

## “BIG FIVE” FACTORS AND INTERCULTURAL SENSITIVITY IN RUSSIAN UNIVERSITY STUDENTS

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**Abstract:** The relevance of the research is conditioned by the necessity of studying the intercultural competence which is viewed as one of the means for preventing and solving the intercultural conflicts and not only as a social but also as a personal phenomenon. In connection to this, the research presented in this paper is aimed at revealing the correlation of particularities of intercultural competence and sensitivity with the Big Five factors. The leading method for diagnosing the intercultural sensitivity was the author adaptation of the technique “Intercultural sensitivity scale” of O.E. Khukhlaev and M.Yu. Chibisova as modified by Yu.A. Logashchenko that allows comprehensively viewing the intercultural competence on the basis of M. Bennet’s Developmental Model of Intercultural Sensitivity. This model gives an opportunity to reveal stages of the rise of intercultural competence such as minimization, absolutization, ambivalence and acceptance. As a result of surveying 388 students (65,5% of them being girls) from two major Russian universities, it has been found that most factors of the Big Five (apart from neuroticism) are associated with the extent of parameters of intercultural sensitivity, except minimization. The materials of the paper are of practical value for elaborating the programs of development and formation of the intercultural competence while taking into account the revealed specific character of personality factors and particularities of a polycultural educational space of today’s universities.

**Keywords:** Intercultural competence, intercultural sensitivity, Developmental Model of Intercultural Sensitivity (DMIS), Big Five Factors, university students.

### INTRODUCTION

Regrettably, the process of globalization in today’s world is frequently accompanied by negative trends: polarization of public opinion, growth of interethnic, interreligious

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and intercultural tension, emergence of conflicts at interpersonal and intergroup levels. The increasing diversity and controversy of the world around people determine the relevance and need of studying the problem of development of intercultural competence which is viewed as a possible means for preventing and solving the intercultural conflicts in various life activity spheres: international relationships, business, culture, education etc.

The problem of development of intercultural competence is especially relevant for the modern multinational universities due to the growth of academic mobility and internalization of students all over the world (Deardorff, 2006). At the same time, the difficulties of studying the problem of intercultural competence and of constructs associated with it are determined by the lack of a unified understanding of these phenomena and, consequently, of reliable techniques for diagnosing them.

The contemporary studies deal with various groups of factors that may influence the development of intercultural competence, with social and cultural, group and personality factors being among them (Kornilova, 2012; Logashhenko, 2015; Pochebut, 2012 Van der Zee and van Oudenhoven, 2013 etc.). Meanwhile, the Russian psychology studies the personality predictors of intercultural competence to a smaller extent – and, first of all, the Big Five factors that are analyzed in detail within the context of efficiency of intercultural adaptation and, consequently, intercultural competence in the Western science (Huang et. al., 2005; Oh & Berry, 2009; Van der Zee & Van der Gang, 2007; Van der Zee & van Oudenhoven, 2013; 2014).

The authors think that from the viewpoint of practical applications of this problem it is working out of psychological programs for developing and forming the intercultural competence and sensitivity with the revealed psychological factors taken into account that is the most sought-after.

Thus, the research suggested will be aimed at the integrated analysis of intercultural competence not only as a social, social and psychological, but also as a personality phenomenon.

## LITERATURE REVIEW

***The problems of studying intercultural competence and sensitivity:*** As of now, science has got no consistent approach to definition, structure and measurement of intercultural competence as a psychological construct. The studies being of interest for the authors employ a number of notions that are close in their meaning, such as *intercultural competence* (Borghetti, 2013; Chibisova & Khukhlaev, 2008; Deardorff, 2006; Sinicrope et. al., 2013), *intercultural communicative competence* (Byram, 1997; Skopinskaja, 2009), *intercultural sensitivity* (Bennett, 1986, 1993; Hammer et. al., 2003; Pochebut & Logashenko, 2014), *multicultural effectiveness* (Van der Zee & Van Oudenhoven, 2014) and some others. Having generalized



ethnorelative stages imply *acceptance* of intercultural distinctions, *adaptation* to their influence and *integration* of another worldview with one's own. Based on this model, M. Bennet and M. Hammer (Hammer et. al., 2003) developed the *Intercultural Development Inventory (IDI)*. This technique is a commercial product so special training and permission for use are required. In spite of this, IDI is currently widely applied for scientific research. On the official website [idiinventory.com](http://idiinventory.com), M. Hammer, one of the authors of the technique, keeps a record of thesis papers using IDI. Starting from 1998, the quantity of such works has approached 85 (Hammer, 2015).

In the recent time, DMIS has been used in Russia as well. Based on this model O.E. Khukhlaev and M.Yu. Chibisova (2008) developed a technique for measuring intercultural sensitivity that was tested out in a number of studies (Logashenko, 2015; Pochebut & Logashenko, 2016). The technique includes 4 scales: Minimization, Absolutization, Ambivalence and Acceptance. Minimization scale characterizes the extent of estimating the intercultural distinctions as insignificant during interaction (from admitting the presence and influence of cultural distinctions up to the complete denial of their existence). Absolutization scale shows the extent of subjective feeling the possibility to control the influence of cultural distinctions during the intercultural activity (ranging from being convinced of the possibility of control up to perceiving the distinctions as spontaneous and uncontrollable). Two above scales correspond to M. Bennett's ethnocentrism stage. Ambivalence scale demonstrates the extent of agreement and harmony of attitudes towards cultural distinctions and is a transition stage from ethnocentrism to ethnorelativism. Acceptance scale illustrates the readiness for admitting the fact of existence of cultural distinctions, the ability to notice them and take them into account in one's intercultural activity; it corresponds to the ethnorelative stage of the development of intercultural sensitivity according to M. Bennett (Logashenko, 2015).

In empirical studies, it has been found that the development of intercultural competence can be associated with various social and cultural, group, personality factors (Kornilova, 2012; Logashenko, 2015; Pochebut & Logashenko, 2016; Van der Zee & Van Oudenhoven, 2013). It is the personality factors that are of the greatest interest within the context of this work so they are going to be discussed in detail.

***Personality factors of intercultural competence:*** Within the system of concepts of *intercultural competence* created by UNESCO (2013), such characteristics as resilience, conviviality, reflexivity, creativity, transvaluation, liquidity and so on are included in the number of personality resources.

As personality predictors of intercultural competence, it is the Big Five factors that are studied by the Western psychology most frequently. Data have been obtained to the effect that all personality traits of the Five-factor model are associated with

intercultural competence either way. However, these correlations have their specific characters in different national, ethnic, professional samples as well as depending on the diagnostics ways and methods used (Huang et. al., 2005; Van der Zee & Van der Gang, 2007; Van der Zee & Van Oudenhoven, 2013; Van der Zee and Van Oudenhoven, 2014).

In Russian psychology, the personality factors of intercultural competence were studied in works of L.G. Pochebut on the basis of the author’s concept of intercultural communicative competence (Pochebut, 2012). It has been determined that the core of intercultural communicative competence is interethnic tolerance which is in the same unit as interpersonal tolerance, trust and sensitivity (empathy).

In the research of L.G. Pochebut and Yu.A. Logashenko (Pochebut & Logashenko, 2014), relationships between intercultural sensitivity (viewed on the basis of M. Bennett’s model) and the following particularities of personality were studied: locus of control, tolerance and ethnic identity. Valid relationships between tolerance and such scales of intercultural sensitivity as Acceptance (which was in line with the research hypothesis) as well as Minimization and Absolutization were revealed, which was unexpected for the authors and demands further studying. Moreover, valid negative association between the Absolutization scale and two components of ethnic identity were found: the significance of ethnic identity and evaluation of the majority’s and the minority’s actions.

The importance of tolerance as the crucial factor of intercultural adaptation of foreign students studying in Russia has been demonstrated in numerous research works conducted in multinational Russian universities (Chebotareva, 2011; Kudinov et. al., 2012; Kudinov & Kudinov, 2014; Novikova & Novikov, 2015 etc.).

At the same time, studies of the Russian students' tolerance in correlation to the Big Five factors have shown that *extraversion*, *agreeableness* and *openness to experience* are connected with various kinds and components of tolerance (Murzakanova, 2015).

Thus, the Western psychology views first of all the Big Five factors as the personality predictors of intercultural competence, with the indirect performances of intercultural competence being used most frequently – success in professional activity, establishing the interpersonal contacts, ability to adapt in another culture (Huang et. al., 2007; Van der Zee & Van Oudenhoven, 2013; Van der Zee & Van Oudenhoven, 2014).

In the Russian psychology, up to nowadays the Big Five factors were almost not considered within the context of intercultural competence, apart from the studies of intercultural adaptation of foreign students (Novikova et. al., 2016) or tolerance (Murzakanova, 2015). It is the said gap in the study of intercultural competence and sensitivity that has determined the problem of this research: to reveal the correlations between the Big Five factors and indices of intercultural competence considered on

the basis of M. Bennett's DMIS. Based on the presented analysis of the Western and Russian psychological literature, the authors put forward the hypothesis that it is *openness to experience*, *extraversion* and *agreeableness* that will be associated with individual scales of intercultural sensitivity in the closest way.

## RESEARCH METHODS

In this research, *Developmental Model of Intercultural Sensitivity (DMIS)* by M. Bennett (1986, 1993) was used which as it is shown above gives an opportunity for diagnosing certain stages of the rise of intercultural competence (Hammer et. al., 2003; Chibisova & Khukhlaev, 2008; Kornilova, 2012; Pochebut & Logashenko, 2014).

*The objective* of this research is to find out the correlation of intercultural sensitivity particularities in students studying at multinational Russian universities with the Big Five factors which are supposed to be one of its possible personality determinants.

In order to achieve the objective, the following tasks had to be solved:

1. to perform modification and psychometric check of the technique "Intercultural sensitivity scale" by O.E. Khukhlaev and M.Yu. Chibisova (2008) as modified by Yu.A. Logashenko (2016);
2. to diagnose particularities of intercultural sensitivity and personality factors in samples of Moscow higher education institution students;
3. to identify associations between parameters of intercultural sensitivity and the Big Five factors in the sample under study.

The research was conducted in the first half of academic year 2016-2017 on the basis of two major Moscow universities – Peoples' Friendship University of Russia (RUDN University) and National University of Science and Technology (MISiS). Both universities rank among the 20 best Russian higher education institutions and are participants of the Project for enhancing the competitiveness of the leading Russian universities (Top-5-100).

**Sample:** 388 students (65,5% of them being girls) aged 17 to 24 (the average age – 18,9 years old) studying in the first and second years in various directions (Philology, Psychology, Economics, Management, Physics, Mathematics and so on) took part in the research. The students represent various regions of Russia as well as former USSR republics (Azerbaijan, Armenia, Belarus, Georgia, Kazakhstan, Moldova, Tajikistan, Turkmenistan, and Uzbekistan). All students are native speakers of Russian and learn in the Russian language. The tests were conducted within classes in psychological and pedagogical subjects as an additional assignment.

**Methods and techniques:** For diagnosing the intercultural sensitivity, the technique "Intercultural sensitivity scale" of O.E. Khukhlaev and M.Yu. Chibisova (Chibisova and Khukhlaev, 2008) as modified by Yu.A. Logashchenko (Logashenko, 2016)

was used which in the original includes 51 statements corresponding to four main scales (Acceptance, Absolutization, Ambivalence, Minimization). Their essence is described above.

Some further modifications of the technique were introduced by the authors:

1. the direct answer scale was used ranging from 0 (“completely disagree”) to 10 (“completely agree”) which is more habitual for most respondents;
2. the quantity of questions on each scale was reduced to 8 (based on previously conducted research using the factor analysis, Cronbach’s  $\alpha$  and McDonald’s  $\omega$  coefficients), as a result of which this variant of the technique has the total scores on each scale ranging from 0 to 80 points.

For diagnosing the Big Five factors, the NEO FFI Five-factor questionnaire was used in its Russian adaptation by M.V. Bodunov and S.D. Biryukov (1989). The questionnaire is developed on the basis of the Five-factor personality model (McCrae & Costa, 2004; McCrae & John, 1992). This variant of the questionnaire includes 60 statements towards which the surveyed ones express the extent of their agreement using a 5-point scale. With 12 statements corresponding to each of the 5 factors (*neuroticism*, *extraversion*, *openness to experience*, *agreeableness*, *conscientiousness*), accordingly, the total scores on each factor take the value from 12 to 60 points. The questionnaire has been well tested out on Russian samples (Krupnov et. al., 2016; Murzakanova, 2015; Novikova, 2016).

For statistical processing of the results, the methods of descriptive statistics, Cronbach’s  $\alpha$  and McDonald’s  $\omega$  (Omega hierarchical) coefficients and Spearman’s range correlation analysis were used. The calculations were performed in R computer environment (version 3.3.2).

## RESULTS AND DISCUSSION

Table 1 presents the results of descriptive statistics for all scales of the techniques used (Cronbach’s  $\alpha$ , McDonald’s  $\omega$ , the mean value and standard deviation), as well as correlation coefficients between all the variables under study.

First of all, attention should be paid to the fact that for all Five-factor questionnaire scales, acceptable values of Cronbach’s  $\alpha$  coefficient were obtained. The minimum value was obtained for *openness to experience* and *agreeableness* scales, which was pointed out by other researchers too (Sartori et. al., 2016). Correlations between most scales of the technique were found, which contradicts the theoretical foundations of the Five-factor model but has been revealed in many studies (Ashton et. al., 2009; Musek et. al., 2007; Van der Linden et. al., 2010) so it is currently the subject of methodological debate (Krupnov et. al., 2016; Rossier et. al., 2016).



TABLE 1: CRONBACH' ALPHA COEFFICIENTS, MCDONALD'S OMEGA HIERARCHICAL COEFFICIENTS, MEANS, STANDARD DEVIATIONS, AND CORRELATIONS BETWEEN STUDY VARIABLES (N = 388)

No	Variables (Scales)	A	$\omega_h$	Mean	SD	1	2	3	4	5	6	7	8	9
1	Neuroticism	.80	.59	34.90	4.91	1								
2	Extraversion	.82	.61	40.14	5.02	-.12*	1							
3	Openness	.60	.37	36.85	4.26	.08	.25***	1						
4	Agreeableness	.70	.62	39.32	4.96	.08	.28***	.28***	1					
5	Conscientiousness	.82	.59	40.67	4.92	-.05	.37***	.26***	.28***	1				
6	Acceptance	.78	.70	55.11	12.95	-.08	.10*	.12*	-.01	.17***	1			
7	Absolutization	.75	.57	34.87	14.29	.04	.03	.04	.14**	-.02	-.07	1		
8	Ambivalence	.71	.56	52.65	11.82	.01	.18***	.08	.14**	.11*	.51***	.24***	1	
9	Minimization	.67	.41	50.73	11.38	.05	.04	-.01	-.01	.08	.02	-.20***	-.13**	1

Note: \*  $p \leq 0.05$ , \*\*  $p \leq 0.01$ , \*\*\*  $p \leq 0.001$ .



For all variables of the technique “Intercultural sensitivity scale”, the acceptable Cronbach’s  $\alpha$  coefficient values were obtained as well (0,67 – 0,78). With regard to this, the check of internal agreement of scales using McDonald’s  $\omega$  (Omega hierarchical) coefficient has shown that for all questions of each scale there are factor loadings with modules larger than 0.2 (0,37 – 0,70), which confirms their acceptable agreement.

The following correlations have been found between individual scales of this technique:

- Ambivalence is positively related both to Acceptance ( $r = 0.51, p \leq 0.001$ ) and to Absolutization ( $r = 0.24, p \leq 0.001$ ), which confirms DMIS provision about Ambivalence being a transition stage from ethnocentrism to ethnorelativism;
- Minimization is negatively related to Absolutization ( $r = -0.20, p \leq 0.001$ ) and Ambivalence ( $r = -0.13, p \leq 0.01$ ), which confirms DMIS theoretical assumptions because underestimation of intercultural distinctions is opposite to exaggeration of these (Absolutization) and, to a smaller extent, to contradictory relationships (Ambivalence).

On balance, the data of psychometric check confirm the construct validity of the variant of the technique “Intercultural sensitivity scale” used by the authors.

The data about correlations between the Five-factor questionnaire variables and the Intercultural sensitivity scale ones are of the greatest interest within the context of this research.

As it follows from the table, almost all Big Five factors, apart from *neuroticism*, are associated with the extent of most parameters of intercultural sensitivity, except Minimization.

*Acceptance* scale (the ability to notice cultural distinctions) correlates with *extraversion* ( $r = 0.10, p \leq 0.05$ ), *openness to experience* ( $r = 0.12, p \leq 0.05$ ) and *conscientiousness* ( $r = 0.17, p \leq 0.001$ ). All correlations are positive although not very high. The associations seem quite logical to the authors because the personality’s activity, openness to experience and conscientiousness during communication are highly likely to promote identification of cultural distinctions. It is curious that the highest coefficient has been obtained for *conscientiousness* that includes, among others, a responsible and conscious attitude to the interaction process, which can help analyzing the intercultural situation, clarifying the distinctions found, and using the obtained knowledge about intercultural distinctions for showing respect for the interlocutor.

*Ambivalence* scale (the level of agreement and harmony of attitudes towards cultural distinctions) is positively related to *extraversion* ( $r = 0.18, p \leq 0.001$ ) and *agreeableness* ( $r = 0.14, p \leq 0.01$ ). It can be supposed that orientation to active interaction with the world, to a dialogue with other people prevents overestimation

of the role of culture particularities, on the one hand (i.e. prevents the assurance of the culture completely determining the personality and its way of communication from forming) and propensity to underestimate the influence of culture (denial of existence of cultural distinctions, refusal to take into account the cultural particularities), on the other hand.

*Absolutization* scale (the propensity to exaggerate the role of cultural distinctions and their uncontrollability) is positively related to *agreeableness* ( $r = 0.14, p \leq 0.01$ ). A friendly attitude to the interlocutor, a wish to find ways to achieve agreement with the interlocutor may lead to exaggerating the importance of the influence of culture on personality and the interaction process as a whole. The fact that *agreeableness* is associated both with absolutization and with ambivalence confirms the idea about ambivalence being a transition stage from ethnocentrism to ethnorelativism.

The results obtained are consistent with the data of the Western studies conducted on the basis of Five-factor model, and, on balance, confirm the hypothesis put forward about the Big Five personality factors being important for intercultural competence (understood in a broad sense): not only *openness to experience, extraversion and agreeableness*, but also *conscientiousness*.

## CONCLUSION

Thus, as of today, there are numerous problems hindering the practical development of the relevant problem of intercultural competence and sensitivity that are due both to the lack of widely accepted theoretical models and to the shortage of diagnosing techniques. The authors believe that M. Bennett's DMIS actively used in empirical research and practical developments both abroad and in Russia is one of the promising models of intercultural competence and sensitivity.

The results of the empirical research conducted have confirmed the hypotheses put forward on the whole and have allowed making the following conclusions:

1. there are valid associations between most Big Five factors and intercultural sensitivity;
2. *extraversion, openness to experience* and *conscientiousness* are positively related to the ability to notice cultural distinctions, accept them and take them into account during interaction;
3. *extraversion* and *agreeableness* are associated with the ambivalence of attitudes towards multicultural distinctions;
4. *agreeableness* is associated with the propensity to overemphasize the influence of cultural distinctions on the interaction process.

The authors believe that combining M. Bennett's approach (DMIS) to the investigation of intercultural sensitivity and the capacity of Five-factor personality model allows revealing the personality factors of intercultural competence. Proceeding from the results obtained, programs for developing and forming the

intercultural competence can be worked out, in particular, taking into account the specific character of polycultural educational space of today’s education institutions; for efficient implementation of the former, it is not only social and group, but also personality factors that have to be borne in mind.

Further on, the authors plan to continue research of the problem in order to find out the personality predictors of intercultural competence in the following directions: (1) on a larger sample, (2) with improved ICC diagnostics techniques, 3) expanding the range of used methods of statistical processing – including the cluster, dispersion and regression analysis.

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