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**STUDENTS' MULTICULTURAL TOLERANCE CORRELATES:
STUDY GROUP MOSAICITY AND DEVELOPMENTAL LEVEL**

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Abstract

The multicultural educational environment determines the difficulties of interpersonal interaction of students who find it difficult to cope with their individual perception of other cultures representatives who consider them within their own culture. Cultural differences can be manifested in intercultural interaction situations thus the concepts of “My culture” and “Another culture” are analyzed. Eckhel’s mosaic index characterizes the complexity of the ethnic composition of a particular study group and, at the same time, reflects the likelihood of tension development against the background of ethnic heterogeneity. The factors affecting the international students' choice of tolerant strategies and behavior tactics, affecting the multicultural tolerance manifestation were correlated. “Well-being”, “activity”, “mood”, “tolerance index”, “academic performance”, “group developmental level” and “Eckhel’s mosaic index” are presented as multicultural tolerance correlation variables. Multicultural correlates are both in positive and negative relationships of highly significant value. The success of the student’s personality formation is determined by the level of organization of the academic group, its values, conditions and socio-psychological settings. Students with high empathic capacity were also more tolerant. The students’ involvement in the joint activity of the group through the adoption of group standards, values and sanctions and the readiness for their implementation forms the attitude towards identification with the group, which serves as a factor in harmonizing the interaction of two or more cultures.

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1. Introduction

The process of internationalization of higher education is now becoming increasingly large-scale and at the same time fraught with a large number of diverse problems. In this regard, the problem of foreign students' adaptation to an unfamiliar country with all its cultural and social characteristics is especially relevant.

On entering a new cultural environment, a number of foreign students have a distinct disorientation, called the "cultural shock". Case study is among the situation groups that can cause psychological instability and "cultural shock". There are case study (new language, new teaching methods, an unfamiliar grading system, the stressful nature of learning), social and socio-psychological (poor relationships with fellow students and compatriots, the local population). Foreign students can overcome the "cultural shock" state by adapting to the new sociocultural environment, including the educational environment of the university.

Tolerance is one of the key categories in professional pedagogy, preserving the cultural and ethnic integrity and individuality of students. It determines the successful process of uniting various educational clusters at the international level and preserves them.

It is worth noting that a high mosaic rate in international student groups determines a tolerant educational environment for the successful foreign students' adaptation.

2. Problem Statement

Firstly, at the present stage of internationalization it is necessary to form multicultural tolerance, tolerant behavior and students' constructive communication as a multicultural dialogue.

Secondly, multi-ethnicity is one of the main features in a multicultural educational environment: students of different nationalities and cultures study in almost all study groups.

Thirdly, educational organizations are not fully utilizing their potential for promoting multicultural tolerance.

Analysis of the above circumstances confirms that the relevance of the selected problem is due to the needs of the state, society and educational organizations of Russia. The difficulties of interpersonal interaction among students: it is not easy to cope with their individual perceptions of representatives of other cultures who take them within their own culture. It is due to the multiconfessional and multicultural nature of educational organizations. Thus, in order to achieve effective intercultural interaction between students, it should be purposefully taught, it cannot be formed independently.

3. Research Questions

Based on the observations above, the authors have determined the following research questions:

- identify the content factors influencing the tolerance formation based on the analysis of psychological and pedagogical literature;
- analyze the quantitative and qualitative characteristics of students and student groups as objects of intercultural interaction;

- study the characteristics of the emotional students' state in international educational groups, conduct a correlation analysis;
- describe the ethnic tension index on the example of the Astrakhan State Technical University (ASTU) and conduct a correlation analysis

4. Purpose of the Study

The purpose of the study was to identify factors of students' tolerant behavior in international educational groups, to conduct and describe correlation analysis between indicators of tolerance formation criteria.

5. Research Methods

The authors resorted to theoretical (inductive and deductive reasoning, synthesis, generalization and abstraction, comparing and contrasting) as well as empirical (pedagogical experiment, educational observation, questionnaire, interview, expert evaluation, learner testing) methods. Mathematical method of processing statistical data is used.

5.1. Well-being, activity, mood survey

To diagnose the emotional state of students, we used the methodology for the rapid assessment of well-being, activity, mood (WAM) – test of differentiated self-appraisal of functional state (Doskin et al., 1973). WAM is a table, which contains 30 pairs of words that reflect the studied characteristics of the psycho-emotional state (well-being, mood, activity). Each of them represents 10 pairs of words. On the survey list, a rating scale is located between the polar characteristics. Examples of tasks: workable 3 2 1 0 1 2 3 broken, tense 3 2 1 0 1 2 3 relaxed.

The subject is asked to correlate his condition with a specific rating on a scale. When processing the results of the study, the scores are converted into “raw” points from 1 to 7. The quantitative result is the sum of the primary points for individual categories:

- 1 - 4 points - low level unfavorable degree of assessment;
- 4 - 5 points - the minimum;
- 5 - 5.5 - the optimal;
- 5.5 - 6 - a high level;
- 6 - 7 - a very high level.

5.2. The Eckhel's mosaicity index calculation

Within our research we carried out the analysis of so-called "mosaicity" of international groups. For this purpose we used a method of calculation of the Eckhel's mosaicity index (EMI) (Lagutkin, 2007):

$$P_j = 1 - \sum_{i=1}^m \eta_i^2 ,$$

where P_j is the mosaicity index of international structure j-of group;
 m – number of students - representatives of various countries as a part of group j;
 n_i – the specific weight (share) of students - representatives of i-y of international group in the general structure of number of j of group.

The methodology for calculating the EMI can be simplified to the Diversity Index (hereinafter DI), it is calculated in the same way: for each group of foreigners, its share (usually in the form of unit fractions, less often in percent) in the total number of students in the group is determined, then all received the shares are squared, summed up, and the result of the sum is subtracted from the unit: $IR = 1 - ((P_i)^2 + (P_x)^2 + (P_u)^2 + \dots)$, where P_i , P_x , P_u are the shares of the nations i, x, y in the study group (Frankham et al., 2002).

5.3. The tolerance index questionnaire

To diagnose the general level of tolerance, an express questionnaire “Tolerance Index” was used. It was based on domestic and foreign experience in this field (Soldatova et al., 2002). The stimulus material of the questionnaire was made up of statements reflecting both the general attitude to the world and other people, and social attitudes in various areas of interaction where tolerance and intolerance of a person are manifested. The methodology includes statements revealing attitudes to certain social groups (minorities, mentally ill people, beggars), communicative attitudes (respect for the opinions of opponents, readiness for constructive conflict resolution and productive cooperation). Special attention is paid to ethnic tolerance - intolerance (attitude to people of a different race and ethnic group, to their own ethnic group, assessment of cultural distance).

For quantitative analysis, the total result is calculated, without dividing by subscales.

Individual or group assessment of the revealed level of tolerance carried out in the following steps:

22-60 - low level of tolerance. Such results indicate high intolerance of a person and the presence of pronounced intolerant attitudes towards the world and people.

61-99 - the middle level. Such results are shown by respondents for whom a combination of both tolerant and intolerant traits is characteristic. In some social situations they behave tolerantly, in others they may show intolerance.

100-132 - high level of tolerance. Representatives of this group have pronounced features of a tolerant personality.

5.4. The study group developmental level survey

To assess the business, creative and moral climate of the student group was used the questionnaire (Fetiskin et al., 2002). Each quality was evaluated according to polar criteria in a 9-point scale, which made it possible to identify its condition in three grades: norm - 5 points; above the norm - 6–9 points; below the norm - 1–4 points.

In the survey on the methodology “Program of introducing objective data (experimental) about the group as a subject of joint activity, communication and relations”, teachers and curators took part, they were asked to rate the groups in which they conduct practical classes and seminars, and give lectures.

Each group was evaluated separately by the teacher, and a sample was taken by several teachers in the same group for reliability.

Both questionnaires make it possible to give an assessment of the group's state level

6. Findings

The phenomenon of "tolerance" is the subject of a study of biomedical, exact (including mathematics, genetics and ecology) and humanitarian sciences (philosophy, sociology, politics, psychology, pedagogy). The concept of "multicultural tolerance of a student" as a subject of pedagogical research is determined by the breadth of semantic term. The key items in defining "tolerance" are:

- this is the ability to allow someone to perform actions that diverge from your own views;
- tolerance is associated with the adaptive capabilities of a person;
- tolerance is associated with the absence or weakening of the response to a certain unfavorable factor as a result of a decrease in sensitivity to its effects; therefore, it is important to determine the conditions under which the subject of intercultural interaction acts as the behavioral norm, and those conditions under which, on the contrary, tolerant behavior harms the tolerant object. Then an adequate norm ensuring successful adaptation is intolerance;
- tolerance can be considered as a mental property of a person, as a way of behavior, as a quality of human behavior.

6.1. The concept of tolerance

Let us consider the etymology and content of the tolerance concept definitions presented in the scientific psychological and pedagogical literature. Descriptions of the concept are non-strict and they differ in volume, composition, semantic and logical structure. An analysis of the studies of the phenomenology of tolerance shows that "tolerance" is an interdisciplinary multicomponent. It is rather a complex concept that has many different definitions in the scientific literature. This determines a certain range of problems as directions to solve.

Firstly, in our opinion, it is important to answer the question about the essence of student multicultural tolerance: is tolerance ability? Is it readiness for certain ("tolerant") reactions to the environment? Is it the reaction? Is it a feature? Is it behavior? Is it a norm (value) that guides a person in a multicultural environment?

Another fundamental issue that needs to be resolved is the determination of the conditions for the intercultural interaction object's tolerance is a behavioral norm, and those conditions under which, on the contrary, tolerant behavior causes damage to the tolerating subject. Then the adequate norm that ensures successful adaptation is intolerance. Even Plato (Popper, 2013) wrote that "if one is infinitely tolerant and not ready to protect a tolerant society from intolerance, then the tolerant will be defeated" (the paradox of tolerance) (Tishkov, 1995). Tolerance is manifested in situations of social importance, when socially significant differences are detected it is perceived as a psychological threat (Bardier, 2005). Indeed, tolerance is updated in an environment where a clash occurs between a person and groups of people with different cultural settings and stereotypes. This clash is resolved constructively, on the principles of cooperation and no one seeks to change the world's views of the other side, but accepts them as

alternative (Rastatueva, 2008). And if tolerance is considered as “readiness and ability to perceive a person or a group without protest” (Mosolova, 2013). Then a question arises: in what case should a person perceive anything “without protest”? And in what cases he can and even he needs to "protest"?

It should be noted that in the framework of numerous studies, the essence of the “tolerance” concept can be described as an individual feature (personality quality, personality component) and as an integral entity in the personality structure (cohesive personality, personal system of qualities, system of these quality regulations). The definitions used to describe this phenomenon include such categories as “tolerant behavior,” “tolerant personality,” and others.

Let us turn to the biological sources of this phenomenon. Tolerance (Golovin, 1997) is defined as “the absence or weakening of response to a certain unfavorable factor ... the ability to endure adverse effects for a long time without reducing adaptive capabilities”. Our attention is drawn to the fact that tolerance is a certain permissible range of response options inherent in a particular species and not violating its genotype (Soldatova et al., 2001). In immunology, tolerance is understood as the ability of an organism to endure without the effects of environmental damage potentially adverse effects of environmental factors ... that helps to maintain homeostasis (Chebykina, 2012). There are ideas of various scientific areas, defines tolerance as an “individual quality that helps to maintain internal balance and regulate behavior within the framework of moral and ethical standards when exposed to” external factors, the result of which is difficult to predict. In other words, the psychological meaning of tolerance can be reflected through the concept of “sustainability” (Mosolova, 2013).

6.2. “My culture” and “Other culture” concept

And, if we talk about multicultural tolerance, it is important to understand why and under what conditions a representative of his own culture is perceived as an unfavorable factor. What reaction should be normal to an unfavorable factor: tolerant or intolerant? In situations where "the world around us ceases to be understandable, the search begins for groups that would help restore its integrity and orderliness, protect them from difficulties" (Stefanenko, 2009, p. 23).

Representatives of their culture often act out as such a group; we call them “emergency support group” (Stefanenko, 2009, p. 23). A person “tends to focus on ethnic communities and often exaggerate the positive difference between their community and others” (Stefanenko, 2009, p. 22).

We suggest considering student tolerance through the prism of the “interaction” category, as the environment of a modern Russian university is a multicultural environment. Russian students enter into a process of intercultural interaction with foreign students there.

Intercultural interaction is a way of implementing joint activities of different cultures owners, requiring mutual cooperation and coordination participants` individual actions during intercultural interaction. In situations of intercultural interaction, cultural differences may be manifested by the object of intercultural interaction between “My culture” and “Other culture”. “My culture” means the concepts, norms, patterns, ideas and values of a culture owned by a grown up person; with personal opinion formed in the course of socialization that become a system of personal values, regulators of his behavior. “My culture” constitutes the cultural identity of the person; it is the native culture of a person. He identifies and

unites himself with the basis of the existing emotional connection, includes it in his inner world and accepts as his own norms, values, samples of this culture (Goykhman, 2017).

“Other culture” (not “My culture”) is a culture with which a person does not identify himself.

Cultural differences are the mismatch of the characteristics and properties of different cultures. It is the mismatch of the views, assessments, beliefs and behavior of participants in intercultural interaction.

A significant situation of intercultural interaction is a system of objective (physical and social environment) and subjective (personally significant) conditions of intercultural interaction, which stimulate and mediate the tolerant / intolerant behavior of such interaction object. Having found himself in a significant (not indifferent, important) situation of intercultural interaction and faced with the manifestations of “Other culture”, a person actualizes his attitude to it in such ways.

- he cognizes “Other culture” (evaluates, understands, comprehends, explains, correlates these manifestations with the phenomena of “My culture”, finds similarities and differences, determines the relationship with the manifestation of “Other culture”);
- he experiences this connection with the manifestation of “Other culture”, endowing this manifestation of “Another culture” with personal opinion;
- he chooses strategies and tactics of behavior in relation to the manifestations of “Another culture”.

Attitude to the “Other Culture” is a selective, experiential and personalized connection with the manifestations of the “Other Culture”, which is expressed in actions and experiences.

In the case when the situation of intercultural interaction is assessed and experienced as not posing a threat to one’s own cultural identity, and the manifestations of “Other Culture” are perceived as value, the subject chooses tolerant strategies and tactics of behavior aimed at constructive intercultural interaction.

Thus, the tolerant behavior of the intercultural interaction object is actions and deeds based on the willingness to accept cultural differences without losing his own cultural identity and aimed at constructive intercultural interaction: restraint (“tactfulness”) and “dialogue”. “Tactfulness” is a tolerant behavioral strategy of an intercultural interaction object, based on restraining one’s negativity in perceiving and assessing cultural differences, the ability to subordinate behavior to certain requirements, based on equality and non-aggression. “Dialogue of cultures” is a strategy of tolerant behavior of the object of intercultural interaction, based on the discovery and understanding of the cultural differences values.

Complex multi-level process of the formation of tolerance should be considered as a dynamic process of continuous acquisition of skills of peaceful, conflict-free coexistence in a polycultural, polyethnic and multi-confessional medium, based on the acceptance, respect and understanding of each other (Tektibayeva, 2015). The rich possibilities to develop positive attitudes to inclusion and interculturality offered by the presence of plurilingual and pluricultural children (Stunell, 2020).

6.3. Intercultural interaction and multicultural tolerance

Multicultural tolerance is a characteristic of a person (mental property of a person) as a subject of intercultural interaction, expressing a value attitude to “Other Culture” and determining tolerant behavior in significant situations of cultural differences.

The structure of multicultural tolerance is formed by the components: cognitive (cognition and assessment of cultural differences), affective (experience, imposing cultural differences with personal meaning, accepting cultural differences as values), and conative (choice of strategies and tactics of tolerant behavior).

Multicultural tolerance of students studying with foreign citizens determines their tolerant behavior in significant situations of cultural differences manifestation in the university educational environment. It is presupposed that tolerant behavior of students in the group contributes to a more comfortable intercultural interaction and self-awareness of the student at the university; the level of development of the student group and the severity of the international composition mosaicity of the student group will influence the choice of tolerant / intolerant strategies and behavioral tactics (Agirbova & Hubiev, 2019).

In order to solve this problem correlation analysis was carried out. It was done on factors affecting the international students' choice in tolerant strategies and tactics; on the manifestation of multicultural tolerance.

6.4. Well-being, activity, mood

The study was conducted on the basis of the Astrakhan State Technical University in 2019-2020. Representatives of almost all nations and nationalities living in the Russian Federation, as well as students from neighboring countries (Tajikistan, Kazakhstan, Uzbekistan, Turkmenistan, Kyrgyzstan, etc.) and foreign countries (Guinea, Egypt, Ghana, etc.) study at our university.

The survey «Well-being, activity, mood (WAM)» involved 186 full-time students of 1-4 courses, undergraduate studies; the survey was conducted for a limited period of time, under the same conditions. Figure 1 shows the results of WAM diagnostics by courses: well-being - the minimum indicator for Russian students is at the 2nd and 3rd year (5.3 points - optimal), and the maximum is at the 4th year course (5.9 points - high), for foreign students the maximum indicator is 5 points; 2 optimal groups are at the 1st course, and the minimum point sum is at the 4th year students (3.5 points - low). Thus, we see that the well-being of foreign students is worsening by the time they complete their studies, while among Russians it is improving.

Activity is the minimum indicator for all students in the 2nd year, Russian students have 5.0 points - optimal and foreign ones have 4.1 points - sufficient), and the maximum is at the 4th year students (6 and 6.1 points - high), foreign students have a little activity higher. Thus, we see that activity increases by the time the training is completed, regardless of nationality.

Mood is the minimum indicator for Russian students in the 3rd year (5.4 points - optimal), and the maximum is at the 4th year (6 points - high), for foreign students the maximum indicator is 4.8 points (sufficient) at the 1st year, and the minimum at the 2nd course (3.7 points - low). Thus, we see that the mood of foreign students deteriorates sharply after the first year of study, and the mood of Russian students throughout the entire period of study is at a fairly high level.

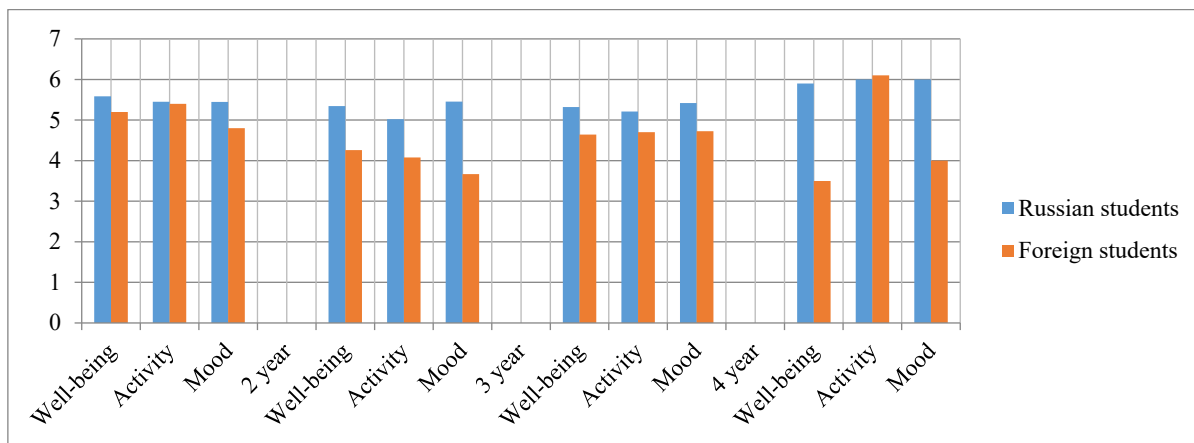


Figure 01. Diagnostic results of an operative assessment of well-being, activity, mood (WAM) of students of IMPT

6.5. Mosaicity structure of international groups

The Eckhel index characterizes the complexity of the ethnic composition of a group and, at the same time, reflects the likelihood of tension developing against the background of ethnic heterogeneity.

The index is built on the assumption that in any group, interethnic contacts have the same intensity and they are determined only by the percentage of national groups. Thus, the larger the number of ethnic groups with a larger share in the group, the greater the importance of the index itself, indicating the degree of “fragmentation” - “mosaic” of this community (Rastei et al., 2014).

An analysis of the scientific literature on the problems of tolerance formation revealed that the methodology for calculating the Eckhel mosaic index (hereinafter EMI) is often found in the context of “ethnic mosaic index”, “ethnic composition mosaic index”, “confessional mosaic index”, “ethnic diversity index”, “Ethnic tension index.” Interethnic tension is taken as the violation of relations in society, arising due to escalating contradictions between ethnic groups (Chernysh, 2016).

We distinguish between the concepts of “ethnic”, “national” and “international”, because the student group may include citizens of the Russian Federation as representatives of various ethnic groups that are part of the peoples of the Russian Federation. We consider the “international” more accurately conveys the specifics of the interaction of Russian and foreign students.

Table 1 contains the results of the EMI calculation in the context of institutes and faculties of ASTU. Here we can see that the highest mosaic index of the international student groups composition was obtained at the Institute of Fisheries, Biology and Environmental Management - 0.833, followed by the Institute of Oil and Gas - 0.554 and the Institute of Economy - 0.475. The EMI was additionally calculated for each individual student group.

Table 01. EMI calculations (on the example of student groups at ASTU)

Institute	Number of students at ASTU, %		Mosaicity Index of International groups Structure
	Russian students	Foreign students	
Institute of Fishery, Biology and Environmental management (IFBE)	61%	39%	0,833*
Institute of Marine, Power and Transport (IMPT)	75%	25%	0,352
Institute of Information technologies and communications (IITC)	75%	25%	0,346
Institute of Economy (IE)	59%	41%	0,475
Institute of Oil and Gas (IOG)	46%	54%	0,554
Institute of Construction (IC)	54%	46%	0,256

The index values vary from zero to one; while the minimum value will be an indicator of absolute homogeneity, homogeneity of the composition of the group, and the unit will be a sign of maximum diversity (the group is represented by representatives of many different foreign citizens comparable in number). EMI can be arbitrarily interpreted as the probability that two randomly selected people will belong to different racial or ethnic groups; the more different groups in the group, the higher the maximum possible value of the level of international diversity of the group.

6.6. The students' emotional state and tolerance index

Students from the first up to the fourth year study took part in the survey, to make the calculations and analyses easier we numbered them from 1 up to 28 in a direct order. Three subscales of the Tolerance questionnaire aimed to diagnose such aspects of tolerance as ethnic tolerance, social tolerance, tolerance as a personality trait are presented as an average Tolerance index (table 2). All the study group results come within the middle level (from 61 to 99 index point) The highest points above 90 are coloured in yellow and the lowest point in 60s band is in blue.

The results show that the students' emotional state is directly connected with the tolerance index. An active well-being student in a nice mood is more tolerant.

After preparatory stage when all figures and data were gathered and filled in the research work upon differentiating the correlation indicators was done.

Table 02. Results of the survey on the students' emotional state and tolerance index

Year of study	Experiment number for Study group	Well-being	Activity	Mood	Tolerance Index
1 year	1	5,65	5,48	5,02	70
	2	4,81	4,78	4,68	78
	3	5,67	5,55	5,33	83
	4	6,4	6,1	6,5	88
	5	5,6	4,8	4	84
	6	5,4	5,9	5,85	90
	7	5,75	5,7	5,2	84
2 year	8	5,1	4,9	4,1	71
	9	5,37	5,34	5,66	70

	10	4,52	4,38	4,5	86
	11	4,9	4,3	5	85
	12	5,2	4,65	5	82
	13	5,8	6	4,9	86
	14	5,4	5,05	5,46	90
3 year	15	4	4,9	5,2	69
	16	5,05	4,84	4,92	90
	17	5,08	4,6	4,6	94
	18	4,8	5,8	6	89
	19	4,83	4,95	5,2	85
	20	5,55	5,49	5,91	87
	21	4,8	5,05	4,78	85
4 year	22	5,3	4,89	5,65	70
	23	5,6	6,1	5,68	81
	24	5,9	5,68	6,08	91
	25	5,1	5,7	6	86
	26	4,84	5,6	5,3	80
	27	5	4,62	4,3	86
	28	4	5,1	5,7	89

Correlation analysis of the data obtained in the groups showed the presence of a significant relationship between the indicators of activity and well-being (correlation coefficient - 0, 56 at a significance level of 0.002); activity and mood (correlation coefficient 0, 678 at a significance level of 0.001). The results are shown in Table 3.

Table 03. The results of the correlation analysis between indicators of activity and well-being, activity and mood

Indicators of international students` emotional state	The value of the Spearman correlation coefficient	The level of relationship significance between variables
Activity and well-being	0,56	0,002
Activity and mood	0,678	0,001

The same results showed some other experiments (Esteban-Guitart et al., 2012; Foroponova, 2014) that students with high empathic capacity were also more tolerant.

6.7. The study group developmental level

Further, we would like to present the results of a study on the level of development of the study group; it is a relevant factor in the multicultural tolerance formation. The fact is that the socio-psychological qualities of the study group — business, creative, moral, and the focus of group activity — indirectly affect the success of the educational activities of foreign students through the updating of personally significant components (motivation, adoption of long-term learning goals, personal self-determination, social well-being). High level of development of socio-psychological qualities turns the group into a subject of psychological assistance to foreign students (Foroponova, 2014; Gaidar, 2013). The involvement of students in the joint activity of the group through the adoption of group norms, values and sanctions and the readiness for their implementation forms the attitude towards identification with the

group, which serves as a factor harmonizing the interaction of two or more cultures. The program for the formation of the socio-psychological maturity of foreign students groups through their inclusion as subjects in the joint activity of the system of social organizations of different levels contributes to the positive dynamics in the development of the group and the successful adoption by students of the country-study culture.

According to the results of the survey, students were asked to rate each other on a scale of 9 points. After analyzing the obtained data, we determined that the atmosphere in the study group is

- below normal in only three groups of the 2nd and 4th courses;
- normal in three groups of the 1st course and in one group of the 3d course;
- above the norm in most groups (from 58% at the 1st course to 86% at the 3d and the 4th courses (21 groups).

We conclude that in the process of training, the psychological climate in study groups becomes more comfortable.

Achievements of groups in educational activities were determined using expert evaluation by employees of deans' offices, which made it possible to determine the rating of groups according to performance criteria in practical classes and exams.

At the next stage we carried out a correlation analysis of all the data obtained by groups (table 4).

Table 04. The results of the correlation analysis between indicators of tolerance index and the group developmental level; index of tolerance and the ethnic mosaic index

Indicators of international students` tolerant behavior	The value of the Spearman correlation coefficient	The level of relationship significance between variables
Tolerance index and the group developmental level	0,683	0,001
Tolerance index and EMI	-0,517	0,005

6.8. The correlation analysis results

The calculation was carried out using mathematical statistics programs. The correlation analysis revealed highly significant (significance level $p \leq 0.01$) and significant (significance level $p \leq 0.05$) positive relationships between variables:

- tolerance index and the group developmental level;
- tolerance index and academic performance;
- tolerance index and well-being.

Numeric expressions of the parameters “well-being”, “activity”, “mood”, “tolerance index”, “academic performance”, “group developmental level”, “Eckhel’s mosaic index” form a correlation constellation with correlation coefficients, the values of which exceed the critical values of two levels of confidence from 0.05 to 0.001.

It is noted that not all personality tolerant properties identified in the theoretical analysis give significant connections in the presented galaxy of correlations. So the parameters of hope, level of anxiety, diplomacy, etc. did not reveal significant connections with the components of tolerance. This fact

is not the basis for the exclusion of these properties from the group of tolerance parameters, but rather indicates the multilevel nature of the studied phenomenon, which requires further analysis.

Figures 2 and 3 show the results of the correlation analysis with positive relationships of variables, the diagrams show a strong direct relationship between the indicators of Well-being, Activity and Mood, and there is also a strong direct relationship between the index of tolerance and the group developmental level. Consequently, with an increase in the indicator of Activity, the indicator of Mood and Well-being will increase accordingly. An increase in the tolerance index leads to an increase in the group developmental level, and, conversely, we can predict more tolerant behavior of intercultural interaction subjects in the case of the study group team formation.

Pearson/Spearman correlation coefficients between X and Y are shown when the variables range is restricted. X ray presents numbers (1-28) of the study groups taken into the survey (table 2), Y-ray is the variables range point for Well-being, activity and mood (figure 2).

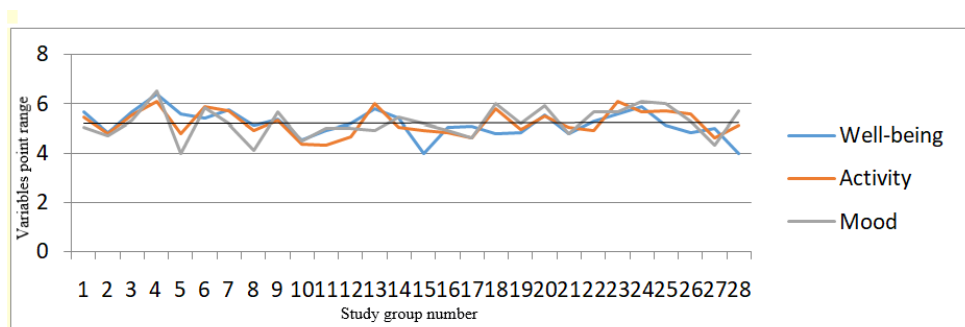


Figure 02. Positive correlation of values: well-being, activity and mood

Figure 3 presents Positive correlation of values: tolerance index and group developmental level where X ray – numbers (1-28) of the study groups taken into the survey (table 2), Y-ray is the variables range (0-100).

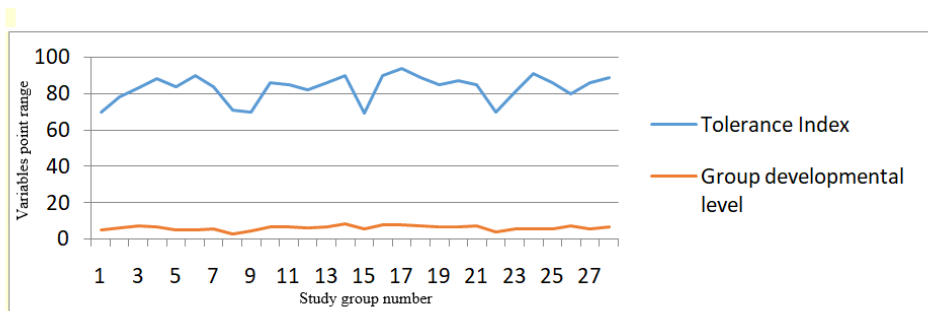


Figure 03. Positive correlation of values: tolerance index and the group developmental level

In the course of the correlation analysis, highly significant (significance level $p \leq 0.01$) and significant (significance level $p \leq 0.05$) negative relationships between variables were revealed:

- EMI and tolerance index;
- EMI and group developmental level.

Highly significant negative relationships between these variables indicate that with an increase in EMI, a decrease in the tolerance index occurs, i.e. in groups with a high international composition mosaicity, a low level of tolerance of intercultural interaction objects is diagnosed.

7. Conclusion

Factors and criteria in behavioral stereotypes and communication contribute to the emergence of barriers between foreign and Russian students. It is necessary to study the specifics of the national psychological characteristics of all ethnic groups represented in the study group: for all participants of the educational process in order to avoid misunderstanding and various kinds of conflicts between students or teachers (Korol et al., 2015). The actual use of the mosaic index of the group international composition assessed by the tension in the study group is planned in the next study; the objective conditions for intercultural interaction there will be completely different. This study emphasizes the problems of “mosaicity” of the study group in terms of interpersonal relations of students, the problems of sociocultural adaptation to the conditions of the international academic environment. We conclude that when designing and implementing joint forms of training for international staff groups, the mosaic index should be taken into account.

Highly significant relationships between the correlation analysis survey variables - “well-being”, “activity”, “mood”, “tolerance index”, “academic performance”, “group developmental level” and “Eckhel’s mosaic index” - show that all of them are significant in the educational environment. None can be ignored.

Survey data confirm the hypotheses put forward and make it possible to design the pedagogical conditions for the formation of multicultural tolerance of international group students more constructively: through the inclusion of foreign students as objects in the joint activity of the social organizations system at various levels, to develop a study group team with an international staff as a group subject of psychological assistance to foreign students.

Multicultural tolerance is an individual’s attitude based on the successful process of its cultural and ethnic self-identification and determining the positive nature of intercultural interaction with Others, adaptation and further integration into a foreign culture environment.

The effectiveness of socialization, education and professional activities of a person is directly related to the level of multicultural tolerance development. Therefore, the formation of multicultural tolerance is one of the strategic purposes of the university, teachers and students in particular.

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