

Extraversion and introversion in second-language acquisition : a literature review

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Abstract

This paper is a chronological literature review of how the Individual Learner Differences (ID) of Extraversion-Introversion (E-I) were used in second language acquisition. A Japanese context was sought when possible. CALP and BICS and its relationship with E-I are discussed. Teachers take for granted that students who speak more tend to be better at learning languages. If this is the case then a knowledge of E-I will be of major benefit to teachers when they plan and teach their classes. The literature cites many instances where E-I does have an influence on both first and second language learning. However, a standardized working definition of E-I is elusive. Another problem associated with the use of E-I included finding an appropriate instrument from a long list of measuring devices that is sensitive enough and reliable to measure E-I. Finally, this paper looks at how these measures can be used in language teaching. The conclusion drawn indicate that while there is strong evidence to suggest that E-I plays a role in language acquisition, clearly more work needs to be done in fine-tuning the instruments used to measure E-I.

Key words : BICS and CALPS, Differences (ID), Extraversion-Introversion (E-I), Individual Learner Measuring

Extraversion-Introversion and Language Learning

As a teacher with experience at several junior high schools in Japan, I have taught many kinds of students. One of the characteristics I have noticed from my students is that their personality plays a vital role in their studies. From my observations I have found that extraverted students, by virtue of their outgoingness, easily communicate in English even though they might not produce accurate output. On the other hand, many introverted students have an obsession with producing accurate sentences and take the time to compose and produce correct forms.

I am interested in Extraversion-Introversion (E-I) because I believe that E-I is a gateway through which teachers can manipulate the learning of their students. Teachers will be able to tailor their lessons so that students obtain the maximum benefit from them. Of course, the tailoring of lessons depends on many variables such as time constraints and requirements of the course. However, knowing about E-I is one way in which to individualize teaching. Basically, this literature review asks if there is there a relationship between E-I and L2 language learning.

E-I plays a major role in not only first language acquisition but also in second language (L2) acquisition (Dewaele & Furnham, 1999, p.529). Nation (2007, p.4) as part of his “Four Strands” advocated talking in conversations as a way for receiving Meaning-Focused Input and producing Meaning-Focused Output. These two Strands are derived from Krashen’s (1985) Input Hypothesis and Swain’s (1985) Output Hypothesis (Nation, 2007).

Lightbown & Spada (2006) wrote that many teachers are convinced that extraverted learners who interact without inhibition in the L2 will be the most successful learners. I partially believe this, so I try and talk with my students as much as I can. Usually, I talk with students that exhibit extraverted tendencies. For these students, just talking and getting their message across is their goal. Many of my extraverted students just like to talk. It is easy to accommodate their need to communicate outside of class time without the pressures of the classroom.

With my introverted students, I spend considerable time explaining grammar points and correct pronunciation to them. These students take the time to say things correctly with good pronunciation. When they are not pressured to speak, introverted students will speak slowly and carefully, but what they usually say is grammatically accurate and with good pronunciation. I have also observed that in many cases, introverted students produce homework that is of a higher quality than extraverted students.

The way I modify my teaching depending on the individual student, suggests that there is a need to study E-I and its effects on learning. Many teachers whom I have observed teaching, exploit the personalities of their students in academically advantageous ways. The rationale for this literature review on E-I is to increase the power of language teachers to exploit their student’s personalities in ways beneficial to their learning both in class and away from class.

Rationale for the paper

The fields of personality and Individual Learner Differences (ID) are very broad areas of study. ID have fascinated researchers in Second Language Acquisition (SLA) for a long time and actually predate SLA as a field of inquiry itself (Ellis, 2008). Dörnyei & Skehan (2003) also concluded that ID in L2 learning have generated the most consistent predictors of second language success.

This paper is a literature review of selected papers that deal with E-I and language learning. When possible I have tried to search out papers that deal with the Japanese context as my current teaching context is with Japanese learners. I have also tried to find papers that are considered turning points in the study and research of E-I. The questions that I hope to answer along the way are as follows :

1. How is E-I measured and how reliable are these methods?
2. What are the definitions of E-I found in the literature and how do these differ?
3. How can measures of E-I be used in language teaching?

E-I and its Relationship with CALP and BICS

Ellis (2008, p.673) reported that there are two major hypotheses with regard to the relationship of E-I and L2 learning. The first hypothesis stated that extraverted learners do better in acquiring basic interpersonal communication skills (BICS). This is because extraverted learners have more opportunity to practice, receive more input and thus become motivated and successful in L2 communication. The second hypothesis stated that introverted learners do better at developing cognitive academic language proficiency (CALP). The reason might be that many introverted learners spend more time reading, writing and trying to produce accurate language (Ellis, 2008).

BICS and CALP are terms coined by Cummins (1979) as two parts of a global language proficiency factor. Cummins (2008) made these two distinctions “in order to draw educators’ attention to the timelines and challenges that second language learners encounter as they attempt to catch up to their peers in academic aspects of the school language” (p.71).

There have been a few revisions to the definition of BICS/CALP, but basically Cummins (2008) referred to BICS as conversational fluency in a language. In other words, it is the language necessary for daily life and includes informal conversations and interactions. It is fair to say that extraverted learners have little trouble with communication and thus BICS is readily applicable to them.

Cummins (2008) referred to CALP as the students’ ability to understand and express, in both oral and written modes, concepts and ideas that are relevant to success. He was talking about success in terms of school. Another way to put it is that CALP is the language necessary to function in the classroom by being able to understand and discuss classroom content.

While many researchers have used BICS/CALP as a way to describe the language proficiency of individual language learners, Cummins (2008) intended the primary use of BICS/CALP as a way to understand and evaluate the language level of L2 learners. Of great interest to E-I research is that Cummins (1980) found that to acquire BICS took students on average 2 years whereas, CALP took at least 5 to 7 years.

Measuring Personality and E-I

There is a plethora of E-I related tests that are mainly used in health and psychological studies. For example, the Sixteen Personality Factor Questionnaire (16PF) is described as a “self-report assessment instrument, which enables clients to formulate personality models useful in industrial/organizational applications, clinical settings, counseling, and research for predicting human behavior” (IPAT, n.d.). A quick search on the Internet turned out many more examples such as the Balanced Inventory of Desirable Responding (BIDR), Minnesota Multiphasic Personality Inventory (MMPI) and the Revised NEO Personality Inventory (NEO PI-R).

Kezwer (1987) commented that a lack of uniformity of the results of personality tests may be

Table 1 Measures Used to Rate Subjects' Degree of E-I
(Kezwer, 1987, pp.48-49)

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1. Teacher observations of three measures of sociability
 2. Omnibus Personality Inventory
 3. Marlowe-Crowne Scale
 4. Eysenck Personality Inventory
 5. Teacher evaluations using an undescribed instrument
 6. Observations by the subjects' teachers
 7. Early School Personality Questionnaire
 8. Personality-Interest Test
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due to the diversity of these tests used to measure E-I. Kezwer also noted that inter-reliability correlations were not available among the various tests at that time. Although the tests were of a similar type of self-reporting questionnaire, they neither defined E-I in the same way, nor attempted to measure the same thing (p.49). Table 1 lists the personality tests that Kewzer found in the literature. In addition to the larger variety of personality tests used in the research, Kezwer also commented on the diversity of proficiency tests that are used to correlate with the personality tests (p.51). With the research comparing different personality tests with different language proficiency tests to yield incomparable results, one can easily see why there is little correlation with the E-I research.

Ellis (2008) reported that E-I is usually measured in language learning research by analyzing responses to self-report questions such as those in the Eysenck Personality Questionnaire (EPQ) or the Myers Briggs Type Indicator (MBTI). Another measure that is used in many studies is the Eysenck Personality Inventory (EPI). For many researchers, the EPI scales are the 'gold standard' for the measurement of E-I (Dewaele & Furnham, 1999, p.514).

Busch (1982) praised the speed at which the EPI can be administered and easily scored. The EPI has also been used in many other studies which makes for a good basis for comparison. Finally, compared with the EPQ, the EPI and has been well validated for Japanese learners (Busch, 1982). The EPI created in 1963 is a psychological questionnaire that measures different personality traits such as E-I and neurosis (Robson, 1994). A revised version of the EPI created in 1974 is the EPQ and this measures amongst other things extraversion, psychoticism and neuroticism (Robson, 1994).

The majority of the research I have reviewed used the MBTI. The MBTI is a questionnaire that targets four personality dichotomies. These are E-I, sensing-intuition, thinking-feeling, and judging-perceiving. Although the use of the EPI has been up until recently largely shunned by SLA circles (Dewaele & Furnham, 1999, p.522), both the EPI and MBTI have been well received as measurements for personality (Dewaele & Furnham, 1999, p.541). One of the problems of using this multiplicity of measurement instruments, however, is that it is difficult

to draw general conclusions, as it is difficult to identify to what extent the constructs being measured are the same or different (Kezwer, 1987, p.49).

On a related note, Dewaele (2005) explained that personality and particularly E-I can be used as a standalone measure of language learning in conjunction with more sensitive and appropriate research designs or be incorporated in the form of an 'interdisciplinary' measure. This interdisciplinary measure would include collocated ID and psychological variables that are spread out over personality psychology, applied linguistic and bilingualism which are focused on interpersonal communication processes.

A chronology of Selected Research on E-I

The Good Language Learner

No review on E-I in SLA can be complete without mentioning the work of Naiman, N., Fröhlich, M., Stern, H.H. & Todesco, A. (1978) groundbreaking book *The Good Language Learner*. It was groundbreaking at the time because it offered “a substantial empirical study that was directly based on the experiences of good language learners” (Naiman et al., 1978, p. viii). This study has been widely quoted in the literature and it might even have been instrumental in the misunderstanding of the link between E-I and different types of language indicators (Dewaele & Furnham, 1999, p.520). In other words, the results of their study have negatively influenced the perception of E-I and language learning.

The aim of Naiman et al. 's (1978) study was to identify the predictors of success in second language learning in the learner's personality and other factors in order to portray what it was to be a “good language learner” (Dewaele & Furnham, 1999, p.520). Seventy-two Canadian high school students were administered a number of personality tests, among them the EPI. The subjects were assessed using the IEA Listening Test of French Achievement and an Imitation Test. The results for the E-I portion of these tests found that there was no correlation between extraversion and language learning. Dewaele and Furnham (1999) attributed the lack of correlation between E-I and language learning to their test designs that showed “unrealistic expectations and insufficient understanding of the concept, before being judged irrelevant to language learning” (p.509).

It's fun to study at the Y-M-C-A

Busch (1982) proposed two questions from her study of the relationship between E-I tendencies of Japanese students and their proficiency in EFL. The first question was the relationship between E-I and standardized tests and the second was the relationship between E-I and oral interview exams. She hypothesized that extraverts would do better at oral communication because extraverts create opportunities to practice the language and obtain input, and also are able to increase motivation from successful experiences. These are opportunities to practice more, create output, receive input and gain more success in communicating in the L2 (Ellis, 2008, p.674). These opportunities fit nicely with both Krashen's (1985) Input Hypothesis and

Swain's (1985, 1993) Comprehensive Output Hypothesis.

Busch's subjects were 80 junior college students and 105 adult learners who participated in a YMCA standardized English test at the Kobe YMCA language school, completed the EPI and provided information on a biodata form. Forty-five of the 80 college students were then randomly chosen to participate in English oral interviews, rated by two evaluators. These recorded interviews were rated two months later for comprehension, pronunciation, fluency, and grammar.

Busch found no significant relationship between E-I and the standardized English test (p.128). She did find that there was a correlation between length of study at the YMCA language school and extraversion. She reasoned that it was likely that extraverted students were more likely to continue at the YMCA than introverted students. Busch's second research question concerned the E-I tendencies of Japanese students and their performance on oral interview tests (p.114). She found only a weak significant correlation between introverted students and pronunciation where introverted students had better pronunciation because they were less impulsive than extroverted students (p.128). Ellis (2008) concluded that Busch's study fails to lend support to the "hypothesis that introversion aids the development of academic language skills" (p.675). Busch (1982) concluded, however, that the studies she looked at found "that introverts tend to do better in high school and college" thus "support the view that introverts do better academically" (p.129).

Thorne's study of E-I pairs

Thorne (1987) examined the mutual impact of extraverts and introverts on conversation style. Her test subjects were a group of 52 women who took the MBTI in order to divide them into introverted and extraverted groups. The groups consisted of 26 extraverts and 26 introverts. These groups then formed speaking pairs and had two conversations to get acquainted with each other. The three types of pairs that were created were of two types. Dispositionally similar pairs were made up of introverts with introverts (I/I), or extraverts with extraverts (E/E). Dissimilar pairs were made up of introverts with extraverts (I/E).

Schedules were arranged so that two extraverts and two introverts arrived at the same session. The researchers made sure that the participants were not previously acquainted with each other. The pairs were arranged so that each would converse with a dispositionally similar and a dissimilar partner. These were analyzed and compared with each other. The pairing produced a total of 52 conversations (13 E/E, 13 I/I, and 26 I/E) (p.719). Her results found that E/E pairs showed a wide range of topics and more claims of common ground and thus found a positive impact on conversation (p.725). Their conversations were more upbeat and expansive. I/I pairs, however, engaged in focused problem talk. Their conversations were more serious and focused. Thorne accounted for these differences in terms of the ability of E/E pairs to create situations that have commonality (p.725). She pointed out that it is very difficult to have a conversation when one speaker is insistently upbeat and the other being serious (p.724).

Robson's Japanese college students study

Robson reported in his 1994 doctoral dissertation that he undertook a small-scale study of female Japanese college students by measuring their personalities using the Japan-specific Yatabe/Guilford Personality Inventory (Robson, 1994, p.188) and comparing the results with a variety of language proficiency measures such as TOEFL scores.

Robson also obtaining measures of voluntary participation from oral English classes through audio recordings of his classes, which were then analyzed. Robson also based his study on Cummins' (1980) BICS/CALP construct. Robson found that generally, extraverted students who were also socially active and leaders were more likely to participate in oral English classes than introverted students (p.142).

A study of Indonesian students learning English

Carrell, Prince and Astika (1996) looked at the relationship between personality types from a group of 76 Indonesian students and their academic performance in a semester-long course. The results of the MBTI were correlated with a battery of discrete-point tests of reading comprehension, vocabulary, grammar and writing. They found that the students were almost evenly divided between extraversion and introversion, a finding similar to other studies (p.94). Importantly, they found few direct relationships between E-I and their performance on the tests (p.95).

These authors gave two reasons for the weak correlation between personality types and language performance measures. The first was that personality preferences gave no indication about student's cognitive levels and maturity, which are related to the effectiveness with which students apply cognitive resources (p.95). The second was that personality is not as robust an indicator of relationships between language learning variables as a more salient ID such as language aptitude (p.95).

Wakamoto's Japanese college student study

Wakamoto (2000) looked at the relationship between E-I and language learning strategies of 254 female Japanese junior college students majoring in English. He employed the MBTI and the Strategy Inventory for Language Learning (SILL) to see what Language Learning Strategies (LLS) the students used. The reason for his study was to find evidence for his hypothesis that E-I has a very important influence on learning English in Japanese secondary classrooms (p.71). Wakamoto argued that with class sizes in Japan of around 40 students per teacher, it is difficult to take into account ID and LLS. Instead, teachers should be concentrating on the knowledge of how learners actually learn (p.71).

Wakamoto found a significant correlation of certain strategies with extraversion. Specifically, he found that there was a correlation between the LLS he labeled "functional practice strategies" and "social-affective strategies" with extraverted students (p.78). Wakamoto described "functional practice strategies" as practice that is focused on actual language use and not form and "social-affective strategies" as the mediation between people or control of one's

affective domain (p.78). He found no significant correlation between LLS and introverted students.

Conclusion

From the research articles that I have looked at, it is safe to say that personality traits, and in particular E-I, have effects on language learning. This effect is not apparent in earlier research and the failure to find a strong correlation between E-I and language learning apparently discouraged research into this area. A major setback in continued personality and in particular E-I research seems to have come from Naiman et al. 's (1978) poorly-thought-out E-I research design of E-I (Dewaele, 2005). Naiman et al. (1978) in their study of a "good language learner" included E-I in their research design but then later dismissed the use of the EPI. The negative publicity generated by Naiman et al. (1978) may have led to the misunderstanding of E-I in SLA circles as an independent variable (Dewaele, 2005, p.521).

Recent use of more sophisticated linguistic variables, covering not only written language but also natural oral language, in conjunction with the EPI, has found that indeed the EPI was not to blame for the lack of expected correlation reported by Naiman et al. (Dewaele, 2005, p.522). With more sensitive and appropriate research designs, extraversion has been found to be a good predictor of fluency in oral L2 production (Wakamoto, 2000 ; Dewaele, 2005). In other words there has been some support that extraverted learners do better in acquiring BICS (Ellis, 2008, p.674).

Due to the enormous range of personality tests available, researchers had a hard time choosing the appropriate instruments to use. Early research tended to use the instruments that were the cheapest or most expedient to use, but the cheapest and most widely used instruments are not the most sensitive. Recent research has settled on a smaller group of personality tests with results that are easier to compare.

The same cannot be said of introversion as research has yet to confirm that introverted learners do better at developing CALP (Ellis, 2008). From the studies I looked at, both Busch (1982) and Carrell et al. (1996) failed to find a relationship between introversion and CALP. As reported earlier, it takes more than double the time for students to acquire CALP than BICS and so any studies on introversion and CALP will have to take this length of time into account. It is imperative that future studies on introversion and CALP take a more longitudinal and diachronic approach with an emphasis on more appropriate designs that are able to break down the psychological constructs into their components.

Clearly more research needs to be done in the area of personality and language learning. Personality is such a large and diverse field of study that it is inevitable that there have been some problems in specifying it. Recent studies have finally found strong evidence that extraversion does have an effect on language learning and communicative language use, especially in fluency (Ellis, 2008, p.676). Introversion, too, may have an effect on language learning, but more

research and well designed experiments will need to be used to find a correlation. Instead of focusing on ‘supertraits’ like introversion, research might take a more fine-grained approach and focus on the ‘primary traits’ that make up these ‘supertraits’. Ellis (2008) summarized as follows “the role of personality needs to be examined in terms of how traits such as E-I influence the way that learners process language” (p.677).

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