constructs must be created. The goal of this study is to create a new tool which takes into account current research trends dealing with the nature of personality, as well as research on the effectiveness of personality tests to effectively assess language learners' personalities within the context of their language learning. Based on the

findings of this study, the newly created tool may provide researchers with an option to use to accurately assess language learning personality in their studies.

II: LITERATURE REVIEW

Research on Introversion/Extroversion's effect on L2 Ability

Defining Constructs in SLA

The idea of personality has been defined in many different ways over time. Without a single way of looking at personality, it is impossible to create the basis for a study on something that does not have a set standard. This literature review will start by examining the many ways personality, introversion, and extroversion have been defined in past research in the field of SLA as well as other fields, and then define these constructs as they will be used in this study for the purpose of clarity.

Hu and Reiter (2009) outline five different ways of defining personality: psychoanalytic, learning/behaviorist, dispositional, cognitive, and biological. Depending on which of these definitions a researcher adheres to, they may see personality's boundaries and level of variability in very different ways. According to Hu and Reiter (2009), most studies have dealt with the dispositional view of personality, which believes that people are consistent in their thoughts and actions. But if a different study took a psychoanalytic view of personality, for example, they would believe that personality is a dynamic set of processes always in motion.

The issue of defining personality brings up an important question: is personality variable? If so, how can a changing entity be measured? This question is something all researchers in this field should consider. Chen et al. (2015) declared that students' personalities may be different in and out of school, thus considering personality as a variable trait. Dewaele (2005) believed "language learners or users are constantly bombarded by events that continuously shape and reshape their personalities" and thus change their language learning abilities (p. 371).

Many SLA theorists are skeptical of psychology (Dewaele, 2005), but when examining personality, a largely psychological construct, researchers must consider the current research being done in the psychological field. One interesting psychological perspective currently undergoing research is that of intraindividual variability. In the field of psychology, personality was traditionally viewed as stable, but Nettle and Fleeson (2015) argue that frequent and short-term variability happens. Nettle and Fleeson (2015) argue that considering intraindividual variability is important because “it is clear that a full description of what people are like will include that a person is not always the same and varies at least a little bit from moment to moment” (p.177). This view of personality posits that each person’s behavior includes an average and a standard deviation for the way in which it is possible they might behave. Finally, those who believe in intraindividual variability believe that personality development is a lifelong process – even studying adults would not improve the accuracy of a static personality trait test.

While intraindividual variability may be a new term, the idea of having multiple aspects to your personality has been generally accepted, even since the beginning of Isabel Briggs Myers’ venture into the world of personality theorizing in her book *Gifts Differing*. Myers states that every person has a dominant trait, but the auxiliary trait will also be a constant part of them. Her idea is that an individual will strengthen one process over another due to their inherent and natural choice based on “the way people prefer to use their minds” (Myers, I.B., 1980, p. 1). It is important for SLA researchers to realize that certain individuals may not be able to be defined as an introvert or extrovert if they do not have a strong preference or have not strengthened one trait over another.

Not only is defining personality a concern, researchers also must define what exactly extroversion and introversion mean in the confines of their study. Hu and Reiter (2009) noticed

that different tests define extroversion in different ways and get different results showing “how important it is for researchers to understand the exact meaning of the same label in personality research” (p.106). Meyers (1980) defines introverts as being more concerned with the “inner world of concepts and ideas... [versus extroverts who are] more involved with the outer world of people and things” (p. 7). In the working or schooling world, introverts show concentration on a task and they must have the right idea about something before sharing it with others. Extroverts, on the other hand must share their work widely with others (Myers, 1980). Defining these traits prior to conducting a study will allow researchers to pinpoint the exact personality type they are studying.

This seems to be a time of change for many constructs in the language teaching world. Not only, as this study proposes, should the idea of personality in a language classroom be reviewed, much work has been done recently on the changing construct of motivation in the language classroom (Dornyei, Henry, & Muir, 2016). Dornyei et al. (2016) remind us that the construct of motivation has gone through many changes, one of the most recent being a shift to “*temporal variation* of motivation (i.e., how motivation changes over time)” (p. 22). Few instances of similar research have been done related to personality, but it seems that the two constructs run parallel to each other in that both shift and vary based on the situation in which the learner finds himself.

For the purpose of this study, the researcher will define constructs with the most current and widely accepted definitions held today. This study will look at personality through a psychoanalytic lens as a variable trait that can change overtime or within different situations. The American Psychological Association (2017) defines personality as “individual differences in

characteristic patterns of thinking, feeling and behaving.” The personality test created will try to tap into this view of personality.

Introversion will be defined following Myers’ (1980) example, as people who are concerned with their own inter-workings and are able to re-charge by being alone. Extroversion will be defined as people who are more interested in the outer world and who gain energy by spending time with others.

Positive Correlation Found

There have been many studies that confidently have reported a relationship between extroversion and second language speaking ability. The basic assumption in SLA theory has been that extroverts are better language learners than introverts. Gass, Behney, and Plonsky (2013) pointed out, “the gregariousness associated with extroverts would suggest that they would engage in more talking and social activity in an L2 and thus learn the language better” (p. 465-466). Some individually conducted studies that agree with these terms are now discussed.

In a study of 33 Indonesian University English Education students, Lestari, Sada, and Suhartono (2015) found a moderate relationship between introversion and extroversion and speaking test scores. Extroverts did slightly better than introverts in this study. This study used the Mark Parkinson Personality Questionnaire which emphasized an indirect communication technique of acquiring data. It was modified by a psychologist to be more appropriate for the students. The researcher also observed the students’ personalities in their language class and combined the results from the observation and from the questionnaire to determine the student’s personalities.

Moyer (2014) looked at the success of certain individuals in achieving perfect native-like accents while others spend their whole lives unable to speak with such pronunciation. Moyer

(2014) discussed many possible causes for this, one of which being personality and “openness to developing new experiences,” as well as “one’s perceived ease of establishing contact with native speakers” (p.432). These two qualities (i.e. openness and perceived ease of contacting native speakers) that make native-like pronunciation more easily achieved are also traits that can be linked with the openness of extroverts and their tendency to seek out external stimuli.

In Dewaele and Furnham’s study (1999), they stated that extroverts had a higher fluency rate than introverts, but they did not outperform introverts when it came to accuracy. The study found the same results in formal and informal situations, with the fluency of extroverts over introverts improving in higher complexity situations.

Scientifically, Dewaele (2005) believes extroverts have the advantage over introverts in their short-term memory processing abilities. He speculated that “levels of dopamine and norepinephrine, which are vital in attentional and working memory processes, might exceed optimal levels more easily in introvert than in [extrovert] L2 users. Such excess could cause an overload and a breakdown in fluency” (p. 373). There has not been enough research done on this subject to prove Dewaele’s beliefs, but studying the brain to determine personality is an idea with promise (this will be discussed in more detail later in this study when examining implications for future research).

Suliman’s (2015) study of 20 male and female university English majors, in which he administered a questionnaire asking about student’s personality and their personalities’ perceived influence on their language acquisition. He then observed students’ behavior in a classroom and found distinct differences between extroverts and introverts in the language classroom. He found that extroverts were more likely to succeed because even when they were unsure of the answer they “were likely to try out a large amount and variety of different word types with high speech

rates and legible pronunciation” (p. 112). As Rod Ellis’ (2014) principle states, output is vital for second language learning, so in this sense, extroverts have an advantage over introverts who Suliman (2015) saw “avoid interaction in English classes because they might be afraid of embarrassing themselves when speaking incorrectly or being unable to speak” (p. 112).

The preceding research has argued for a positive correlation between extroversion and some aspect of second language speaking, which is the view supported by the majority of scholars in the field of SLA. Next, we move to a discussion of those studies that found the opposite.

No Correlation Found

While the standard in the SLA field has been to believe that extroverts make better second language speakers, many studies have gone against that theory and have found no correlation between extroversion and second language speaking ability. In examining past studies, Tarone (2009) asserted that most researchers “have found that these particular personality traits [extroversion and introversion] do not seem to affect success; both extroverts and introverts can succeed in attaining their language learning goals” (p. 4). The following section reviews studies that enforce these beliefs.

One study, done by Chen, Jiang, and Mu (2015) found that neither extroversion nor introversion were key factors in English language performance. This study used a self-reporting questionnaire which was an adapted version of the Eysenck Introversion-extroversion Scale translated into Chinese. as well as the teacher’s and fellow students’ observations to get a more complete view of personality. They then conducted a speaking test where the students were assessed by an examiner on accuracy, range of vocabulary, grammar, size of contributions, and

discourse management. Taking a broad look at speaking skills, none of them seemed to be impacted by extroversion or introversion factors.

Another study done by Sharp (2008) found no statistically significant results when examining 100 Hong Kong university undergraduates. Although this test purported to examine overall language ability, it only tested reading and grammar, believing that these were appropriate measures to predict language proficiency. (See the research variables section below for a discussion on this.) The study gave the Myers-Briggs Type Indicator (MBTI) personality inventory (an extremely popular and well-known test of personality), a strategy test, and a language proficiency test to compare the results.

Van Daele (2005) conducted a fairly well-scoped and innovative study, in which two second languages were looked at, rather than one, to determine if extroversion's effects were stable across different target languages. Linguistic accuracy and complexity of production were examined in a picture story retell task. This study was also longitudinal in that it collected data at three six-month intervals to determine if the effects were stable over time. The results were very inconclusive. Van Daele found that only the measure for lexical complexity correlated positively with extroversion. The longitudinal data showed that the effects of personality were not consistent over the three testing periods and that the effects decrease over time. Overall, extroversion had no effect on accuracy or fluency.

These studies' findings were interesting because the results did not show any relationship between introversion/extroversion and speaking ability. Researchers must decide if something has been faulty with their methodology, or if there really is no correlation. One way to do this would be to replicate the research, although replicating the same flawed studies would not be a good use of resources. See Table 1.1 for a summary of all studies reviewed here. The next

section examines possible methodology pitfalls in hopes of recognizing the problems of past studies and avoiding them in the future.

Table 1.1

Summary of Studies Reviewed

Study	Personality Test Used	Language Construct Examined	Personality Definition	Introvert/Extrovert Definition	Extroversion Correlates with Higher Ability? Y/N
Lestari, Sada, and Suhartono (2015)	Mark Parkinson Personality Questionnaire	Overall speaking performance	A dynamic and organized set of characteristics possessed by a person that uniquely influences his or her cognitions, motivations, and behaviors in specific situation	N/A	Yes
Dewaele & Furnham (1999)	Eysenck Personality Questionnaire	Speaking fluency and accuracy	Biological	Higher/Lower levels of arousal in the nervous system	Fluency-Yes Accuracy-No
Suliman (2015)	Questionnaire on personality and its perceived effect on language learning	Speaking, listening comprehension and reading comprehension	Personality Factors: It is a feature or a quality that is assumed to distinguish one student from another.	Introvert: It means a person who is more concerned with his own emotions and feelings than in issues outside himself. In other words, it means being too shy to join social activities.	Yes

				Extrovert: It means a person who is more concerned with what is happening around him than in his own emotions and thoughts	
Chen, Jiang & Mu (2015)	Eysenck Personality Questionnaire (adapted version)	Oral communicative ability	N/A	Introvert: reserved, shy, self-restrained Extrovert: social, outgoing, talkative	No
Sharp (2008)	MBTI	Reading and grammar	Everyone is different and individuals are characterized by a unique and basically unchanging pattern of traits, dispositions or temperaments	N/A	No
Van Daele (2005)	Eysenck Personality Questionnaire	Speaking accuracy and complexity	Biological	Higher/Lower levels of arousal in the nervous system	No

Problems with Previous Methodology and Tools

It is impossible to compare the studies detailed above on a one to one basis. Each study is variable in how it defines and measures personality, and how it measures language ability. The studies also vary in regards to situational aspects such as culture, location, and demographics of the subjects, and language skills assessed. These pitfalls can explain much of the variation in results.

Research Variables

Personality Measurement Tools. The first and largest variable between tests is that each one not only defines personality, introversion, and extroversion in different ways, but each one also uses different measurements of personality. Table 1 shows the various personality measures that were used for each test which led to many different results. The personality measures used in the articles reviewed here include: Mark Parkinson Personality Questionnaire, Eysenck Personality Questionnaire, Myers-Briggs Type Indicator, and an unnamed questionnaire. It is evident that having such a wide variation among tools can easily skew the results.

Language Measurement Tools. There have also been different speaking factors such as fluency, accuracy, pronunciation, and speed which may need to be separated out and studied individually instead of lumped together when looking at oral language ability.

The way in which researchers conduct tests also needs to be considered. In Sharp's (2008) study, speaking abilities were not tested, although overall language proficiency was assumed to be known. Such studies fall short of their goals because of the way in which they are testing the subjects. This study had a large sample size (100), making it hard to administer a speaking test to each individual, but this logistical problem should not stop the researchers from taking all aspects of language into consideration. When studies do conduct speaking tests, it is

also important to have multiple testers present in each testing situation so that the results of the study do not hinge on one interlocutor's opinion.

Situational Variables. Each study looked at has many unaccounted for situational variables that may be skewing the study in some way. One large consideration is the country in which the study takes place. In a country such as China, where Chen et al. (2015) conducted a study, "Chinese students are encouraged to remain quiet and listen to the teachers attentively, which is also thought to be respectful to the teachers" (p. 586). This cultural fact could mean that extroverts may not be able to benefit from their outspoken personality types in a Chinese classroom. Hu and Reiterer (2009) pointed out "if the 'typical personality' of one culture is more introverted than that of a second culture, [this might affect] the self-concept and persona of individuals speaking the two languages and participating in the two cultures" (p. 97-98). Someone from a more introverted culture will have to decide how to alter their personality to fit into the target language's culture. Similar to cultural differences, the different languages being used may respond to extroversion and introversion differently, as well. Researchers must consider learners' L1 and L2, taking into account language distance, and the difficulty of the language being learned, both factors that could affect how comfortable and extroverted learners feel in their L2 environment.

Wakamoto (2009) believes that gender has a lot to do with extroversion and introversion in that women must find a means of self-expression indirectly within the female role, as extroversion is not a trait that is expected of women. Thus, male and female test subjects should always be accounted for separately when examining extroversion and introversion data, which was not done in any of the studies that were considered for this literature review.

Overall, Dewaele (2005) put it best when he said “Researchers need to be aware that the patterns they are observing may be influenced by independent variables lurking in the background” (p. 370). Once researchers are aware of these lurking variables, they can minimize their impact, thus creating a study that focuses only on what it sets out to determine.

Myers-Briggs Type Indicator and Other Personality Tests

Along with the question of lurking variables, many questions have arisen about the validity of the Myers-Briggs Type Indicator (MBTI). Sharp’s (2008) study decided that a possible reason they did not find the expected correlation was that “personality preferences, as set out in the MBTI, give no indication of student maturity, motivation, or of situational factors” (p. 20). Indeed, situational factors seem to be key when giving a personality test related to a specific situation (i.e. performance in the language classroom). Hu and Reiterer (2009) go so far as to say that “although the MBTI is a standard tool for assessing personality types... the researchers of SLA... did not find it an appropriate indicator in language related issues” (p. 105).

One of the major problems with MBTI, according to Pittenger’s (2005) essay, is that it views personality types as distinctive groups instead of a sliding scale. In past versions of the MBTI, if someone scored in the middle range, they would receive an “X” for that particular category because they were so close to the middle that it was not beneficial to define them as an extrovert or an introvert. In the current version of the MBTI, even if someone is close to the middle, they will still be defined as an extrovert or introvert. When receiving results from a trained psychology professional, this slight variation would be explained to the test taker to alert them that their preference is slight and they may decide to choose a preference to strengthen. Unfortunately, many SLA researchers do not pay attention to this nuance within the MBTI and press forward to draw a black and white line between introversion and extroversion for the

purpose of their study. Thus, studies that have 10 introverts and 10 extroverts may actually have 5 introverts, 5 extroverts, and 10 people that are in the middle. The results of SLA studies may, therefore, be skewed by including the middle section of people with one of the polarizing sides. Because of this, “the MBTI four-letter type formula may imply statistically significant personality differences where none exists” (Pittenger, 2005, p. 213).

The problem is with the way the questions are asked. Tests like the MBTI are considered “forced choice scales” where the subject must choose a polar side, and these tests should be used cautiously in professional studies because human personality is not as black and white as such tests make it out to be (Pittenger, 2005). Ultimately, in the test and the way research has used the test, personality has been viewed as an invariant set at birth, but retests using the MBTI do not support this theory, as people often get different results when they take the test at different times. Finally, many people who have taken the test believe it has mislabeled them based on their own introspection (Pittenger, 2005). Clearly, this is not the reliable test that SLA researchers need to use as a standard when it comes to personality studies.

Another popular personality test to administer in SLA studies is the Eysenck Personality Inventory, but Hu and Reiterer (2009) say this test may have been so popular because it is easy to administer and easy to score, not because it is a valid test for the language classroom.

Regardless of which test is used, the question of personality variability arises once again, seeing that a singular self-reporting test may not be adequate to gain a true understanding of a learner’s personality. Pomerance and Converse (2014) advocate for giving a personality test context to improve the validity of the test. This would mean adding a context such as “in the language classroom” to each question on a personality test (Pomerance & Converse, 2014). Without this frame of reference, learners may access information that is inappropriate for the

context that researchers are looking to test. If a person's self-concept has a high level of differentiation, meaning they can see themselves differently in different situations, it is important to provide a frame of reference to help the learner focus in on the self-concept that the researcher is hoping to test.

Simply adding a frame of reference may not completely clear up all issues with personality tests, as the format itself may be somewhat invalid when assessing complex and variable personalities. Answering questions about your own personality is often a difficult task, seeing as subjects may misinterpret the question, or lie about answers (intentionally or unintentionally). Finally, "limiting [a] study of personality to what is revealed in trait questionnaires, which capture only average behavior, excludes consideration of the variability in how people actually behave" (Nofle, 2015, p. 177). Questionnaires must take into account the context they are most interested in to avoid gathering information only about the subject's average personality.

Research Questions

The previously conducted studies may raise more questions than they answer. Thus, this study sets out to find the answers to these questions by using research-based methods to create a new personality test to assess language learners. The following research will examine these questions:

- (i) Does examining the personality traits introversion and extroversion in a binary or continual way provide more informative results?
- (ii) Does intraindividual variation affect the validity of personality tests given in the language classroom?

III: METHODS

Participants

The participants were 69 ESL students in and ESOL program at a regional university in the Midwest. All of the students were currently enrolled in Listening and Speaking and/or Reading and Writing for Academic Purposes class. Participants were recruited during their class time. The researcher attended English classes to ask for volunteers. All participants were also currently enrolled in regular undergraduate classes for their intended degree program, thus they were at an appropriately advanced level to understand material meant for native speakers. For the second round of testing, only 51 participants returned, thus the number of data sets used in this study is 51.

Materials

The first test given was the Open Extended Jungian Type Scales 1.2 by Eric Jorgenson. Jorgenson presents this test as an equivalent to the Myers Briggs Type Indicator (MBTI). This test is licensed under a Creative Commons Attribution-NonCommercial-ShareALike 4.0 International License. The researcher originally wanted to give the official MBTI but after looking, realized that test administrators must be trained or psychological professionals. For a further discussion on this issue, please see the Limitations heading in the Discussion chapter.

This test was amended to contain only questions regarding introversion and extroversion to save time and cognition of the behalf of the participants. The original format of the test was kept the same (i.e. instructions, choice scale). The test was pilot tested with four graduate teaching assistants in university ESL programs and 6 ESL students of similar demographics to the participants in this study. Each participant in the pilot test was asked if they thought they were an introvert or an extrovert based on their own introspection. The two traits were defined

for pilot test participants. Based on individuals' perceptions, this test appears to have face validity as results largely matched individual's perceptions of themselves.

Based on ESL student's pilot testing, wording of one question on this test needed to be changed. Question number four originally read "Gets worn out by parties" or "Gets fired up by parties." Although the goal was to keep this test in its original format, 4 out of 6 ESL pilot testers asked the meaning of these two phrases, and thus, the researcher found it necessary to change the wording to avoid confusion in the study. It is important to note that previous research may not have amended the personally tests in any way which could have created confusion for students, and less reliability among past studies' results. The edited form of the test is as follows:

Figure 3.1

MBTI-Style Test

Here are 8 pairs of personality descriptions connected by a five point scale. For each pair, you must choose where on the scale between them you think you are. For example, if the pair is "angry" versus "calm", you should circle a 1 if you are always angry and never calm, a 3 if you are half and half, etc.

1	bored by time alone	1	2	3	4	5	needs time alone
2	energetic	1	2	3	4	5	mellow
3	Works best in groups	1	2	3	4	5	Works best alone
4	Gets tired after parties	1	2	3	4	5	Gets excited after parties
5	Talks more	1	2	3	4	5	Listens more
6	Stays at home	1	2	3	4	5	Goes out on the town
7	Finds it difficult to yell very loudly	1	2	3	4	5	Yelling to others when they are far away <u>comes naturally</u>
8	Likes to perform in front of other people	1	2	3	4	5	Avoids public speaking

The test created by the researcher was the second test given, which was named Extroversion/Introversion in Language Learning Test (EILLT). The test is an edited version of Figure 3.1. Because of the aforementioned research on the MBTI, this test was edited for several qualities in order to make it more reliable and accurate (see list that follows).

First, the language in the test was simplified to make it more reliable. MBTI is said to be at a seventh grade reading level, but to be certain, the researcher wanted to create a tool that had no ambiguous wording or exceedingly difficult vocabulary. Examples of such changes include changing “mellow” to “calm” and changing “worn out” to “tired.” (See a full list of changes made in Appendix A). After these changes were made, the EILLT was run through LexTutor VocabProfilers and it found that 97.38% of words in the test are covered by the first 2000 most frequent vocabulary words. There are only 3 academic words in the questionnaire: energy, individual, and topics. These are words that students in the English for Academic Purposes program will be familiar with based on their experience in college-level classes.

Secondly, each question was edited to be given the context of the language classroom to make the test more valid, as Pomerance and Converse (2014) had recommended. This was done to give students the proper situational aspects of their personality to access while answering the questions. If intraindividual variability plays a role in personality, this added context should pinpoint some of the variation.

Thirdly, the researcher changed the choice scale to a Likert-type scale with a choice of 0-5. This scale avoids middle ground to ensure more valuable results. In the official MBTI, these choices are “strongly disagree, disagree, neutral, agree, strongly agree,” but it is the researcher’s hope that taking out the additional vocabulary will clear up the scale choosing process for second language learners. Finally, the scoring of this test will be done differently than the scoring of the

MBTI which would count a slight inclination to one preference as a set personality trait. Slight inclinations will be discounted in the EILLT. Each item from the original test has also been edited into 3-4 slightly different questions. Students' answers to similar questions will be averaged to account for answering differences within questions. The instructions for this test have also been crafted based on Quenk's (2000) instructions for MBTI administration. As she states, "providing the client with the appropriate test taking attitude is essential," (Quenk, 2000, p. 29). The instructions hope to set the participants at ease and to try to avoid many of the common pitfalls in survey research.

The test was also pilot tested with six students of similar demographics to the study's participants and four TESL graduate students to gather feedback on the format, vocabulary, and to make sure the test is valid. The test was edited further after the pilot test to amend common confusion. The EILLT is included in Figure 3.2.

Figure 3.2

Extroversion/Introversion in Language Learning Test (EILLT)

Answer these questions honestly based on your own preferences. Do not spend too much time on any one question, instead go with your first feeling about the question. There are no right or wrong answers. Your teacher will not know which answers you put. Circle one number for each question. 0 – Not at all - 5 – Very.

1. I am bored by individual work in language class.

0 1 2 3 4 5

2. I have a lot of energy in language class.

0 1 2 3 4 5

3. I talk more than I listen in language class.

0 1 2 3 4 5

4. I get tired after a long discussion in language class.

0 1 2 3 4 5

5. After language class I like to spend time with friends or classmates.

0 1 2 3 4 5

6. I am calm in language class.

0 1 2 3 4 5

7. I get excited by a long discussion in language class.

0 1 2 3 4 5

8. My voice is quiet in language class.

0 1 2 3 4 5

9. I am excited by talking to others in language class.

0 1 2 3 4 5

10. I work best in groups in language class.

0 1 2 3 4 5

11. I would rather give a speech in front of the class than listen to my classmates' speeches.

0 1 2 3 4 5

12. I find it easy to speak loudly in language class.

0 1 2 3 4 5

DO NOT FLIP BACK TO FRONT SIDE.

13. I work best alone in language class.

0 1 2 3 4 5

14. I find it difficult to speak loudly in language class.

0 1 2 3 4 5

15. I listen more than I talk in language class.

0 1 2 3 4 5

16. I need quiet time alone after a language class with lots of talking.

0 1 2 3 4 5

17. I like to discuss with others in language class.

0 1 2 3 4 5

18. I don't like speaking in front of the whole class in language class.

0 1 2 3 4 5

19. I like discussing topics with others in language class.

0 1 2 3 4 5

20. I like to spend time with my classmates from language class.

0 1 2 3 4 5

21. I enjoy working by myself in language class.

0 1 2 3 4 5

22. I would rather listen to my classmates' speeches instead of give one myself.

0 1 2 3 4 5

23. I would rather hear someone else's opinion than share my own in language class.

0 1 2 3 4 5

24. After language class, I like to go home and be by myself.

0 1 2 3 4 5

25. I like giving a speech in front of my classmates in language class.

0 1 2 3 4 5

26. I enjoy group work in language class.

0 1 2 3 4 5

Procedure

First, each student was randomly given a set of two tests including the MBTI-Style test (Figure 1) and the EILLT (Figure 2). If tests were administered during a class period, the students took the personality tests before they did anything else in class. Participating in class activities before taking the personality tests could prime the students to feel a particular way when they take the personality test. These tests were coded with a number so as to ensure that the students' two tests were kept as a data set without identifying the student by name. This allowed the students to answer freely and honestly. Students started by taking the MBTI-Style test. Before taking the test, students were read the instructions by the researcher, and had the rating scale explained to them. Students could then begin the test and did not have a time limit. When they reached the end of the MBTI-Style test, they were told to stop and wait. Next, the students flipped to the EILLT in their testing packet. They were read the instructions and had the rating scale explained to them. Students were encouraged to ask questions if they did not understand either test at any time. Students began the EILLT and when they completed it, this phase of the testing is done.

One week later, students took both personality tests again following the same steps as listed above. Re-testing was to account for any intraindividual variability within students' personalities. It was expected that the MBTI-Style test would have a greater amount of intraindividual variability, as this has been a critique with the test by past researchers. After taking the second round of personality tests, students were given an oral language assessment. The assessment was a three-minute long impromptu argumentative speech. This assessment was recorded and scored using a speaking score card similar to the one used by Lestari, Sada, and Suhartono (2015). The scoring included five categories: pronunciation, vocabulary, fluency,

accuracy, and relevancy and adequacy of content. Each category had a maximum score of 6 points and a minimum score of 1 point for a perfect overall score of 30 points. The oral language assessment was viewed and scored by the researcher.

Analysis

Once students had completed all three rounds of the testing, results were gathered from each of the three tests. Each student's data was coded using a number to ensure the data set remained whole. The MBTI-Style tests and the EILLT were scored using a number scale where each answer was awarded a number. The results of these tests were then converted into percentages to be able to easily compare them. This was done because the MBTI test and the EILLT had different maximum scores, so a percentage made the scores comparable. Each question was scored using a scoring scale to measure extroversion; thus, higher scores were labeled as more extroverted. A paired-sample t-test was run to compare the results from the first and second round of the personality testing. This answered research question (ii) and determined the amount of intraindividual variability within each test.

Correlations were taken to determine if there was any connection between the speaking test scores and each test as well as determining the correlation between the MBTI and the EILLT. This determined how closely the test were related to the language measure and if the two tests were testing a similar construct.

Next, the personality test scores for the MBIT and EILLT were put in order from lowest to highest and broken into three categories each, introverts, extroverts, and those in the middle. These categories were then used in a one-way ANOVA to determine if there was any connection between the group of extroverts or the group of introverts and the speaking test score.

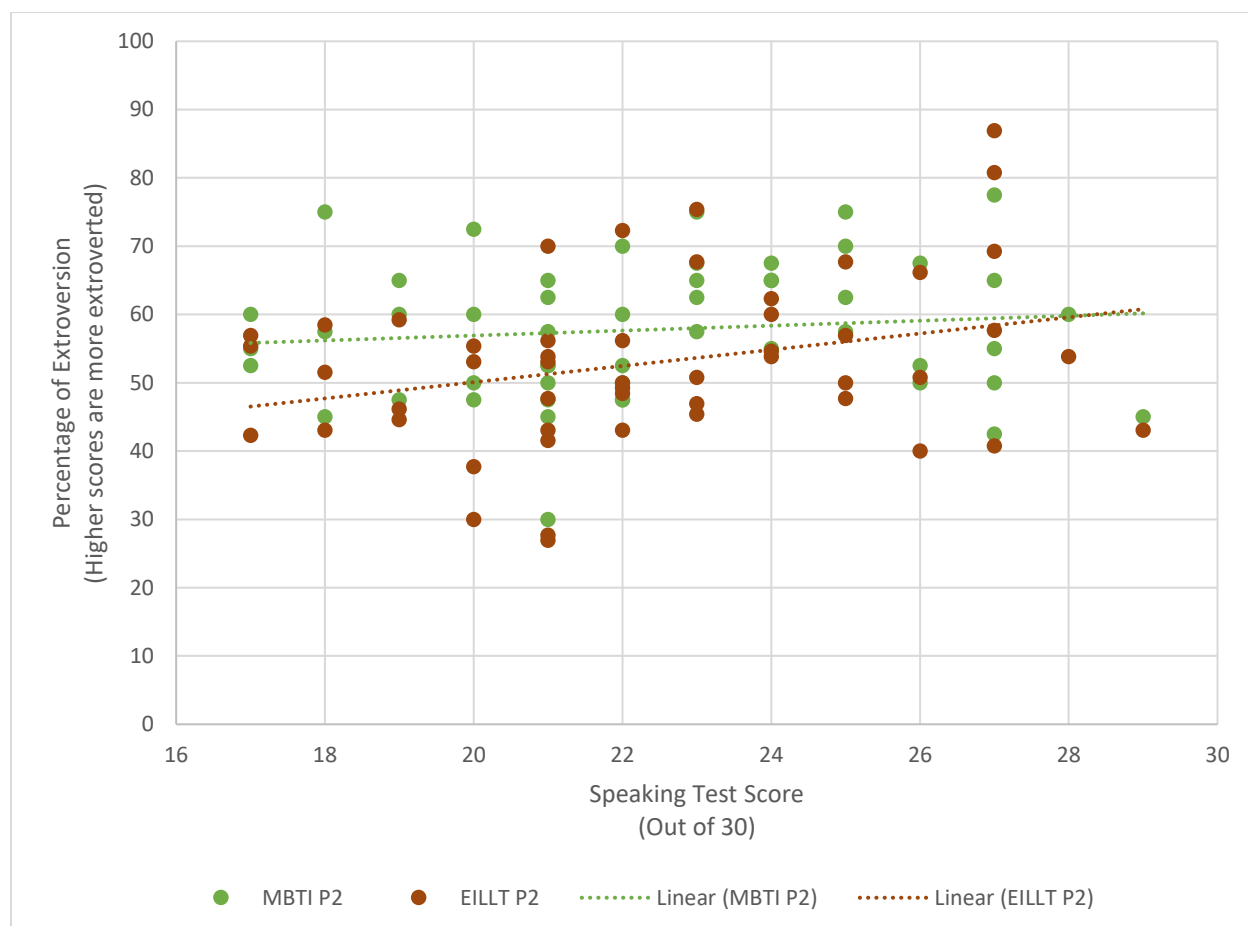
IV: RESULTS

When examining the results of the personality tests themselves, from week one to week two, the results of each test did not significantly change (see section below on research question (ii) for more details on this), so it was decided to look only at week two to answer research question one (i). It is seen that MBTI and EILLT in week two positively correlated with each other ($n=51$; Pearson Correlation=.490; $p<.000$).

To answer research question one (i), correlations were conducted first looking at a continual scale of the traits introversion and extroversion. When treating these traits as having a scalar nature, it was seen that the MBTI did not correlate with any language measure. The EILLT correlated significantly with the total speaking test score ($n=51$; Pearson Correlation=.298; $p=.034$). The EILLT also correlated significantly with the vocabulary segment of the speaking test score ($n=51$; Pearson Correlation=.320; $p=.022$) and the accuracy segment of the speaking test score ($n=51$; Pearson Correlation=.313; $p=.025$).

Figure 4.1

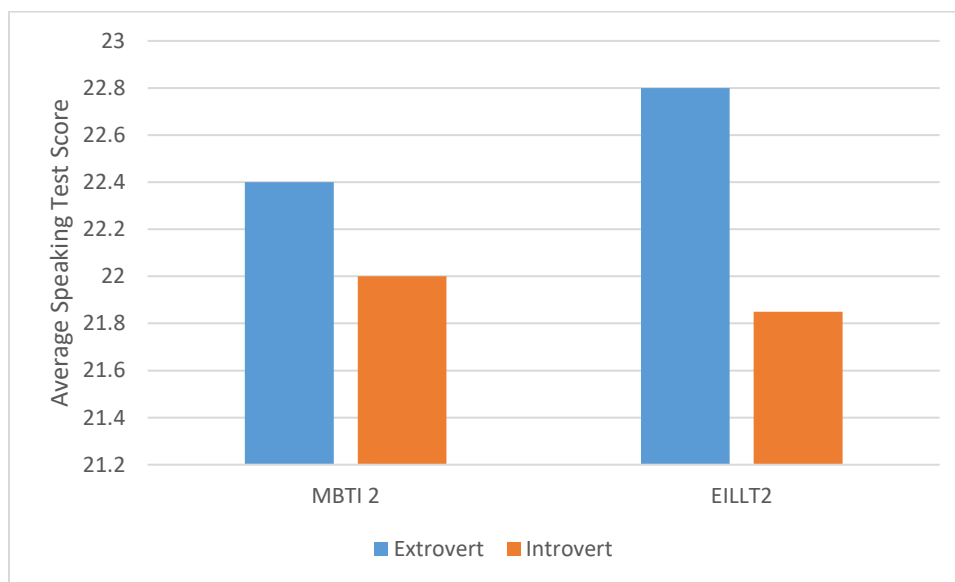
Correlation between Total Speaking Test Score and Personality



When looking at introversion and extroversion as binary, we see that the average speaking test scores of the two groups (extroverts and introverts) are not much different. The average speaking test score for extroverts on the MBTI was 22.4 points while the average score for introverts on the MBTI was 22 points. The average score for extroverts on the EILLT was 22.8 points while the average score for introverts on the EILLT was 21.9 points.

Figure 4.2

Extroverts and Introverts Score on Speaking Test



Looking at personality as binary, the researcher also broke the MBTI and EILLT into three groups. Only the second round of testing was examined for these tests. These groups were determined by an examination of the descriptive data for the MBTI by looking at score distributions and determining where an informative cutoff point would be. To do this, a spreadsheet listing of scores was sorted from highest to lowest. Personality test scores above 65 were coded as extroverts (n=16), scores below 50 were coded as introverts (n=15), and scores in the middle (n=20) were excluded. For the extrovert group, the mean score on the speaking test was 23.19 with a standard deviation of 2.664. For the introvert group, the mean score on the speaking test was 22.40 with a standard deviation of 3.269. The two groups (introverts and

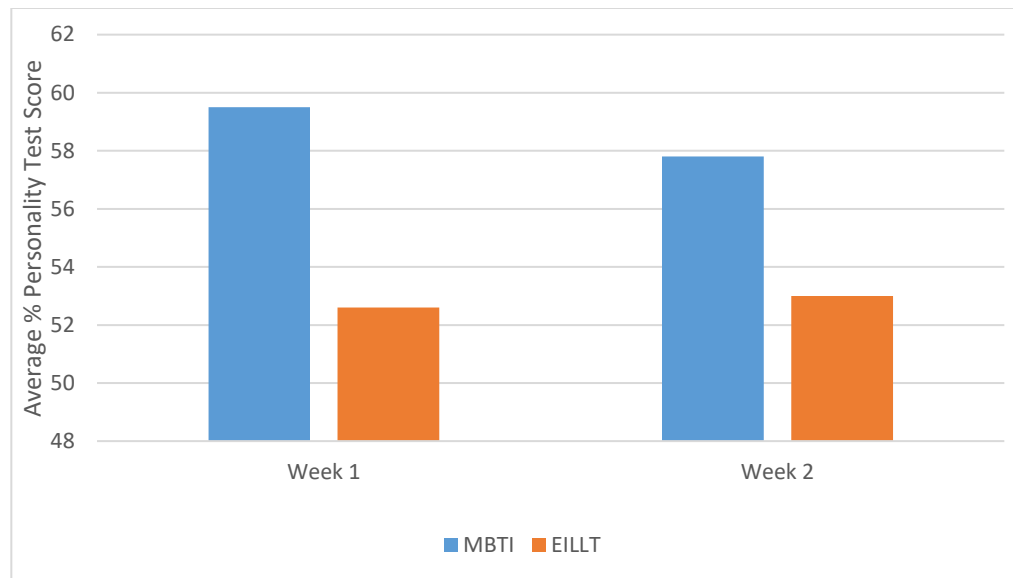
extroverts) speaking test scores were not statistically significantly different with a mean difference of .788 at a significance level of .485.

When completing this same analysis with the EILLT, three groups were once again determined by an examination of the descriptive data for the second round of the EILLT. Personality test scores above 60 were coded as extroverts (n=11), scores below 50 were coded as introverts (n=22) and scores in the middle (n=18) were excluded. For the extrovert group, the mean score on the EILLT was 24.45 with a standard deviation of 2.115. For the introvert group, the mean score on the speaking test was 22.00 with a standard deviation of 2.944. The two groups (introverts and extroverts) speaking test scores were statistically significant with a mean difference of 2.455 at a significance level of .030.

To answer research question two (ii), paired sample t-tests were conducted to determine if intraindividual variability effected the results of the MBTI or the EILLT tests when taken a week later for a second time. A paired sample t-test ($t=5.161$; $df=50$; $p<.000$) comparing the MBTI and EILLT the first time students took them showed a statistically significant difference between the first MBTI (n=51; $m=59.5$; $SD=11.71$) and the first EILLT (n=51; $m=52.6$; $SD=11.85$). A second paired sample t-test ($t=3.007$; $df=50$; $p=.004$) comparing the MBTI and EILLT the second time students took them showed a statistically significant difference between the second MBTI (n=51; $m=57.8$; $SD=10.0$) and the second EILLT (n=51; $m=53.0$; $SD=12.3$).

Figure 4.3

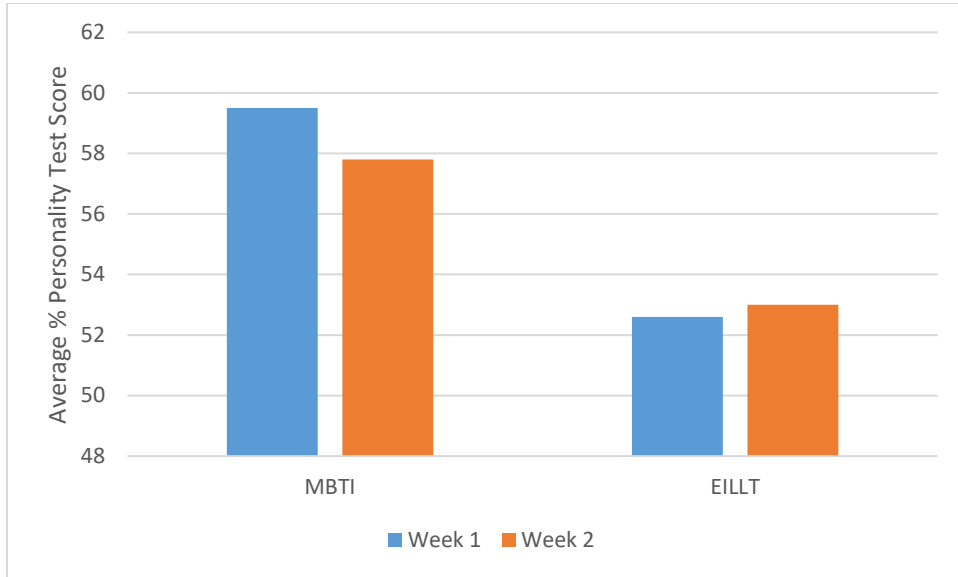
MBTI Versus EILLT Personality Scores



When comparing the first and second rounds of the MBTI, a paired sample t-test ($t=1.762$; $df=50$; $p=.084$) did not show a statistically significant difference between the first MBTI ($n=51$; $m=59.5$; $SD=11.7$) and the second MBTI ($n=51$; $m=57.8$; $SD=10.0$). When comparing the first and second rounds of EILLT, a paired sample t-test ($t=-.455$; $df=50$; $p=.651$) did not show a statistically significant difference between the first EILLT ($n=51$; $m=52.6$; $SD=11.9$) and the second EILLT ($n=51$; $m=53.0$; $SD=12.3$).

Figure 4.4

Week 1 Versus Week 2 Personality Scores



V: DISCUSSION

Research question one (i) asked if looking at the personality traits introversion and extroversion as binary or continual provided more meaningful information. The results show a much greater amount of detail when looking at the traits as a continuum. It shows that overall, the EILLT has a correlation with the total speaking test score as well as the vocabulary and accuracy sections of the speaking test, while the MBTI does not show any correlations with the speaking test. These results are different than many of the previous research that was unable to find any correlation for various reasons (Dewaele & Furnham, 1999; Chen, Jiang & Mu, 2015; Sharp, 2008; Van Daele, 2005). It is possible that giving the questions the context of the language classroom and simplifying the language so that students could understand what they were answering is what allowed this test to slightly predict language ability. Only about 8% of the total speaking test score can be explained by the EILLT results, while about 10% of the vocabulary and accuracy scores could be explained by the EILLT score. While these percentages are small, they are still able to predict the language measure results to some degree, which is valuable when it comes to testing personality in the language classroom.

According to this study, vocabulary and accuracy may be two elements of speaking ability that are effected by a language learner's personality. First, using and understanding new vocabulary words takes practice and exposure (Nation, 2001). This is something that extroverts may have an advantage over introverts due to the fact that they put themselves in situations where they get more chances for input and output as they interact with others more often than introverts. Secondly, accuracy was somewhat surprising to see correlated with the EILLT, due to the fact that previous researchers such as Dewaele and Furnham (1999) have stated that accuracy is something that introverts may excel at due to their careful attention and internal

monitoring system. This was not the case in the current study. One possible explanation for this would be that extroverts have chosen to interact with more native speakers and have heard more correct grammar and been corrected more than introverts who have studied from a book.

When looking at introversion and extroversion as binary traits as the MBTI does, the results become much more stifled. There is not a large difference between the average speaking test score for extroverts and introverts on MBTI (.4 points) or between the average speaking test score for extroverts and introverts on EILLT (1.1 points). This shows that when looking at the traits with a black and white distinction, the EILLT's predictive nature for speaking test scores does not show. Instead, both groups seem to be very similar when it comes to the language measure, which may have been the basis of past studies' (Dewaele & Furnham, 1999; Chen, Jiang & Mu, 2015; Sharp, 2008; Van Daele, 2005) results saying that there is no difference between introversion and extroversion's effect on language ability.

On the other hand, when looking at the two categories that had been created for each test, the MBTI introverts and extroverts average speaking test scores are not statistically significant, while the EILLT introverts' and extroverts' average speaking test scores are statistically significant at the .05 level. This shows that even when looking at personality as binary, the EILLT is more closely related to language than the MBTI.

While the EILLT is more closely aligned with language, it is also more sensitive in its measurement of personality. This can be seen by comparing the range of scores for each test. The highest value for the second round of the MBTI was 77.5% and the lowest was 30%, making the range 47.5%. The highest value for the second round of the EILLT was 86.9% and the lowest was 26.9%, making the range 60%. Being more sensitive means that this tool gives more insight into the personality of individuals.

Research question two (ii) asked if intraindividual variation affects the validity of personality tests given in the language classroom. To determine if this is the case, it is necessary to compare the results of the two different personality tests. Interestingly, the mean score on the MBTI was higher each time than the mean score on the EILLT. The difference between the first round of the two tests was 6.9 percent while the difference between the second round of the two tests was 4.8 percent. This shows that participants taking the two tests did get significantly different results when they took a test that asked them about their personality in the language classroom specifically rather than their general personality. This confirms the idea that intraindividual variability does exist as people may act differently in different situations as Nofle and Fleeson (2015) suggest.

The lower score on the EILLT means that participants were ranked as more introverted on this test than they were on the MBTI. This is possibly due to the fact that speaking in a second language can be intimidating for many people, and many may feel less comfortable in their second language than their first. Thus, it could be said that when participants were taking the MBTI, they may have been thinking of their personality in their first language, doing everyday tasks, or an aggregate personality and not their personality as it is in the language classroom. This goes back to Nofle's (2015) perspective on the limitation of questionnaires in that they only assess an average of people's personality (p. 177). Perhaps adding the context of the language classroom in some ways addresses these limitations.

In addition to personality varying by situation, proponents of intraindividual variability believe that personality may change over extended and shorter periods of time. Thus, each personality test was given to participants a second time a week later. This would determine if personality varies day to day. It turned out that neither tests' results were significantly different

from week one to week two. This is interesting evidence against intraindividual variability based on short periods of time. Many critics of MBTI have stated that test takers get different results when they take the test at different points (Pittenger, 2005) but this was largely not the case during the one-week interval in this study. The EILLT did have a closer correlation between the two tests than the MBTI by a p value of .567. This means that although the two tests are both similar from week one to week two, perhaps specifying the language classroom context on the EILLT removed some variation from participants' answers. In addition, this similarity from week one to week two leads us to believe that both of these tests are reliable because they don't change from week to week.

The EILLT is validated by the fact that the MBTI and the EILLT correlate with each other, thus we can say that the EILLT is testing the same things as the MBTI. In this case, it might seem unnecessary to have created a new test, but the EILLT correlates with the language measures in interesting and different ways which leads to an intriguing possibility of using this test in the language classroom. Only the EILLT shared statistically significant correlations with the language measures. This was evident by the EILLT's relationship with the total speaking test score as well as individual breakout scores for the vocabulary and accuracy sections of the speaking test.

Pedagogical Implications

Learning about students' personalities is something teachers have done both formally and informally for many years. Understanding a student's preferred behavior may lead to beneficial lesson planning and diversifying of teaching techniques for ESL educators.

Firstly, it is important for educators to realize that one personality is not superior to another. Both introverts and extroverts have their own talents and educators should not favor

one type of personality over another. This means that creating different assignments for students throughout the semester in which each student can show their strengths in different ways may be a valuable pursuit.

Teachers may decide to use the EILLT to learn more about students' personality in the language classroom in the beginning of the semester. A teacher who does this may be able to better serve his or her students by understanding their types of activities they may excel at and providing ample opportunities for students to partake in these activities. For example, giving extroverts time for discussion and giving introverts time for thinking and writing tasks will highlight students' strengths. Giving students options for the types of activities they can do will also provide students with a low-stress learning environment that meshes with their personality. Similarly, teachers who have administered the EILLT will have knowledge of what language skills students may struggle with based on their personalities and will be able to provide additional scaffolding to students based on this knowledge.

Finally, teachers may use the EILLT results to decide on how to group students for particular activities. For example, putting extroverts together with introverts for a group task may be beneficial for certain types of activities, while for others, homogeneous groups would be better. Having knowledge of students' personalities will allow educators to make these decisions and to eliminate various problems that might arise out of clashes of personality.

Future Research

The completion of this study created further questions that should be addressed through additional research. First, validating and fine-tuning the EILLT through large-scale testing is essential. One way to do this would be to compare the test's results to teacher's perceptions of students' personalities and be sure the two match. Similarly, it may be interesting to improve the

EILLT's scoring through use of item response theory (IRT). This method weights different questions and provides different scoring for each question instead of summing up the total as was done in this study. IRT was beyond the scope of this study, but it may be a valuable next step in further developing the EILLT because, "when comparing IRT to the more traditional CTT-based summated scoring, IRT should theoretically produce more accurate trait estimations," (Speer, 2016, p. 42). Completing some validation and perhaps creating IRT-based scoring would be positive improvements on the EILLT that should be made before using this test in classrooms or for future research on a large scale.

Next, it would be interesting to do a longitudinal study to determine how much personality changes over a longer period of time. Taking a look at the results of both the MBIT and the EILLT over the course of months or years may provide valuable insight into the nature of intraindividual variability that was not able to be given in this particular study. This would also determine if a student should take the EILLT each semester or if taking it once at the beginning of their college career would be sufficient. If participants in a future study were found to have similar results after a year's time, it could save teachers time to only have to test students once.

Future research may also be done to look at different demographic variables as they relate to the EILLT results such as gender and culture. Wakamoto (2009) said that women might be more introverted due simply to their role in society. It would be interesting to see if this is true in the results from the EILLT testing. Similarly, some researchers (Chen et al., 2015, Hu & Reiterer, 2009) believe that different cultures may be more extroverted than others. Separating the results of the EILLT out by culture, it would be interesting to see if there are any trends in how different cultures scored. Looking at these variables and determining how they play out in

the EILLT scoring would provide more insight into the effectiveness of this test in relation to different groups of students.

Limitations

Throughout the research process for this study, several factors have been identified as possible limitations that may have effected this study in some way. The first of these limitations was the fact that the researcher was not able to use the professional version of the MBTI. The administration of this test must be done by a trained psychological professional. There is also a cost associated with each individual test. Thus, it was inaccessible for this study. It is unclear if past researchers may have had the same problems and then used a derivation of the MBTI, similar to what was done in this study. It cannot be taken for granted that the creative commons licensed MBTI that was chosen to be used for this test is as accurate as the official MBTI or that scoring for both tests would have been similar.

The seriousness of participants was another possible limitation of this study. Many participants were offered extra credit by their English for Academic Purposes instructors for participating. Therefore, there was a good incentive to show up on the days of the study, but there was not anything at stake for participants' performance on the test. Therefore, it is unclear how seriously participants took the study. In the same vein, the directions for the speaking test during the language assessment section of the study required students to present a three-minute speech, but many students did not take a full three minutes to give their speech. Many spoke for one to two minutes, while some spoke for as little as 30 seconds. When this was the case, participants were scored lower in the "content" category of the speech rubric. It is unclear if this is an actual issue with the participant's speech content, or if it is more related to the speaking test

prompt or the participant's motivation to complete the study. Perhaps different parameters should have been implemented for the speaking test.

Similarly, some participants did not return for the second day of the study. 69 participants initially consented to participate in this study, but 18 did not return on the second day of the study. Thus, there was a large amount of hanging data that could not be used. Having complete data would have allowed for more accurate results, but it seems that this is something unavoidable in human subjects testing.

Because the time interval between the two tests was only one week, there might be much more to discuss if there was a longer interval between the two tests, such as a year. It is often the case that individuals take the MBTI at multiple points in their lives and get different scores (Nofle & Fleeson, 2015), but this type of change may not happen over periods of days or weeks. Thus, it is hard to determine from this study the extent to which time is a factor in intraindividual variation.

Language learners bring many different things to the language classroom. Using more finely-tuned research methods when looking at personality's relation to language acquisition may be a valuable step in answering research questions on personality's effect on language learning. Tests such as the EILLT may someday provide insight into language learners' personalities in order to better serve them in the classroom.

References

- American Psychological Association. (2017). Personality. Retrieved from <http://www.apa.org/topics/personality/>.
- Chen, Y., Jiang, Y., & Zengzhen, M. (2015). A survey study: The correlation between introversion/extroversion and oral English learning outcome. *Journal of Language Teaching and Research*, 6, 581-587. doi:<http://dx.doi.org/10.17507/jltr.0603.14>
- Deckersbach, T., Miller, K.K., Klibanski, A., Fischman, A., Dougherty, D.D., Blais, M.A., Herzong, D.B., & Rauch, S.L. (2006). Regional cerebral brain metabolism correlates of neuroticism and extraversion. *Depression and Anxiety*, 23, 133-138.
- Dewaele, J.M. (2005). Investigating the psychological and emotional dimensions in instructed language learning: Obstacles and possibilities. *The Modern Language Journal*, 89, 367-380. doi: 0026-7902/05/367-380^[L1]_{SEP}
- Dewaele, J.M. & Furnham, A. (1999). Extraversion: The unloved variable in applied linguistic research. *Language Learning*, 49(3), 509-544. doi:10.1111/0023-8333.00098
- DeYoung, C. G., Hirsh, J. B., Shane, M. S., Papademetris, X., Rajeevan, N., & Gray, J. R. (2010). Testing predictions from personality neuroscience: Brain structure and the big five. *Psychological Science*, 21(6), 820-828. doi:<http://doi.org/10.1177/0956797610370159>
- Dornyei, Z., Henry, A., & Muir, C. (2016). *Motivational currents in language learning: Frameworks for focused interventions*. New York, NY: Routledge.
- Ellis, R. (2014). Principles of instructed second language learning. In M. Celce-Murcia, D.M. Brinton, & M.A. Snow (Eds.), *Teaching English as a second or foreign language* (pp. 31-45). Boston: National Geographic Learning.

- Eysenck, H.J. (1967). *The biological basis of personality*. Springfield, IL: Thomas.
- Gass, S.M., Behney, J., & Plonsky, L. (2013). *Second language acquisition: An introductory course*. New York, NY: Routledge.
- Hu, X. & Reiterer, S.M. (2009). Personality and pronunciation talent. In G. Dogil & S.M Reiterer (Eds.), *Language talent and brain activity* (pp. 97-129). Berlin: Mouton de Gruyter.
- Lestari, A., Sada, C., & Suhartono, L. (2015). Analysis on the relationship of extrovert – introvert personality and students’ speaking performance. *Jurnal Pendidikan dan Pembelajaran*, 4, 1-14. Retrieved from:
<http://jurnal.untan.ac.id/index.php/jpdpb/article/view/9232/9146>
- Lieberman, M.D. & Rosenthal, R. (2001). Why introverts can’t always tell who likes them: Multitasking and nonverbal decoding. *Journal of Personality and Social Psychology*, 80(2), 294-310. doi:10.1037//0022-3514.80.2.294
- Moyer, A. (2014). Exceptional outcomes in L2 phonology: The critical factors of learner engagement and self-regulation. *Applied Linguistics*, 35, 418-440. doi:10.1093/applin/amu012
- Myers, I.B. & Myers, P.B. (1980). *Gifts differing*. Palo Alto, CA: Consulting Psychologists Press.
- Nation, I.S.P. (2001). *Learning vocabulary in another language*. Cambridge: University Press.
- Noftle, E.E., & Fleeson, W. (2015). Intraindividual variability in adult personality development. In Diehl, M., Hooker, K., & Sliwinski, M.J. (Eds), *Handbook of intraindividual variability across the life-span* (pp. 176-197). New York: Routledge, Taylor & Francis Group.

- Pittenger, D.J. (2005). Cautionary comments regarding the Myers-Briggs Type Indicator. *Consulting Psychology Journal: Practice and Research*, 57, 210-221.
doi:10.1037/1065-9293.57.3.210
- Pomerance, M.H. & Converse, P.D. (2013). Investigating context specificity, self-schema characteristics, and personality test validity. *Personality and Individual Differences*, 58, 54-59. doi:http://dx.doi.org/10.1016/j.paid.2013.10.005
- Quenk, N. (2000). *Essentials of Myers-Briggs Type Indicator assessment*. New York: Wiley & Sons, Inc.
- Sharp, A. (2008). Personality and second language learning. *Asian Social Science*, 4, 17-25. Retrieved from: www.ccsenet.org/journal/html
- Skehan, P. (1991). Individual differences in second language learning. *Studies in Second Language Acquisition*, 13(2), 275-298.
doi:http://dx.doi.org/10.1017/S0272263100009979
- Speer, A. B., Robie, C., & Christiansen, N.D. (2016). Effects of item type and estimation method on the accuracy of estimated personality trait scores: Polytomous item response theory models versus summated scoring. *Personality and Individual Differences*, 102, 41-45.
doi: <http://dx.doi.org/10.1016/j.paid.2016.06.058>
- Suliman, F.H.A. (2014). The role of extrovert and introvert personality in second language acquisition. *Journal of Humanities and Social Science*, 20, 109-114.
doi:10.9790/0837-2025109114
- Tarone, E., & Swierzbis, B. (2015). *Exploring learner language*. New York: Oxford.

- Van Daele, S. (2005). The effect of extroversion on L2 oral proficiency. *CÍRCULO de Lingüística Aplicada a la Comunicación (clac)*, 24, 91-114 Retrieved from:
<http://www.ucm.es/info/circulo/>
- Wakamoto, N. (2009). Extroversion/introversion in foreign language learning: Interactions with learner strategy use. *Linguistic Insights: Studies in Language and Communication Monograph*, 67, 13-126.
- Zafar, S., & Meenakshi, K. (2012). Individual learner differences and second language acquisition: A review. *Journal of Language Teaching and Research*, 3, 639-646.
doi:10.4304/jltr.3.4.639-646

Appendix A: Changes made from MBTI Test to EILLT to decrease ambiguity for second language learners.

Original Question Number	Original Wording (MBTI)	EILLT Question Number	Edited Wording (EILLT)	Reason
2	“energetic”	2	“have a lot of energy”	Simplified vocabulary
4	“worn out”	4	“tired”	Removed multi-word unit
6	“go out on the town”	5, 20	“spend time with friends or classmates”	Removed colloquial vocabulary
2	“mellow”	6	“calm”	Simplified vocabulary
4	“fired up”	7, 9	“excited”	Simplified vocabulary
4	“parties”	7, 9	“long discussions,” “talking to others”	Appropriate for language learning context
7	“finds it difficult to yell very loudly”	8, 14	“my voice is quiet,” “difficult to speak loudly”	Appropriate for language learning context
8	“perform in front of other people”	11, 25	“give a speech in front of the class”	Appropriate for language learning context
7	“yelling to others when they are far away comes naturally”	12	“easy to speak loudly”	Appropriate for language learning context
6	“stays at home”	16	“need quiet time alone”	Appropriate for language learning context
8	“avoids public speaking”	18, 22	“don’t like speaking in front of the whole class,” “would rather listen to my classmates’ speeches than give my own”	Simplified vocabulary, appropriate for language learning context

Appendix B: Informed Consent Document

Assessing Introversions and Extroversions in L2 Settings

Informed Consent

You are invited to participate in a research study of assessing personality in the language classroom. You were selected as a possible participant because of your enrollment in the [REDACTED]. This research project is being conducted by Caitlin Skellett, to satisfy the requirements of a Master's Degree in Teaching English as a Second Language at [REDACTED].

Background Information and Purpose

The purpose of this study is in general terms, to create a more useful personality test to determine student's personality in a language learning setting.

Procedures

If you decide to participate, you will be asked to take two different personality tests two different times. These personality tests will take approximately 15 minutes each. You will take the two different tests on the same day, and then take the two different tests a second time one week later. This study will also use your research presentation speech to assess your speaking ability, but this will not change the requirements of this assignment.

Risks

As this is a study that tests your personality, it may be uncomfortable to examine your own personality, or you may find your personality trait is assessed differently than what you might have hoped. The questions used on the personality tests are all appropriate for the language classroom, so these questions should not make you feel any more uncomfortable than you do in a normal EAP class session. You may also withdraw from the study at any time if you are uncomfortable.

Benefits

You will be able to better understand your personality as it relates to language learning. This can help you in the future to determine the best and most useful way for you to study based on your personality and preferences.

Confidentiality

At no time will I, or anyone else, know your answers to the personality test. Each test you take will have a number on it that will be randomly assigned to you. Only you will know your number. Once I collect your test, I will have no knowledge of who answered each test. Therefore, the results that I write about will only be published with the "student number" (e.g. 1-16). Your name will never be included with your data.

Research Results

If you are interested in learning about your own personality score, please remember your assigned number and ask me after the study is complete (next semester) for your results. I will also be happy to provide the results of my overall research when the study is completed to anyone who is interested. The study will also be published on the [REDACTED] website on the thesis repository page once it has been completed.

Additional Resources

If you would like to know more about introversion and extroversion personality traits and how they may relate to your studies, you may be interested in the following:

- Dewaele, J.M. (2005). Investigating the psychological and emotional dimensions in instructed language learning: Obstacles and possibilities. *The Modern Language Journal*, 89, 367-380. doi: 0026-7902/05/367-380
- Hu, X. & Reiterer, S.M. (2009). Personality and pronunciation talent. In G. Dogil & S.M. Reiterer (Eds.), *Language talent and brain activity* (pp. 97-129). Berlin: Mouton de Gruyter.
- Myers, I.B. & Myers, P.B. (1980). *Gifts differing*. Palo Alto, CA: Consulting Psychologists Press.
- Sharp, A. (2008). Personality and second language learning. *Asian Social Science*, 4, 17-25. Retrieved from: www.ccsenet.org/journal/html
- Skehan, P. (1991). Individual differences in second language learning. *Studies in Second Language Acquisition*, 13(2), 275-298. doi:<http://dx.doi.org/10.1017/S0272263100009979>

If you need assistance, or would like to talk to someone about personality traits, the following services are available:

[REDACTED]

Contact Information

If you have questions right now, please ask. If you have additional questions later, you may contact me at [REDACTED] or contact my adviser, [REDACTED]. You will be given a copy of this form for your records.

Voluntary Participation/Withdrawal

Participation is voluntary. Your decision whether or not to participate will not affect your current or future relations with [REDACTED], the researcher, or your grade in this class or any other [REDACTED] classes. If you decide to participate, you are free to withdraw at any time without penalty.

Acceptance to Participate

Your signature indicates that you are at least 18 years of age, you have read the information provided above, and you have consent to participate. You may withdraw from the study at any time without penalty after signing this form.

Signature: _____

Date: _____