

Personality, motivation, and language attitudes of learners of CTLs and LCTLs

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Abstract

Research has explored various characteristics of foreign language learners. However, little research has investigated how personality traits, motivation, and language attitudes are similarly or differently described between learners of Commonly Taught Languages (CTLs) and Less Commonly Taught Languages (LCTLs). The current study examined the correlations of academic achievement, personality, and motivation of learners in CTLs, LCTLs and Non-foreign languages (NFLs), respectively, and the extent to which learners in CTLs, LCTLs and NFLs may differ in these perspectives. The results indicated correlations between overall academic achievement and foreign language achievement of students in CTLs and LCTLs. In addition, students in CTLs, LCTLs and NFLs also experienced their unique correlations in personality and motivation factors. Significant differences were noticed in neuroticism and motivation of the target language: students studying LCTLs were less nervous and more motivated than those in CTLs. Strong tendencies occurred in integrativeness and attitudes toward the learning situation: students in LCTLs attained a more integrative orientation and a more positive attitude toward the learning environment.

Introduction

According to the U.S. Census Bureau, there are over 329 different languages spoken in the United States (Lee, 2005). Schools encourage students to take an interest in learning foreign languages (FL). Many high schools require students to take two-year FL courses. In universities, many departments or colleges also require students to take three-to-four semesters of FL courses in addition to their high-

school FL background. Thus, students register for FL courses with various intentions of satisfying language requirements, learning about other cultures, communicating with non-English speaking countries, facilitating career planning and so forth. While previous studies examined the individual differences in FL learning, little research has investigated the characteristics of students in Commonly Taught Languages (CTLs) and Less Commonly Taught Languages (LCTLs) in aspects of personality and motivation. In the present study, the authors examined students' personality traits, motivation and language attitudes, as well as their academic performance in three groups of CTLs, LCTLs and students without college-level foreign language learning.

Commonly Taught Languages and Less Commonly Taught Languages

FLs are usually categorized as Commonly Taught Languages (CTLs) and Less Commonly Taught Languages (LCTLs). While definitions vary, LCTLs in the United States typically encompass low-enrollment and infrequently taught languages, such as Arabic, Chinese, Japanese, and Russian. CTLs refer to FLs that are commonly known and widely taught in high schools and colleges, such as Spanish and French (Brecht & Walton, 1994; Brown, 2009; Furman, Goldberg & Lusin, 2007; Ging, 1994). It is important to note that while LCTLs are spoken by over 80% of the world's population, they are taught in only 1% of the secondary schools in the United States, and only 10.2% of the postsecondary institutes ("Report of the MLA Task Force on the Less Commonly Taught Language," 2006). Due to limited resources, teaching LCTLs becomes a difficult task: more often LCTLs are not offered beyond intermediate-level courses; LCTLs are usually taught to achieve fluency rather than applying the languages to social and historical settings (Joseph, 2006).

In recent years, a rapidly changing world order has prompted renewed interest in providing a national capacity for dealing with languages and cultures beyond those of Western Europe (Brecht & Walton, 1994). The Foreign Language Assistance Act focuses on

introducing Arabic, Chinese, Japanese, Russian, and Korean into schools with support for instructional programs, study abroad opportunities, teacher training, material development, and so forth (“Report of the MLA Task Force on the Less Commonly Taught Languages,” 2006). Private foundations have also joined this movement to introduce LCTLs into the K-12 education system. More students were enrolled in non-European language courses from 2003 to 2006 (Furman, Goldberg & Lusin, 2007). According to the U. S. Institutions of Higher Education, a total of 204 LCTLs were offered in 2006, which was 42 (25.9%) more LCTLs than reported in 2002. The largest increases in enrollment were in Middle Eastern and African languages, where enrollment grew by 55.9%, and in Asian and Pacific languages, which reported a 24.6% increase.

Little research has examined learners of CTLs and LCTLs as separate groups or compared differences and similarities between them (Brown, 2009; Ramage, 1990; Ueno, 2005). Ueno (2005) investigated learners’ motivation of LCTLs and found that it changed over time. The results showed that students initially studied the target LCTLs due to their attraction to an uncommon language and the challenge to learn the language. Then over time, students became intrinsically motivated and obtained a sense of satisfaction and pleasure in learning the language. Brown (2009) examined the academic and demographic aspects of students of LCTLs and CTLs. 1st- or 2nd-year FL students were recruited in a survey including Personal Data, Current Academic Data, and Foreign/Second Language Data. Results showed that 73% of students studying LCTLs had a GPA of 3.0 or higher, 36% chose personal interest as their primary motivation and 31% considered FL requirement as the best description of their reason for taking FL courses. For students of CTLs, 63% achieved a GPA of 3.0 or higher, 13% were interested in the languages they studied and 65% took the courses as a language requirement.

Personality and motivation in foreign language learning

Psychologists have often used personality traits to examine human behaviors (e.g., Ramsdal, 2008; Zuckerman, Eysenck, S. &

Eysenck, J., 1978). Studies on learners' personalities have been conducted in the field of language acquisition. Onwuegbuzie, Bailey and Daley (2001) examined cognitive, affective, and personal aspects of students enrolled in foreign language courses with measures of the Self-Perception Profile for College Students, the Foreign Language Classroom Anxiety Scale, the Social Interdependence Scale, and the Study Habits Inventory. The authors found that higher foreign-language anxiety influenced participants' ability of foreign-language learning; cooperativeness was associated with students' foreign-language achievement. Oya, Manalo and Greenwood (2004) investigated the influence of personality and anxiety on English oral performance among Japanese L2 speakers of English. Seventy-three Japanese speakers were recruited from intermediate-level English courses. Personality and anxiety were examined with the Japanese version of the Maudsley Personality Inventory reflecting extraversion and neuroticism (Komatsu, 1969), the Japanese version of the Spielberger State and Trait Anxiety Inventory measuring anxiety (Mizuguchi, Shimonaka & Nakazato, 1991), and a story-retelling task using six picture cards from the Wechsler Adult Intelligence Scale Picture Arrangement subtest to analyze language fluency, accuracy, complexity, and impression of language performance. Results indicated that impression of language performance was correlated with extraversion at a significant level: the more extraverted the participants, the better the impression they made in oral performance. Accuracy was negatively correlated with the participants' anxiety at a significant level: the more anxious the participants, the less accurate their sentences became.

Recent studies applied the Big Five Inventory (BFI) to examine the relation between personality traits, learning styles, and academic achievement (Chamorro-Premuzic & Furnham, 2003a, b, 2004, 2005; Clark & Schroth, 2010; Farsides & Woodfield, 2006; Furnham, Swami, Aertche & Chamorro-Premuzic, 2008; Landra, Pullmann & Allick, 2007). BFI is a personality assessment used to examine differences in human behaviors that relate to personality traits. The personality dimensions were initially labeled by Norman (1963). The original format of the BFI has 5 dimensions, 44 items, and 5 subscales. The 5 dimensions are Extroversion, Agreeableness,

Conscientiousness, Neuroticism (contrasting Emotional Stability), and Openness to Experience (John & Srivastava, 1999; Tafarodi & Swann, 1995). These BFI dimensions are defined together in Table 1, with examples from the 44 items. Cronbach's alpha for reliability coefficient is 0.82 for Extroversion, 0.75 for Agreeableness, 0.81 for Conscientiousness, 0.84 for Neuroticism, and 0.80 for Openness to Experience, which indicates good intercorrelations among test items measuring each dimension (Engvik & Føllesdal, 2005). The 5 subscales are from 1 to 5, with rating 1 being disagree strongly, and rating 5 being agree strongly.

Researchers suggested some of the BFI traits, such as Neuroticism and Openness to Experience, have been applied frequently to language learning, and are significantly correlated with academic performance and learning styles. Neuroticism has been found to be a negative predictor of academic performance in most learning settings (Landra et al., 2007). Emotional Stability (contrasting Neuroticism) has been significantly correlated with course grades (Ridgell & Lounsbury, 2004). Openness to Experience has been significantly associated with academic outcomes and is a consistently significant contributor to the variance in exam grades in some studies (Chamorro-Premuzic & Furnham, 2003a, b, 2004, 2005; Furnham, Monsen & Ahmetoglu, 2009; Lievens, Coetsier, de Fruyt & de Maeseeneer, 2002; Phillips, Abraham & Bond, 2003; Rothstein, Paunonen, Rush & King 1994), but not others (Bauer & Liang, 2003; Conard, 2006; de Fruyt & Mervielde, 1996; Duff, Boyle, Dunleavy & Ferguson, 2004; Farsides & Woodfield, 2003; Goff & Ackerman, 1992; O'connor & Paunonen, 2007; Paunonen, 1998; Wolfe & Johnson, 1995). Busato, Prins, Elshout and Hamaker (1999) examined the correlations between personality and learning styles. Results showed that the meaning-directed learning style (in which students wish to find out what is meant exactly in their study materials) and the application-directed learning style (when students employ what they learn to actual, real-world settings) were correlated highly with Openness to Experience. The reproduction learning style (when students' behavior is directed mainly at reproducing what is learnt at examinations in order to pass these successfully) was correlated negatively with Neuroticism. The undirected-learning style

(when students have problems with processing the materials for study or experience difficulties with discriminating what is important and what is not) was correlated positively with Neuroticism.

Motivation, another important factor in foreign-language learning, has been examined with various dimensions (Bernaus & Gardner, 2008; Dörnyei, 2005, 2009; Gardner, 1985; Gardner & Lambert, 1959, 1972; Tremblay, Goldberg & Gardner, 1995; Papi, 2010; Yu, 2010). Gardner and Lambert (1959) asked a French instructor to rate students on oral skills and aural comprehension using a 5-point scale with 1 being poor and 5 being excellent. Students were also asked to take the measure of the Orientation Index, which contained integrative orientation (i.e., the motivation is to learn about the FL groups and to meet more people from different cultures) and instrumental orientation (where the reasons reflect a more utilitarian value of linguistic achievement). Researchers found a significant positive correlation between the orientation index and learners' achievement in French. The integratively oriented students were generally more successful in learning French than those who were instrumentally oriented. Also, students with the integrative orientation had more positive attitudes toward the target language group and were more motivated to learn the language.

Tremblay et al. (1995) recruited Eighty-eight students without knowledge of Hebrew to investigate the relation of motivation and achievement in learning Hebrew. The Attitude Motivation Test Battery (AMTB) originally developed by Gardner & MacIntyre (1993) and the self-reported anxiety level were applied to measure students' motivation and anxiety. The Mini-AMTB, a brief form of AMTB, has 6 dimensions: Integrativeness, Attitudes toward the Learning Situation, Motivation of the target language, Language Anxiety, Instrumental Orientation, and Parental Encouragement in Table 2. The published readability coefficient is 0.743 (Bernaus & Gardner, 2008). Participants were measured by AMTB and paired in learning tasks. They rated how anxious they felt about the task before the learning tasks; they estimated how motivated they were to learn the items on the trial and how anxious they felt before and after each trial. The last part of the experiment was the same AMTB questionnaire presented at the beginning of the experiment. The results of this

study suggested that positive attitudes toward the learning language resulted in successful learning; the number of correct Hebrew words from participants was positively associated with motivation; achievement in learning the Hebrew words was negatively related to anxiety. Bernaus and Gardner (2008) also used mini-AMTB to examine L2 students of English. Students were first asked to rate the extent to which their teachers used the teaching strategies listed in the questionnaire. In the second part, the mini-AMTB was applied to measure students' motivation. In the last part, students completed two tasks that measured reading skills and listening comprehension skills. The results indicated attitudes toward the learning situation and instrumental orientation predicted the motivation to learn English and that motivation was a positive predictor of English achievement, whereas language anxiety was a negative predictor of English achievement.

In addition to research lines of personality and motivation, correlations between the two have also been investigated recently. Clark and Schroth (2010) examined relationships between academic motivation and personality among college students. The results suggested that students with different personality characteristics had different reasons for pursuing college degrees: those who lacked motivation tended to be disagreeable and careless; intrinsically motivated students tended to be extraverted, agreeable, conscientious, and open to new experiences; extrinsically motivated students tended to be extraverted, agreeable, conscientious, and neurotic.

Research questions

This study examined correlations among academic performance, personality, motivation and language attitudes, and compared similarities and differences among learners of CTLs, LCTLs and students not taking university-level FLs (NFLs). Four research questions were addressed:

- (1) How are academic performance, personality traits, motivation and language attitudes correlated among students in CTLs, LCTLs and NFLs, respectively?
- (2) To what extent do students in CTLs, LCTLs and NFLs differ in their academic achievement?

- (3) To what extent do students in CTLs, LCTLs and NFLs differ in their personality?
- (4) To what extent do students in CTLs, LCTLs and NFLs differ in their motivation and language attitudes?

Method

Participants

Sixty-one undergraduate students ($M = 32$, $F = 29$) between the ages of 18 and 26 ($M = 21.79$, $SD = 1.61$) were recruited from a large, public university in the United States. Twenty-five of the participating students were solicited from foreign language courses among the CTLs, such as Spanish, Latin, French, Italian, and German; seventeen from the LCTLs, such as Chinese and Japanese; and nineteen were NFLs. All participants were randomly selected and studied in various programs. None of them were heritage speakers or studied multiple FLs in the university. 48% (29/61) of students had the two-year language requirement, whereas 52% (32/61) of students did not. 57% (24/42) of CTL and LCTL students were enrolled in 1st- or 2nd-year FL classes, and 43% (18/42) registered for advanced-level FL courses. All FL classes were of similar size with a maximum of 30 students. Students with study abroad experience were placed at the right level of FL courses at the beginning of each semester.

Questionnaire

The student questionnaire was designed by the authors to include four sections: personal data, academic data, personality, and language attitudes and motivation. Personal data asked participants to report their gender, age, and family language background. Academic data requested information such as major, years in foreign language courses at the university, self-reported overall GPA, and current GPA for the foreign language course (CTL and LCTL students only). Personality included two dimensions of the BFI: Openness to Experience and Neuroticism. The section entitled language attitudes and motivation included questions concerning participants' attitudes to the target language and their learning motivation. The Mini-AMTB

was employed to examine six factors in integrativeness, attitudes toward the learning situation, motivation of the target language, language anxiety, instrumental orientation of the target language, and parental encouragement. Questions of attitudes toward the learning situation were not included in the NFLs' questionnaire. Word modifications, such as changing the target language to any foreign language, were also applied to the NFLs' version.

Coding of personality

Personality was coded with the BFI dimensions of Openness to Experience and Neuroticism (in Table 3). Responses were collected with 1 being strongly disagree and 5 being strongly agree. In this study, Openness to Experience reflected students' interest in learning new languages. Higher scores on this trait were interpreted to be more interested in accepting new languages (Example 1).

Example 1 Questions of Openness from the BFI questionnaire

- (a) Is curious about many different things.
- (b) Is ingenious, a deep thinker.
- (c) Is sophisticated in art, music, or literature.

Neuroticism reflected how well students coped with stress (Example 2). High scores on questions of stability (in 2a and 2b) and low scores on anxiety (in 2c and 2d) were interpreted as ability to cope with stress.

Example 2 Questions of Neuroticism from the BFI questionnaire

- (a) Is relaxed, handles stress well
- (b) Is emotionally stable, not easily upset
- (c) Gets nervous easily
- (d) Worries a lot

Coding of language attitudes and motivation

Language attitudes and motivation were coded with dimensions of the mini-AMTB. Responses were collected in a 5-point scale, with rating 1 being least, and rating 5 being most. Examples 3 and 4 showed questions of Integrativeness and Attitudes toward the learning.

Example 3 Questions of Integrativeness from the AMTB questionnaire

(a) My attitude toward the target language speaking people is

(b) My interest in the target language is

Example 4 Questions of Attitudes toward the learning situation from the AMTB questionnaire

(a) My attitude toward my target language teacher is

(b) My attitude toward my target language course is

Procedure

Research data were collected in 4-8 weeks using anonymous survey procedures. Participants were scheduled to complete the student questionnaire in a department conference room without the presence of the authors. They left the finished form in an envelope placed on the front table, and the authors collected the envelope 20 minutes later.

Data Analysis

In order to compare CTL, LCTL and NFL students' responses to the questionnaire, a univariate general linear model (GLM) was used, followed by post hoc tests across student groups. Grades from A to D were transformed to numeric scales in a sequence of 4 to 1 due to the internal relation across the grade categories (with A the highest grade and D the lowest) and the nature of GLM analyses (to examine numeric variables). Responses to personality and motivation sessions were ordinal degrees from strongly disagree to agree strongly, or from very little to very much. Degrees were formed in numeric scales of 1 to 5 with 1 strongly disagree (or very little), 5 strongly agree (or very much) and three scales of disagree (or little), neutral, and agree (or much) in between. Multiple questions were included in a majority of the BFI and the AMTB dimensions, and thus, means of relevant responses were employed in the analyses of each dimension. A significance level of .05 was used for all analyses.

Results

Within the 61 responses received from students in CTLs, LCTLs and NFLs, 2 responses of self-reported overall GPA were excluded from analyses, as the students were first-semester freshmen without GPA records. Both of these students were studying NFLs. Students in CTLs and LCTLs were included in the analyses of language GPA and attitudes toward the language learning situation, except that one student in CTLs was excluded from the language GPA analysis as she was in her first semester of language learning when data were collected and had no language GPA record.

Research Question 1: How do academic performance, personality traits, motivation and language attitudes correlate among students in CTLs, LCTLs and NFLs, respectively?

Positive correlations were noticed between overall GPA and FL GPA of students in CTLs and LCTLs which suggested that higher academic achievement be a predictor to higher FL achievement and vice versa (Tables 4 and 5¹). Academic achievement for those in NFLs was positively correlated to instrumental orientation and negatively correlated to integrativeness (Table 6). Neuroticism was negatively correlated to motivation factors such as instrumental orientation for CTLs, and integrativeness and attitudes for LCTLs. Integrativeness was positively correlated to motivation of the target language across groups and to attitudes of learning situations in CTLs and LCTLs.

Besides the similar trends across student groups, students of CTLs and NFLs presented some unique correlations in personality traits and factors of motivation and language attitudes (Tables 4 and 6). Openness was positively correlated to parental encouragement for students in CTLs but a negative correlation was found for those in

¹ Only significant results were showed in Tables 4, 5, and 6.

NFLs, which suggested more open students in CTLs received more parental encouragement whereas more open students in NFLs received less parental encouragement. Parental encouragement, instrumental orientation and motivation were also positively correlated to each other for those studying CTLs: they became more motivated when they received more parental encouragement and instrumental orientation.

Research Question 2: To what extent do students in CTLs, LCTLs and NFLs differ in their academic achievement?

Students' self-reported GPA was transformed to numeric scales with 4 as a Grade of A, 3 as a Grade of B, 2 as a Grade of C, and 1 as a Grade of D. Descriptive analyses showed that students in LCTLs scored the highest overall GPA rate ($M = 3.47$, $SD = .51$), followed by CTLs ($M = 3.16$, $SD = .69$) and NFLs ($M = 3.12$, $SD = .70$). The difference across CTLs, LCTLs and NFLs was not significant ($p = .215$, n.s.) (in Fig 1).

For students currently registered in CTLs and LCTLs, their GPA for language courses was examined. Both groups received a GPA higher than 3 (Grade B) on average, and students in LCTLs ($M = 3.41$, $SD = .62$) over-performed those in CTLs ($M = 3.29$, $SD = .62$). No significant difference was noticed between the two groups ($p = .546$, n.s.). Numerically, those in LCTLs received a higher overall GPA than their language GPA, while students in CTLs received a lower overall GPA than their language GPA.

Research Question 3: To what extent do students in CTLs, LCTLs and NFLs differ in their personality?

Students, in general, reported that they were open to new ideas with a score of Openness higher than 3 in the 5-point scale. Descriptive analyses showed that students in LCTLs ($M = 3.86$, $SD = .50$) tended to be more open-minded than those in CTLs ($M = 3.80$, $SD = .48$) or NFLs ($M = 3.55$, $SD = .64$). The difference of Openness across students of CTLs, LCTLs and NFLs was not significant ($p = .193$, n.s.). Students also viewed themselves as

emotionally stable with a score of Neuroticism less than 3. Students in CTLs ($M = 2.82$, $SD = .73$) received higher scores of Neuroticism than those in NFLs ($M = 2.46$, $SD = .56$) and LCTLs ($M = 2.33$, $SD = .40$). The difference across groups was significant ($p = .029$), and post hoc tests showed that students in CTLs were more likely to get nervous or upset than those in LCTLs at a significant level (in Fig 2).

Research Question 4: To what extent do students in CTLs, LCTLs and NFLs differ in their motivation and language attitudes?

The mini-AMTB inventory was employed to examine six factors in Integrativeness, Attitudes toward the learning situation, Motivation of the target language, Language anxiety, Instrumental orientation of the target language, and Parental encouragement. Descriptive statistics for each factor was listed in Table 7. Descriptive analysis showed that students in LCTLs, compared with those of CTLs and NFLs, experienced higher integrativeness, attitudes toward the learning situation, motivation, instrumental orientation of the learning language, and lower language anxiety or parental encouragement.

Univariate general linear model (GLM) analysis showed that motivation of the target language was the only significant factor that differentiated students in CTLs, LCTLs and NFLs ($p = .035$). Further post hoc tests indicated that students in LCTLs had significantly more desire to learn languages than those in CTLs. There was a strong tendency in integrativeness ($p = .061$) and attitudes toward the learning situation ($p = .082$). No significant difference was observed in language anxiety, instrumental orientation of the target language, or parental encouragement (in Fig 3).

Discussions

Research question 1 examined the correlations in academic achievement, personality, motivation and attitudes in groups of students in CTLs, LCTLs, and NFLs. Correlations were noticed between overall GPA and FL GPA of students in CTLs and LCTLs. Thus, overall academic achievement might be a possible predictor of student achievement in FLs. This finding was consistent with previous studies on the correlation between students' overall academic achievement and their foreign-language achievement (Brown, 2009; Ehrman & Oxford, 1995). Academic achievement for students studying NFLs was negatively correlated to integrativeness. It was consistent with studies that claimed students who had lower integrative orientation would have lower achievement in FLs (e.g., Gardner & Lambert, 1959).

Some studies have suggested that students who experienced higher anxiety were likely to conduct poorer overall FL performance (Ehrman & Oxford, 1995; Ganschow, Javorshy, Sparks, Skinner, Anderson & Patton, 1994; Onwuegbuzie et al., 2001; Oya et al., 2004). Though comparisons between students in CTLs and LCTLs showed that those in CTLs with a higher average of anxiety received a lower FL GPA than students of LCTLs, no significant correlation was observed between FL achievement and neuroticism.

Correlation between integrativeness, motivation of the target language and attitudes toward the learning situation was found across student groups. The result was consistent with studies showing that integrative orientation was a very good predictor of academic adaptation. Students who had strong integrative orientation sustained more positive attitudes, stronger desire and a higher level of interest in language learning, and were more likely to contribute to better socio-cultural adaptation toward the target language group in the long run (Gardner & Lambert, 1959; Yu, 2010).

Openness was positively correlated to parental encouragement for students in CTLs but negative correlation was found for those studying NFLs in the present study. This result was consistent with a study of students' motivation as a function of language learning by Inbar, Donitsa and Shohamy (2001), where

researchers found parental reasons being part of the motivation factors for studying foreign languages along with instrumental, cultural, and political reasons.

Research question 2 examined to what extent students in CTLs, LCTLs and NFLs differed in their academic achievement. The descriptive statistics indicated a discrepancy of overall student GPAs across LCTLs, CTLs and NFLs, as well as of the GPA of students studying foreign language between LCTLs and CTLs. Students in LCTLs on average achieved the highest overall GPA and those in NFLs achieved the lowest. Foreign language achievement was also higher for students in LCTLs than in CTLs. The result between LCTLs and CTLs was consistent with previous findings that students in both CTLs and LCTLs had a language GPA higher than B on average, and students in LCTLs over-performed those studying CTLs (Brown, 2009).

Research question 3 investigated personality of students in CTLs, LCTLs and NFLs. Those in CTLs experienced higher negative anxiety than students of LCTLs at a significant level ($p = .029$). The result may be explained in terms of the early exposure to CTLs. Students with high anxiety may choose CTLs, as they may have more access to CTLs through the K-12 programs, and languages are more familiar to them compared to LCTLs which are less widely taught. The descriptive statistics indicated that students in LCTLs were more open-minded and more likely to accept for new ideas and changes, followed by those in CTLs and NFLs. The finding was consistent with previous findings that CTLs were more commonly taught, and students felt more conformable to learn; whereas LCTLs and their cultures were considered unfamiliar to English speakers, and students of LCTLs were more open to less familiar cultures and languages (Oya et al., 2004).

Research question 4 investigated motivation and language attitudes across students in CTLs, LCTLs and NFLs. Motivation of the target language was the only significant factor that differentiated CTLs, LCTLs and NFLs ($p = .035$). Students in LCTLs had significantly more desire to learn languages than CTLs. The descriptive statistics also indicated a strong tendency in integrativeness and attitudes toward the learning situation that

students in LCTLs were more interested in foreign languages and cultures, and attained a more positive attitude to the language course and the language teacher.

To discuss this in more general terms, LCTLs attract academically more successful learners and the learners maintain their good performance in language classes. The overall achievement of students in NFLs is lower than FL learners, and students with comparatively good GPAs have little interest toward FL groups. The correlation between instrumental orientation and the overall GPA of students in NFLs indicates that FL teachers may increase language enrollment and attract higher caliber students into NFLs by advertising practical purposes of acquiring FLs.

Students studying CTLs are more anxious and less open-minded than those studying LCTLs. Neuroticism for students of CTLs is negatively correlated to instrumental orientation and parental encouragement. Promoting a better understanding of practical purposes of learning CTLs and receiving more parental encouragement and guidance may lower learners' anxiety level. Teachers may serve as outreach facilitators and communicate more actively with parents. Students of LCTLs are comparatively emotionally stable. Teachers may focus on their integrative orientation and their attitudes toward the learning situation to further lower their anxiety level.

Students studying CTLs and NFLs are less motivated in language learning than those studying LCTLs. As motivation, integrativeness and attitudes toward the learning situation are correlated in all student groups, teachers may have a better understanding of curriculum design that will improve students' attitudes and motivation. Real materials with cultural elements may be introduced to raise students' interest in FLs, the people who speak the FLs and groups related to them.

From a language program perspective, language goals, rewards, and study abroad opportunities may be established to promote students' further education in the target country. Teachers' professional development may be supported to recognize factors that affect students' motivation. Right-size language classes may be

scheduled to increase teacher-students interactions and to improve the learning situation.

Conclusions

The current study investigated the correlations of academic achievement, personality, motivation, and language attitudes among learners in CTLs, LCTLs, and NFLs and the extent to which learners in CTLs, LCTLs and NFLs differed in these aspects. The results indicated correlations between overall academic achievement and foreign language achievement in CTLs and LCTLs. Neuroticism was negatively correlated to motivation factors such as integrativeness, motivation, and instrumental orientation. Integrativeness was positively correlated to motivation of the target language and attitudes toward the learning situation. Students in CTLs, LCTLs, and NFLs also experienced different correlations in their personality and motivation factors. Significant differences were noticed in neuroticism and motivation of the target language between students in LCTLs and CTLs: those in LCTLs were less nervous and more motivated than students studying CTLs. Strong tendencies in integrativeness and attitudes toward the learning situation were also observed, which suggested that those studying LCTLs attained a more integrative orientation toward target cultures and a more positive attitude toward language learning environment. Given the small sample size, the findings of the current study should be interpreted modestly. Clearly, continued research is called for with a larger sample size to help us further understand students' individual differences in FL learning and the relationship between academic achievement, personality and motivation. Consistency of grading across FL classes also needs to be examined to interpret language GPA in a more accurate manner.

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Table 1. BFI dimensions, definitions and examples

Dimension	Definition	Examples from the 44 items
Extroversion	is an energetic approach toward the social and material world. It includes traits such as sociability, activity, assertiveness, and positive emotionality	"Generates a lot of enthusiasm."
Agreeableness	contrasts a pro-social and communal orientation toward others with antagonism and includes traits such as altruism, tender-mindedness, trust, and modesty	"Likes to cooperate with others."
Conscientiousness	describes socially prescribed impulse control that facilitates goal directed behavior, such as thinking before acting, delaying gratification, following norms and rules, and planning, organizing, and prioritizing tasks	"Makes plans and follows through with them."
Neuroticism	contrasts emotional stability and even-temperedness with negative emotionality, such as feeling anxious, nervous, sad, and tense	"Worries a lot."
Openness	describes the breadth, depth, originality, and complexity of an individual's mental and experiential life	"Is original, comes up with new ideas."

Table 2. mini-AMTB dimensions, components and examples

Dimensions	Components	Examples
Integrativeness	Attitudes toward the target language group; Interest in foreign language; Integrative orientation	"My attitude toward the foreign language (FL) speaking people is" "My interest in FL is" "My motivation to learn FL in order to interact with FL speaking people is"
Attitudes toward the learning situation	teacher and class evaluation	"My attitude toward my target language (TL) teacher is" "My attitude toward my TL course is"
Motivation of the target language	Motivation intensity; Desire to learn the target language; Attitudes to learn the target language	"My attitude toward learning TL is" "My desire to learn TL is" "My motivation to learn TL is"
Language anxiety	The target language class anxiety; The target language use anxiety	"I worry about speaking in my TL class" "I worry about speaking TL outside of class"
Instrumental orientation of the target		"My motivation to learn TL to practical purposes (e.g., to get a good job)"

language

is"

Parental
encouragement

"My parents encourage
me to learn FL"

Table 3. Questions of openness to experience and neuroticism in BFI*

Openness	Neuroticism
Q.2 "Is original, comes up with new ideas"	Q. 1 "Is depressed, blue"
Q.4 "Is curious about many different things"	Q. 3 "Is relaxed, handles stress well"
Q.6 "Is ingenious, a deep thinker"	Q. 5 "Can be tense"
Q. 8 "Has an active imagination"	Q. 7 "Worries a lot"
Q. 10 "Is inventive"	Q. 9 "Is emotionally stable, not easily upset"
Q. 12 "Values artistic, aesthetic experiences"	Q. 11 "Can be moody"
Q. 14 "Prefers work that is routine"	Q. 13 "Remains calm in tense situations"
Q. 16 "Likes to reflect, play with ideas"	Q. 15 "Gets nervous easily"
Q. 17 "Has few artistic interests"	Q. 18 "Is sophisticated in art, music, or literature"

*Reversed scales were applied in questions 3, 9, 13, 14 and 17.

Table 4. Correlations among academic performance, personality traits, motivation and language attitudes in CTLs

		FL GP A	Attitu- des	Motivati on	Instrume ntal orientatio n	Parental encouragemen t
Overall GPA	Pearson	.833*				
	Correlation	*				
	Sig. (2-tailed)	.000				
Neuroticism	Pearson				-.425*	
	Correlation					
	Sig. (2-tailed)				.034	
Integrativen ess	Pearson		.558**	.872**	.477*	
	Correlation					
	Sig. (2-tailed)		.004	.000	.016	
Openness	Pearson					.399*
	Correlation					
	Sig. (2-tailed)					.048
Attitudes	Pearson			.514**		
	Correlation					

	Sig. (2-tailed)			.009		
Motivation	Pearson				.409*	.417*
	Correlation					
	Sig. (2-tailed)				.043	.038
Instrumental orientation	Pearson					.459*
	Correlation					
	Sig. (2-tailed)					.021

** indicates significant correlations at the 0.01 level (2-tailed). * indicates significant correlation at the 0.05 level (2-tailed).

Table 5. Correlations among academic performance, personality traits, motivation and language attitudes in LCTLs

		FL	Integrati		
		GPA	Attitudes	Motivation	veness
Overall GPA	Pearson	.532*			
	Correlation				
	Sig. (2-tailed)	.028			
Neuroticism	Pearson	-.511*			-.585*
	Correlation				
	Sig. (2-tailed)	.036			.014
Integrativeness	Pearson	.575*		.889**	
	Correlation				
	Sig. (2-tailed)	.016		.000	

Table 6. Correlations among academic performance, personality traits, motivation, and language attitudes in NFLs

		Integrati veness	Motiva tion	Instrumental orientation	Parental encourage ment
Overall	Pearson Correlation	-.514*		.502*	
GPA	Sig. (2-tailed)	.035		.040	
Integrati	Pearson Correlation		.820**		
veness	Sig. (2-tailed)		.000		
Open- ness	Pearson Correlation				-.750**
	Sig. (2-tailed)				.000

Table 7. Descriptive analysis of integrativeness, attitudes toward the learning situation, motivation of the target language, language anxiety, instrumental orientation of the target language, and parental encouragement in the mini-AMTB

Dimensions	CTLs	LCTLs	NFLs
Integrativeness	<i>M</i> = 3.77	<i>M</i> = 4.37	<i>M</i> = 3.65
	<i>SD</i> = 1.11	<i>SD</i> = .84	<i>SD</i> = .84
Attitudes toward the learning situation	<i>M</i> = 3.54	<i>M</i> = 4.17	
	<i>SD</i> = 1.22	<i>SD</i> = .99	
Motivation of the target language	<i>M</i> = 3.40	<i>M</i> = 4.29	<i>M</i> = 3.61
	<i>SD</i> = 1.35	<i>SD</i> = .86	<i>SD</i> = .86
Language anxiety	<i>M</i> = 2.50	<i>M</i> = 2.41	<i>M</i> = 2.47
	<i>SD</i> = 1.24	<i>SD</i> = .71	<i>SD</i> = 1 .09
Instrumental orientation	<i>M</i> = 3.12	<i>M</i> = 3.76	<i>M</i> = 3.47
	<i>SD</i> = 1.39	<i>SD</i> = 1.30	<i>SD</i> = 1.39
Parental encouragement	<i>M</i> = 2.56	<i>M</i> = 2.41	<i>M</i> = 2.58
	<i>SD</i> = 1.58	<i>SD</i> = 1.50	<i>SD</i> = 1.49

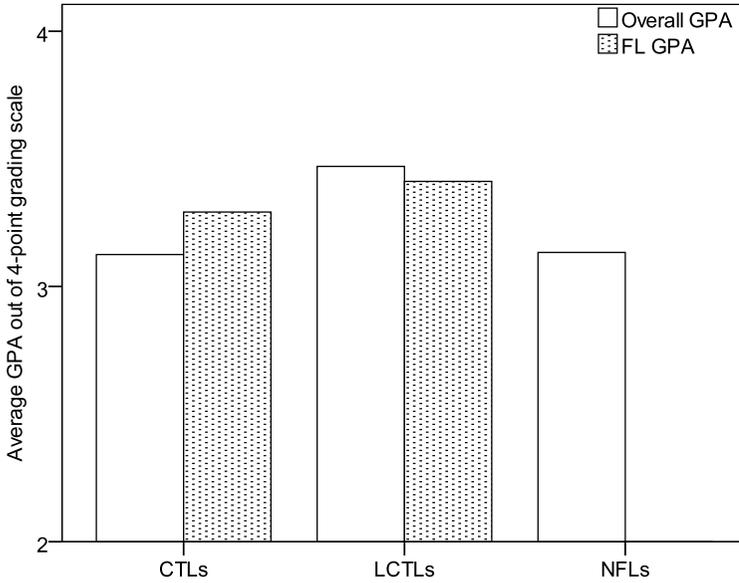


Figure 1. Overall GPA means out of the 4-point grading scale in CTLs, LCTLs and NFLs and foreign language GPA means in CTLs and LCTLs.

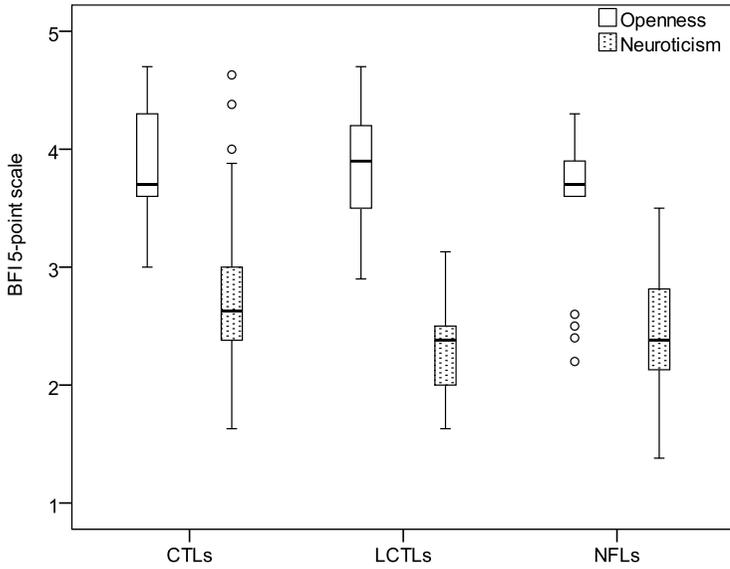


Figure 2. Openness and neuroticism out of the 5-point BFI scale in CTLs, LCTLs and NFLs. * indicates significant difference at the 0.05 level (2-tailed).

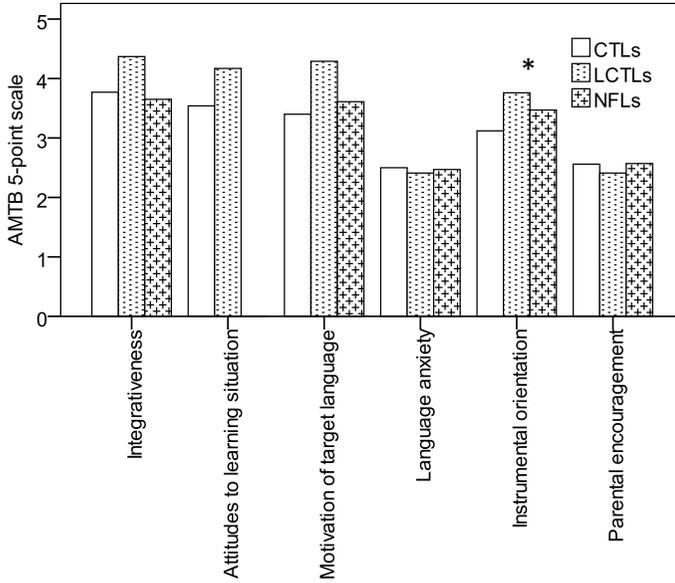


Figure 3. Motivation and attitude factors out of the 5-point mini-AMTB scale in CTLs, LCTLs and NFLs. * indicates significant difference at the 0.05 level (2-tailed).