Original Article

Personality types and intercultural competence of foreign language learners in education context

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Abstract:

BACKGROUND: Personality types of learners have determining role in their achievements. Many researchers concentrate on noncognitive moderators such as personality traits to trace the barriers in learning. This study attempts to find out what kinds of personality types enable learners to be more competent in intercultural context.

METHODS: To conduct the study 236 students were randomly selected from Ardestan and Khorasgan Universities. Two questionnaires were used to collect the data. The first one was a researcher's made questionnaire to assess learners' intercultural competence; based on Bennett's Intercultural communicative Model of intercultural communicative competence (ICC); and intercultural competence assessment Model of ICC, consisting four behavioral dimensions, tolerance for ambiguity, flexibility, respect for otherness, and interaction. The second questionnaire wasMyers-Briggs Type Indicator to identify learner's personality type. The means, standard deviations, t-scores, and significance levels of behavioral dimensions were calculated to interpret the data.

RESULTS: The analysis of the results revealed that greater general competence in cultural adjustment is associated with greater extroversion personality. Students with thinking and judging personalities were more tolerant for ambiguities of foreign cultures than those with feeling and perceiving personality types. The data of respect for otherness were very similar to tolerance for ambiguity, and students with sensing personality preference were more competent in interacting with foreign cultures than intuitive ones.

CONCLUSION: The findings indicated the personality types play opportunity or threat roles for FL learners in intercultural understanding. Therefore, to promote efficiency in education, it is vital to explore the learners' cognitive and noncognitive health conditions.

Keywords:

Culture, individual differences, intercultural competence, personality

Introduction

Many studies investigated individual differences have shown their potential effect in failure or success of learning process. Some researchers believe to understand the barriers in learning a foreign language, it is logical to concentrate on individual differences. Therefore, the success of second language learning is due to cognitive as well as affective, motivational, personality, and demographic factors of the learners among which personality is of great importance.[1] Ackerman *et al.*,[2] have suggested that "individual difference variables such as personality, intelligence, and vocational interests can be used to explain not only variance in academic performance, but also the processes by which traits influence examination outcomes."[3]

Individual differences can be reflected in cultural understating too. Culture, defined generally as people's lifestyle, can be perceived differently by different people. Since knowledge of culture is important

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for facilitating communication with people, learners of language need to learn about and understand cultures. This means that in the language classroom learners not only focus on developing knowledge about another culture but understand themselves in relation to some other cultures. This is why there is a contemporary emphasis on "intercultural."[4] According to Liddicoat[4] "learning to be intercultural involves much more than just knowing about another culture: it involves learning to understand how one's own culture shapes perceptions of oneself, of the world, and of our relationship with others." Learners need to become familiar with how they can personally engage with linguistic and cultural diversity. Liddicoat commented on cultural and intercultural perspectives: There is another way to think about culture in language teaching: the distinction between a cultural perspective and an intercultural perspective: This "cultural" pole leads the development of knowledge about culture which is external to the learner and is not intended to transform the learner's existing identity, values, attitudes, and worldview. The "intercultural" pole implies a change in the beliefs of the learner in the process of learning. The goal of learning is to develop an intercultural identity as a result of an engagement with an additional culture. Here, the borders between self and other are explored and redrawn.[5]

Therefore, cultural understanding can be reflected in individual differences in general, personality types in particular. Since 1990s, there has been an increasing interest on showing how personality affects or, better to say, correlates with the academic performance, the findings confirmed that Personality type affects the way people respond to stimuli and the way that they prefer to learn.[6-8]

De Raad et al.,[9] in a review of personality, learning and education, explain the mediating and moderating roles of personality variables in learning process and state that noncognitive personality factors may appear as moderators of the general process of learning, because they interact with- or moderate-successive stages of the information processing sequence. Furthermore, an individual's personality was reported to have an effect on the extent of information he achieves.[10]

In spite of the diversity of research about the personality of learners or intercultural competence realm, relatively few studies have been conducted to find out the relationship between foreign language learners' personality type and their intercultural competence. Consequently, due to the lack of research, this paper was an attempt to shed light on this matter.

A review of literature

The study of personality has a long history. For example, Plato, Aristotle, Descartes, and Machiavelli, among numerous other philosophers and writers, explored human personality in their works. Modern theorists echo the theories already presented by them.[11] Personality is defined as a dynamic and organized set of characteristics possessed by every person that distinctively and uniquely influences his or her behaviors, motivations, and cognitions in various situations.[12] PPKI theory (intelligence as processes, personality, knowledge, and interests) tries to draw a conceptual framework for understanding the relation between noncognitive and cognitive individual differences. The theory claims that personality traits influence an individual's choice and engagement in intellectually stimulating activities; as a result, they determine the level of knowledge development.[13] Thus, it can be inferred from the PPKI theory that individual differences in personality may influence academic performance. Other studies have also shown that "nonintellectual" factors such as personality traits and learning styles are significantly correlated with academic performance.[3,14] Pervin and John defined personality as "those characteristics of a person that account for consistent patterns of feeling, thinking, and behaving."[15] It is generally conceived of a series of traits such as extroversion/introversion, neuroticism/stability, and judging/perceiving,[16] and it is typically measured using some kind of self-report questionnaires.[17] Psychologists have used them to measure certain dimensions of personality such as risk-taking and tolerance of ambiguity among L2 learners. Each dimension of personality types represents a continuum; that is, individuals can be screened on the spectrum to be less or more, say, extroverted, but it is also possible to determine their preferred personality type.

A brief summary of the four dimensions of personality types based on the Myers–Briggs' Type Indicator (MBTI) is given below:

Extraversion (E) - Introversion (I): "An extrovert receives energy from the outside world, whereas an introvert is more likely to engage in solitary activities, i.e. the trait considers whether a person prefers working alone or feels energized working in a team."[18]

Sensing (S) - Intuitive (N): "A sensing person relies on gathering information through the five senses, relying on concrete facts. Sensors are less likely to see the "bigger picture" and more likely to follow a step-by-step approach. An intuitive thinker is more likely to be drawn by abstract, concepts, and relationships and will be drawn by the innovative and theoretical aspects."[19]

Thinking (T) - Feeling (F): "A thinking person is more likely to prefer decisions made in an impersonal, logical, objective manner. A feeling person will make decisions based more on personal values, relationships,

and the feelings of others. Women are more likely to be feelers."[20]

Judging (J) - Perceiving (P): "This personality preference describes how a person deals with the outside world. The judger is more likely to look for a controlled life, preferring planning, and regulation. The perceiver deals with the outside world through sensing or intuition, but he prefers spontaneity, flexibility, and autonomy."[21]

Since the goal of language teaching is to facilitate communication among individuals who are linguistically and culturally different, introducing cultures in the classroom should aim at enhancing students' intercultural understanding. Intercultural contact is a key issue in the second language acquisition for at least two reasons: on one hand, L2 proficiency develops the medium of communication between members of different communities. On the other hand, interethnic contact improves the learner's disposition; thus, it is concluded that intercultural contact is both a means and an end in L2 studies.[22] In its broadest sense, intercultural competence defined by Fantini as "a complex of abilities needed to perform effectively and appropriately when interacting with others who are linguistically and culturally different from oneself."[23] He listed a wide range of related terms theoreticians used to describe intercultural competence, including intercultural communicative competence (ICC), transcultural communication, cross-cultural adaptation, and intercultural sensitivity. What all intercultural competence terms convey is the ability to decenter learner's culture and communicate with other individuals from linguistically and culturally diverse backgrounds. Sinicrope *et al*. believed that college foreign language and study abroad programs can be helpful for students to develop their intercultural competencies. They commented that the acquisition of such competencies may be important not only for individual enrichment and communicative proficiency but also for providing future educators with the facts necessary for promoting successful collaboration across cultures. As the focus and purpose of intercultural competence research have expanded, approaches to its description and assessment have developed from short attitude and personality surveys to behavioral self-assessments, performance assessments, portfolio assessments, and others.[24]

One of the earliest comprehensive frameworks to the conceptualization and measurement of ICC was Ruben's behavioral approach.[25] In contrast to the personality and attitudinal foci of previous approaches, he advocated a behavioral approach. He considered seven dimensions to identify what individuals know to be interculturally competent and how they actually behave in intercultural setting.[24]

Risager proposed an extended model of ICC. She outlined 10 elements that mostly comprised linguistic elements and proficiencies.[26] Byram and other European researchers (Kühlmann, Müller-Jacquier, and Budin) extended these ideas and develop their own assessment tool. They adopted a multidimensional framework named INCA (intercultural competence assessment) (one of the researcher's made questionnaires utilized in this study was prepared based on this framework). This model consists of two sets of dimensions, a model for the assessor and a model for the examinee, with three skill levels for each dimension: basic, intermediate, and full. From the assessor's point of view, intercultural competence consists of six different dimensions:
1. Tolerance for ambiguity
2. Behavioral flexibility
3. Communicative awareness
4. Knowledge discovery
5. Respect for otherness
6. Empathy.[24]

The second part of the study's questionnaire used to assess participants' intercultural competence was made considering Bennett's Developmental Model of Intercultural Sensitivity (DMIS) which consists of three stages of denial, defense, and minimization (ethnocentric stages); leading to acceptance, adaptation, and integration (ethnorelative stages). The stages illustrate a continuum from least culturally competent to most culturally competent, that is a model of development from denying other cultures to integrating with other world views.[24] In recent years, many studies have conducted to examine the impact of cognitive and noncognitive factors on intercultural understanding. Caldwell-Harris and Ayçiçegi believed that psychological adjustment depends on the degree of match between personality and the values of the target communities.[27] Moreover, Triandis has proposed the concept of "Person-environment fit."[28] In her study, Yashima found that extroversion was the strongest predictor of success in the interactional function. Given the same English competence, the more extroverted person is, the better the adjustment with foreign culture will be.[29] Therefore, it is logical to expect a relationship between personality types and intercultural competence of foreign language learners.

Wilson *et al*. in their article "What can personality tell us about cultural competence?" analyzed a total of 17 personal and situational factors with regard to intercultural adjustment. They found that agreeableness, consciousness, openness/flexibility, and extraversion were positively correlated with adaption. In addition, concerning culture relevant factors, they reported cultural empathy and cross-cultural self-efficiency associated with personality effects.[30] Generally speaking, personality type of the learners can be a

predictor of ICC, but there is still a paucity of studies in this regard; therefore, this study attempts to investigate the relationship between four behavioral dimensions of intercultural competence (based on INCA): tolerance for ambiguity, flexibility, respect for otherness, interaction, and learners' personality type assessed on MBTI.

Purpose of the study

Many studies have conducted to examine the barriers in intercultural understanding, and the personality traits hinder EFL learning; however, to the best knowledge of the present author, few, if any, empirical research has focused on the personality traits that should be guided or modified by pedagogical materials and EFL teachers to make the learners more interculturally competent. As a result, the following research questions were formulated:

1. Is there a statistically significant relationship between four behavioral dimensions reflecting intercultural competence and eight personality types?
2. Which personality types are more influential in intercultural understanding?

Methods

The participants of the study were 236 students from Ardestan and Khorasgan Universities. They were in the age range of 18–32 (mean = 25) of both sexes, male and female. Since the participants' proficiency level is not considered as an influential factor in this research, the students were randomly selected. The students majored in dentistry and MA level of architecture, management, and civil engineering. Their English knowledge was estimated to be about at intermediate and upper-intermediate level.

Two questionnaires were used to collect data. The first one was a researchers-made questionnaire, composed of two sections. (1) 11 statements about cultural issues to be rated with a Likert scale of agreement, constructed considering the ideas and samples presented in Bennett's DMIS, which consists of six stages grouped into three ethnocentric stages and three ethnorelative stages; The items assessed ethnocentric stages detected the learners in denial, defense, and minimization levels; and acceptance, adaptation, and integration statements reveal the learners improve to ethnorelative stages. Participants rate the statements with 1 for the most disagreement to 5 for the most agreement (see sample questionnaires for Bennett's Model in Sinicrope *et al.*[24] (2) 10 rating questions with three frequency options, developed by making a few minor alterations in INCA Model of Intercultural Competence, which consists of six behavioral dimensions, among them tolerance for ambiguity, flexibility, respect for otherness and interaction were selected for this study (For more descriptions and samples see Sinicrope *et al.*[24] To test

the reliability and validity of the questionnaires a pilot study was carried out in a language institute and some items were reviewed and revised-based on the feedback of students. The second questionnaire was MBTI, one of the most popular and well-researched personality test used.[31] It was developed from Carl Jung's Theory of psychological type and was considered to reveal differences within and across cultures. The test consists of 32 pairs of questions assessing four binary personality dimensions including extraversion versus introversion, intuitive versus sensing, thinking versus feeling, and judging versus perceiving. Kirby and Barger[32] have reported on a wide range of studies which they consider providing significant evidence for the reliability and validity of MBTI in a variety of groups with different cultural characteristics."[16]

About two-thirds of the subjects of the study participated in the researcher's classes during their academic semester, but all participants were aware of the object of the study and the researcher attended in all data collection procedure to minimize misunderstanding. A comprehensive explanation was given to the participants and they were asked to answer honestly and precisely. The first questionnaire assessing ICC, which was composed of two parts administered in two sessions with 3 weeks interval. The researcher monitored the answers during and after responding. As a class discussion unexpected answers were reviewed in two classes after data collection. The MBTI questionnaire was administered 3 weeks after the second part of ICC questionnaire. Again as feedback, the answers were investigated with a group of participants, and they confirmed the consistency of their character with the traits derived by MBTI.

The collected data were analyzed using both descriptive and inferential statistics. SPSS software version 18 was (Inc, chicago, IL, U.S.A) used in the study. The means and standard deviations of ICC and its four behavioral dimensions were calculated, and the same approach was applied to the raw data collected from MBTI. To examine the relationship between FL learners' personality traits and their success in ICC relations, t-scores were calculated to compare the relevant mean scores.

Results

Table 1 presents the means, standard deviations, t-scores, and significance levels regarding four personality dimensions calculated through the first section of questionnaire 1. The aim of this part (based on Bennett's DMIS) was to assess the participants' general competence in intercultural communication. Table 1 shows intercultural competence scores are significantly different among students with introvert and extrovert personality, ($P < 0.05$, $P = 0.019$). It can be

interpreted that extrovert students are more competent in communicating with foreign people or cultures than students with introvert personality. However, in the case of the other three binary dimensions, judging-perceiving, sensing-intuitive, and thinking-feeling, no significant difference was found among the groups ($P < 0.05$). It seems that when passing through the process of denial, defense and minimization to acceptance, adaptation, and integration (according to the questionnaire's based model-Bennette's DMIS) being an introvert or extrovert learner makes a more significant difference than the other three binary personality traits.

The second part of the first questionnaire derived from INCA Model of intercultural competence consists of four different behavioral dimensions; tolerance for ambiguity, flexibility, respect for otherness, and interaction. Tables 2-5 compare the means, standard deviations, t-scores, and significance levels of these behavioral dimensions regarding different personality dimensions. Table 2 shows the information of the first behavioral dimension, tolerance for ambiguity, for the participants with different personality types. Tolerance for ambiguity scores is significantly different in students with thinking-feeling and judging-perceiving personality ($P < 0.05$). It may mean that students with thinking and judging personalities are more tolerant for ambiguities of foreign cultures than those with feeling and perceiving personality types. There were no significant differences between scores of tolerance for ambiguity among students with introvert-extrovert and sensing-intuitive personality types ($P < 0.05$).

The information about the second behavioral dimension—flexibility—studied as an ICC element, is shown in Table 3. The results of this section were unexpected. There were no significant differences in mean scores of students with introvert-extrovert, thinking-feeling, sensing-intuitive, and judging-perceiving personality types regarding flexibility ($P < 0.05$). Since flexibility can play a determining role in intercultural competence, this inconsistency can be justified by the globalization process, that lets people assume their individual cultures are among the many valid world views. The data of "respect for otherness," as the third element studied in intercultural competence is demonstrated in Table 4. Surprisingly, the results were very similar to "tolerance for ambiguity." There is a significant difference in "respect for otherness" scores in students with thinking-feeling and judging-perceiving personalities ($P < 0.05, P = 0.001, P = 0.131$). A possible explanation is that feeling students who make decisions based more on personal values, relationships, and the feelings of others[20] are more respectful to intercultural relations than thinking students. Although good at adopting, unconventional perceivers were expected to obtain a higher mean score

Table 1: Intercultural competence scores for participants with eight personality types

Personality type	Mean	SD	t	Significance level
Introvert	42.72	4.27	−3.369	0.019
Extrovert	44.17	5.39		
Sensing	42.98	5.27	−1.104	0.311
Intuitive	43.62	4.62		
Thinking	43.23	4.79	−0.809	0.419
Feeling	43.75	5.02		
Judging	43.29	4.61	−0.469	0.640
Perceiving	43.59	5.31		

SD=Standard deviation

Table 2: Tolerance for ambiguity mean scores among eight personality types

Personality type	Mean	SD	t	Significance level
Introvert	4.52	1.12	−0.024	0.981
Extrovert	4.52	1.31		
Sensing	4.58	1.44	0.569	0.570
Intuitive	4.48	1.06		
Thinking	4.65	1.20	2.539	0.012
Feeling	4.24	1.19		
Judging	4.83	1.22	5.807	0.001
Perceiving	4.01	1		

SD=Standard deviation

Table 3: Flexibility mean scores among eight personality types

Personality type	Mean	SD	t	Significance level
Introvert	5.43	1.02	0.204	0.838
Extrovert	5.40	1.13		
Sensing	5.36	1.35	−0.619	0.537
Intuitive	5.45	0.88		
Thinking	5.42	1.05	0.086	0.932
Feeling	5.41	1.12		
Judging	5.47	1.13	0.717	0.474
Perceiving	5.37	1		

SD=Standard deviation

Table 4: Respect for otherness mean scores among eight personality types

Personality type	Mean	SD	t	Significance level
Introvert	5.45	1.06	−1.596	0.112
Extrovert	5.66	1.11		
Sensing	5.50	1.56	−0.460	0.647
Intuitive	5.57	0.70		
Thinking	5.39	1.25	−4.435	0.001
Feeling	5.87	0.48		
Judging	5.68	1.15	2.168	0.031
Perceiving	5.38	0.99		

SD=Standard deviation

in "respect for otherness," judgers who seek a planned, controlled and regulated life[21] and have more potentials in forming and expressing judgments seem to be more competent in establishing logical relations and respecting unfamiliar values. Again just like Table 2, no significant differences were shown in "respect for otherness" scores

Table 5: Interaction mean scores among eight personality types

Personality type	Mean	SD	t	Significance level
Introvert	10.74	1.56	−1.514	0.131
Extrovert	11.05	1.70		
Sensing	11.32	1.44	3.513	0.001
Intuitive	10.63	1.68		
Thinking	10.78	1.80	−1.761	0.080
Feeling	11.10	1.16		
Judging	10.97	1.76	0.522	0.602
Perceiving	10.86	1.35		

SD=Standard deviation

for introvert-extrovert and sensing-intuitive personality types ($P < 0.05$). The "interaction" data are represented in Table 5. Here, the results are different from the other three dimensions. Interaction scores were significantly different among students with sensing-intuitive personality types ($P < 0.05$, $P = 0.001$). It means that students with sensing personality preference who attend to concrete practical facts are more competent in interacting with foreign cultures than intuitive ones. There were no significant differences between interaction scores of introvert-extrovert, thinking-feeling, and jugging-perceiving personality types ($P < 0.05$).

Discussion

The purpose of this paper is to enhance knowledge on personality traits that contribute to intercultural competence. As researchers affirm the success of second language learning is due to cognitive as well as affective, motivational, and personality factors. The results of the research were in some respects consistent with the results of prior studies;[16,33,34] Specifically, intercultural competence scores were significantly different among students with introvert-extrovert personality, that was in line with the mentioned studies. Here, greater general competence in cultural adjustment is associated with higher extroversion tendency. One explanation may be that extroverted people are more friendly and optimistic and it is reflected in their relationships. Therefore, a learner with an extroverted tendency who seek novelty and social stimulation may be more culturally adoptable. The findings are in line with Huang *et al.*, that personality traits like extraversion and agreeableness will assist a person in the adaptation process.[35] They believe that assertive, active, and gregarious individuals (very similar to extravert tendency) are more willing to get out of their typical comfort zones and hence, can adjust to the social values of the host country. There is a paucity of research with a focus on the other three binaries of personality types, thinking-feeling, judging-perceiving, and sensing-intuitive, especially concerning intercultural competence. We need further research in this regard.

Similar results were obtained for two behavioral elements reflecting cultural competence, respect for otherness, and tolerance for ambiguity. When it comes to tolerance for the ambiguity of foreign cultures and respect for the people of unknown lands and their customary beliefs and lifestyles, thinking and judging learners might be more successful than leaners with feeling and perceiving personality types. Shaffer *et al.* argued that "individuals high on tolerance for ambiguity have the tendency to get along with others in interpersonal settings and this reduces the stress of adopting to the new cultural environment;" besides, they contended that individuals high on motivation and conscientiousness personality (very similar to thinking and judging individuals) who are known to be open-minded, intelligent, and imaginative are more likely to spend time on tasks and meet job expectations when they encounter personal problems or social crisis. They tend to be more creative and eager to adopt and handle work and nonwork-related aspects in a new sociocultural setting.[36]

The most striking result of the study was that none of the two binaries of personality type show a significant difference with flexibility as an ICC element. Further research is needed to find a logical explanation. The results obtained from the last behavioral dimension of ICC, interaction, was different. Cultural knowledge as a product of the interaction process provides a framework for understanding and comparing different cultures that will assist the general adjustment to the cultural environment.[37] Here, sensing learners were reported to be more competent in interacting with foreign cultures than learners with intuitive personality type. The interpretation of the current results might be attributed to their personality traits. Sensing learners who understand real-life situations are willing to face new experiences and make logical decisions seem more interculturally competent than intuitive learners who prefer working with abstract concepts and following routine patterns.

Conclusion

The goal of the study was to explore the impact of EFL learner's personality traits on their success in intercultural communication. The findings reinforced the idea that individual differences should be targeted in pedagogical planning. Among the detected personality traits thinking, judging, feeling, and sensing were significantly related to intercultural communication in behavioral dimensions of ambiguity tolerance, respect for otherness, and interaction. The results reveal the fact that in the continuum of personality traits, the closer EFL learners are to extrovert, thinking, judging, and sensing types, the more they have the potential to

progress in intercultural relations. Regarding respect for otherness dimension, feeling participants scored more than thinkers, that is obvious for those who care about personal values and relationships to be more respectful to unknown people.

The strong link reported between personality traits and cross-cultural adjustment shows that language educators and syllabus designers should seriously take them into account.[12,27] By screening learners before and monitoring them through the learning process in terms of their personality type teachers are able to predict the cultural barriers that each student may encounter. This knowledge may lead to utilizing a more relevant strategy or technique and hence improvement in the learning process.

Finally, as class research, the study suffers some limitations. The participants were not differentiated in terms of their proficiency level. Further researches can be conducted to assess the impact of learners' personality type on their success in intercultural communication with a focus on their proficiency level. Moreover, the participants were limited to adult university students. Further studies can be carried out in other contexts like language institute or high school or other age groups.

Conflicts of interest
There are no conflicts of interest.

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