Impact of Intercultural Educational Space on the Formation of Intercultural Competence of Future Teachers at a Pedagogical Higher Education Institution

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Abstract. The proposed research is directed at studying the impact of the intercultural educational space on the formation of intercultural competence of future teachers at a pedagogical higher education institution. To determine the levels of intercultural development, the authors adopted the Intercultural Maturity Model by P. King and M. Baxter Magolda. Having identified the initial, intermediate, and mature levels of intercultural development, the authors analyze the process of completion to the full development of intercultural competence. Experimental research was conducted in 2019 at the Institute of Pedagogics and Psychology at Ternopil Volodymyr Hnatyuk National Pedagogical University, Ukraine. To conduct the study the authors opened the Intercultural Communication Center, whose activity was aimed at modeling and implementation of intercultural educational space at this university. The participants in this study were 63 future teachers (third-year students of the University). The pedagogical experiment included the following stages: preparation, diagnostics, formation, and control. The authors identified the intercultural orientation of the goals of the educational process and tasks at each stage. The following methods were used: analysis, survey, interview, conversation, methods of observation. During the pedagogical experiment, attention was focused on the formation of students' intercultural abilities according to the content and structure of intercultural competence. The study showed a redistribution of respondents in groups – a significant decrease in the percentage of students on the Initial Development Level (the difference is 55.6%) and an increase on the Intermediate Development Level (the difference is 20.6%) and Mature Development Level (the difference is 34.9%). Statistics allow us to assert the significant dynamics of changes in group indicators by levels of intercultural competence at the beginning and end of the study. The study confirmed the hypothesis that the creation of the intercultural educational space at the higher education institution has a positive effect on the process of intercultural competence formation.
Keywords: intercultural educational space, intercultural competence, Intercultural Maturity Model, future teachers, pedagogical higher education institution.

Tarpkultūrinės edukacinės erdvės poveikis būsimų mokytojų tarpkultūrinės kompetencijos formavimuisi aukštojoje pedagoginėje mokykloje

Santrauka. Straipsnyje, remiantis teoriniu P. Kingo ir M. Baxter Magoldos tarpkultūrinės brandos modeliu ir empirinio tyrimo duomenimis, aptariama tarpkultūrinės edukacinės erdvės įtaka būsimų mokytojų tarpkultūrinės kompetencijos formavimuisi aukštojoje pedagoginėje mokykloje. Tyrimas buvo atliktas 2019 m. Ternopilio Volodymyro Hnatyuko nacionalinio pedagoginio universiteto (Ukraina) Pedagogikos ir psichologijos institute. Čia buvo įkurtas Tarpkultūrinės komunikacijos centras, kurio veikla skirta tarpkultūrinei edukacinei erdvei modeliuoti ir įgyvendinti šiame universitete. Centro vykdomame pedagoginiame eksperimente dalyvavo 63 būsimi mokytojai. Atliktas tyrimas patvirtino hipotezę, kad tarpkultūrinės edukacinės erdvės sukūrimas aukštojoje mokykloje teigiamai veikia tarpkultūrinės kompetencijos formavimąsi.

Pagrindiniai žodžiai: tarpkultūrinė edukacinė erdvė, tarpkultūrinė kompetencija, tarpkultūrinės brandos modelis, būsimi mokytojai, aukštoji pedagoginė mokykla

Introduction

Social processes around the world give rise to reflections on the expediency of purposeful preparation of teachers for professional activity in the intercultural environment. Higher education institutions should provide opportunities for forming value orientations of the individual respecting human rights, democracy while maintaining the promotion of peace, mastering different languages, and developing intercultural competence of each student. It actualizes the creation and use of the educational potential of intercultural educational space at the pedagogical higher educational institution to form the intercultural competence of future teachers. An interculturally competent teacher has fundamentally new qualities, namely, a tolerant attitude to diversity, which goes beyond the usual perception of a particular ethnic group, prevention of religious conflicts, and various manifestations of extremism. Effective teachers are expected to cultivate students' intercultural competence enabling them to engage in everyday intercultural interactions free of stereotypes or prejudice. Competent performance of professional duties in an intercultural environment is of particular importance for a multinational Europe.

The presented vision is a comprehensive approach to the formation of intercultural competence based on the teachers' professional training in any pedagogical higher educational institution. As for the essence of the problem, this article describes an example of creating an intercultural educational space at the pedagogical higher educational institution and using its potential opportunities for the formation of intercultural competence of future teachers.

Literature Review

Preparing young people for life in a multicultural world is one of the priorities of education (Sani, 2015; Hajisoteriou, Angelides, 2015). Modern pedagogy undoubtedly includes the intercultural education of children and the youth based on the principles of freedom, equality, and social justice. One of the most considerable functions of an

educational institution is to teach people to live together, to help them transform the existing interdependence of ethnic groups into solidarity. Therefore, there is a need to educate future teachers in the context of an intercultural educational space and to create a setting for the students to develop intercultural competence (Dyman, Bonkovsky, Vovkogon, 2017). Today the issue of the development of intercultural competence as a fundamental strategy in teacher education is raised in the scientific literature (Thapa, 2019). The worldview of each future educator will promote profound change in a multicultural society, so education should encourage the intercultural competence of students.

Scholars have offered many competing definitions of intercultural competence. Reitenauer et al. defined intercultural competence as "the ability to communicate effectively and appropriately in a variety of cultural contexts" (2005, p. 68). Byram described intercultural competence as the willingness to consider and respect other beliefs and behaviors "and to analyze them from the viewpoint of the others with whom one is engaging" (1997, p. 34). Similarly, according to Kramsch, is "awareness and respect of difference, as well as the socio-affective capacity to see oneself through the eyes of others" (2005, p. 553). A person who displays these competencies is known as an intercultural speaker (Belz, 2002). Intercultural competence provides monitoring for racism and xenophobia and also develops a tolerant atmosphere (Salgur, 2013). Dogancay-Aktuna (2005) discussed how the field of intercultural competence should aid in preparing teachers to be more aware of their pupils' sociocultural backgrounds and thus make more informed decisions. Cushner and Mahon (2009) also discussed intercultural competence in teacher education. The authors consider teachers in general and, just as Dogancay-Aktuna (2005), is concerned with the teachers' intercultural competence and how they will manage a classroom with students of different cultural backgrounds. Before including intercultural competence into classrooms, the question of whether or not the teachers are interculturally competent needs to be answered (Cushner and Mahon, 2009). Thus, providing university students with a specific intercultural curriculum is a considerable task for higher education institutions (Deardorff, 2009; Lee, Poch, Shaw, Williams, 2012).

Today many initiatives help complete the idea of interculturalism in education. Creating intercultural universities is not only about making changes to some subjects and programs. It also applies not only to changes in the physical environment, such as visual manifestations of diversity, but implementation into practices that affect all aspects of university life (Fitzsimons, Finn, Grummell, 2017). People learn their best when they feel like a part of a learning community, and creating intercultural environments means working in a way that is participatory, experiential, and relevant to the interests of the people who are in the room (Connolly, 2008). Therefore, work in the intercultural space implies openness to educational processes, where teachers and students work together to learn, and, therefore, in this context, different ways of learning are valued (Melnyk, 2013). The specificity of professional training of future teacher to work in an intercultural environment occurs through the allocation of an intercultural component in the

content of education and the development of special courses on this basis; planning and management of students' work (multicultural orientation); involvement of future teachers in scientific activities in the sphere of multiculturalism; inclusion of practical tasks related to professional activities in a multicultural society (Demchuk, 2015).

The implementation of the intercultural education of future teachers in a higher pedagogical institution implies the creation of an intercultural educational space (Blondin, 2015). The issue of creating an intercultural educational space was described by Pikalova and Korolkova, who investigated the educational process in the multicultural space of an educational institution (Pikalova, Korolkova, 2012). Koretska described the functioning of social institutions in the context of an intercultural educational space (Koretska, 2014). Mironova studied the organization of multicultural educational space at a pedagogical higher education institution. According to Mironova, intercultural educational space is interpreting as a set of subsystems that purposefully ensure the achievement of educational goals by participants in the educational process of different nationalities and cultures. An intercultural educational space of an educational institution is a territorially defined environment in which there are intercultural and social interconnections of subjects of educational processes (social processes, education, value orientations, e.g.) that determine the specifics of realizing the goal of education and a comprehensive development of the individual in a multicultural society. (Mironova, 2007). The leading idea of intercultural education and the creation of an intercultural educational space is a subsystem of the general pedagogical system of a higher pedagogical institution. It includes the organization of a pedagogical process, built on partnerships between teachers and students, based on the principles of humanism, cultural dialogue, taking into account the multicultural nature of today's society (ethnic, religious, linguistic, e.g.). Intercultural education aims to develop the personality of a future professional who can live and perform professional activities in a multicultural society.

The Structure of an Intercultural Educational Space

In the structure of an intercultural educational space of an educational institution, it is possible to distinguish the intercultural background of teachers and students; representatives of social-cultural institutes (educational and cultural centers of national communities, cultural infrastructure, public and religious organizations); financial and regulatory support (Charkina, 2016). The intercultural space of higher education should preserve ethnic and cultural traditions, open new cultural perspectives, focus on diversity and openness to other cultures, develop students' capacity to accept it, cultivate empathy for people of different nations, acquaint with the folk traditions and behavior and their modern cultural interpretation. The purpose of the intercultural space in the educational institution is to fulfill social and educative tasks (Antonova, 2015). It is necessary to cooperate with various cultural institutions of the region (national, cultural societies), which influence the implementation of intercultural education at the micro level to create a favorable inter-

cultural educational space in the pedagogical institution of higher education. Relevant in this context is the opinion of Pikalova and Korolkova that "close relations with cultural and art institutions (museums, exhibition halls, theaters, libraries), public organizations (diasporas, cultural centers), professional and amateur groups (choirs, ensembles), participation in various initiatives and activities promote consolidation, education in a spirit of peace and mutual assistance" (Pikalova, Korolkova, 2012, p.33-35). The purpose of the intercultural educational space is to create the conditions, mechanisms, and technologies of adaptive integration of personality into culture through education. It is also necessary to define ways of support, personal development (self-realization, adaptation in intercultural society). Substantiation of the essence of intercultural educational space allowed to distinguish its functions: educational, adaptive, social, pedagogical protection, and support (Vashchuk, 2011).

Intercultural Competence: An Assessment

Intercultural learning is the process of acquiring the skills and knowledge necessary to function effectively in intercultural situations. Intercultural learning is a dynamic process that occurs throughout life. Through the process of intercultural learning, people can improve their intercultural competence. Because intercultural competence is dynamic and unstable, unlike a stable trait, it can be found that it is learning-based (Strohmeier, Gradinger, Wagner, 2017). Consequently, intercultural competence can either increase, decrease, or remain the same in response to directed efforts and received experience. As an initial step towards developing effective teaching and learning techniques, it is important to outline the specific results that are based on training. Assessment and measurement of this process are the most difficult components of forming the intercultural competence of future teachers. As all students have different values and worldviews, it is impossible to hope that students will grow at an interculturally similar pace. As a consequence, many researchers of intercultural competence characterize the experience of acquiring intercultural competence as a process (Byram, 1997; Deardorff, 2006; Moloney & Harbon, 2010). One of the most well-known models for the development of intercultural competence is the Intercultural Maturity Model, developed by P. King and M. King Baxter Magolda in 2005 (King, Baxter Magolda, 2005). By identifying the initial, intermediate, and mature levels of intercultural development, the authors analyze the process of completion to the full development of intercultural competence. This model was chosen by us because it defines levels of development: the low level is a less competent way of intercultural interaction; each successively higher level is considered by researchers to be a more competent way of intercultural interaction. The model presumes that people advance to more mature levels of competence only through constant learning, observation, and interaction with representatives of another culture. The Intercultural Maturity Model is based on the assumption that over time, interactants (interlocutors) move from a relatively ethnocentric to a more ethnorelative understanding of other cultures.

Table No.1. *Intercultural Maturity Model, P. King, M. Baxter Magolda, 2005.*

Initial Development Level	Intermediate Development Level	Mature Development Level
Cognitive - Categorical knowledge - Naïve about cultural practices - Resists knowledge challenges **Intrapersonal** - Lacks awareness of social role intersections (race, class, e.g.) - Lacks awareness of cultures - Externally defined beliefs - Differences viewed as threats **Interpersonal** - Identity dependent on similar others - Different views are considered wrong - Lacks awareness of social systems and norms - Views social problems egocentrically	**Cognitive** - Evolving awareness and acceptance of perspectives - Shift from authority to autonomous knowledge **Intrapersonal** - Evolving identity distinct from external perceptions - Tension between internal and external prompts - Recognizes the legitimacy of other cultures **Interpersonal** - Willingness to interact with divergent others - Explores how social systems affect group norms and relations	**Cognitive** - Able to consciously shift perspectives - Use multiple cultural frames **Intrapersonal** - Able to create internal self - Challenges own views of social identities (class, race) - Integrates self-identity **Interpersonal** - Able to engage in diverse interdependent relationships - Ground relations in appreciation of differences - Understands the intersection of social systems and practices - Willing to work for others' rights

Research Methodology

Experimental research was conducted in 2019 (from February to June) at the Institute of Pedagogics and Psychology at Ternopil Volodymyr Hnatyuk National Pedagogical University, Ukraine. The authors identified the following stages of the study: 1) hypothesis construction, formulation of the main goal and objectives; 2) creation of a research program; 3) development of ways and means of recording results; 4) opening the Intercultural Communication Center; 5) purposeful formation of an intercultural educational space in a higher education institution; 6) developing the intercultural competence in the created intercultural educational space; 7) quantitative and qualitative processing of the obtained results; 8) analysis and generalization, interpretation of results, formulation of conclusions.

With the assistance of the Institute of Pedagogics and Psychology at Ternopil Volodymyr Hnatyuk National Pedagogical University, the authors opened the experimental Intercultural Communication Center, whose activity was aimed at modeling and implementation of the intercultural educational space at this university. The next step was to develop a program of activities and approve a project to implement an intercultural educational space. The participants in this study were 63 future teachers (third-year students), selected at random. Students studied in 4 mixed groups (Ukrainians and for-

eigners): Group 1 – 14 students, Group 2 – 15 students, Group 3, and 4 each contained 17 students. The language of communication was English. The aim was to form students' intercultural abilities in accordance with the content and structure of intercultural competence during the pedagogical experiment.

The pedagogical experiment included the following stages: Preparation, Diagnostics, Formation, and Control. The authors identified the intercultural orientation of the goals of the educational process and tasks at each stage. The survey determined the students' intercultural competence levels: during research respondents received assertions and had to rate the importance of each on a Likert scale. The Likert scale had a 5-, 4- and 3-point scale, depending on the purpose of the question. Cronbach's Alpha is the most common indicator of internal reliability when you have multiple questions on the Likert scale. Thus, the questionnaire was tested on 11 randomly selected students for reliability, and the Cronbach's coefficient was found to be 0.8. Data were analyzed based on the frequencies for each section. Calculations were done using a standard deviation (SD) to make it possible to compare averages. The t-test (Student's t-test) was used to compare means before and after testing to determine whether they differ from each other and how significant the differences are. The t-test also showed whether these differences could have happened by chance.

The purpose of the study was to analyze the ways of forming the intercultural educational space of a higher pedagogical educational institution and its influence on the formation of intercultural competence of future teachers. The object of research was the intercultural competence of future teachers. The study hypothesized that the purposeful formation of an intercultural educational space in a higher education institution would promote the formation and development of intercultural competence of future teachers.

Methods

The research was carried out in stages (Preparation, Diagnostics, Formation, and Control): at each stage, the most appropriate methods were used under specific tasks. To accomplish these tasks the authors used the following methods: questionnaires, interviewing, conversation, direct and indirect pedagogical observation, measurement, analysis, and generalization. The methodology was used to track the dynamics of the levels of development of the intercultural competence of future teachers and to establish the scientific reliability of the results of the research. Each of the methods under the research task led to the accumulation of specific factual material, which ensured the transition from observation to deep knowledge and the development of practical recommendations.

At the stage of Diagnostics and initial systematization, the following methods were chosen: questionnaires, observations, analysis of performance, interviews). The questionnaire aimed to examine the existing levels of intercultural competence of students and consisted of 100 questions developed by the authors. During the survey, respondents received assertions and had to rate the importance of each on a Likert scale (5-point, rarely 4-point, and 3-point, depending on the question). The questionnaire contained 4

Sections of Questions: 1) Culture and its components. Cultural diversity; 2) Stereotypes and prejudices. Intercultural conflicts; 3) Intercultural communication; 4) Acquisition of intercultural competence. So, for example, question #12 from Section 1), "How much do you know about the culture of foreign students studying with you?" was rated on a 4-point Likert scale: a) I know nothing; b) Not enough; c) Enough; d) I know a lot. Question #34 in Section 2), "When I meet a person of another nationality, I immediately become alert" was rated on a 5-point Likert scale: a) Always; b) Usually; c) Sometimes; d) Seldom; e) Never. Question #39 of the same Section "Racism is common in the world, it will always exist and nothing can be done with it" was rated on a 5-point Likert scale: a) I agree; b) Agree to a certain extent; c) Undecided; d) Disagree to a certain extent; e) Disagree completely. Question #72 in Section 3), "What is the main reason for experiencing communication barriers in the intercultural communication?" was rated on a 3-point Likert-scale: a) Culture (belonging to a radically different culture, different body language, and gestures, etc.); b) Language (communication in different languages, poor language skills, foreign language accent, use of inappropriate words, expressions, e. g.); c) I do not feel communal barriers in intercultural communication. Question #94 in Section 4), "Intercultural skills cannot be acquired at University," was rated on a 5-point Likert scale: a) I agree; b) Agree to a certain extent; c) Undecided; d) Disagree to a certain extent; e) Disagree completely. Question #96 in the same section 4), "Intercultural education has no influence whatsoever on my attitudes" was rated on a 5-point Likert scale: a) I agree; b) Agree to a certain extent; c) Undecided; d) Disagree to a certain extent; e) Disagree completely.

The authors used interviewing and observation methods with some students and 49 students out of 63 also agreed to a conversation, creative intercultural tasks, and solving interculturally oriented situations.

At the stage of Control, the effectiveness of the formative work and the final control of knowledge, skills, and abilities were determined using the method of analysis of performance.

Results

At the stage of Preparation, the authors opened the Intercultural Communication Center, which contributed to the implementation of intercultural educational space at Ternopil National Pedagogical University. At the stage of Diagnosis, the authors carried out a number of research activities (interviews, observations, questionnaires) to determine the initial level of intercultural competence of future teachers. This was facilitated by the solution of interculturally oriented situations, the study of current and final assessments of students in certain subjects that have an intercultural component in the content of education. At the stage of Diagnostics, the authors found that the vast majority of surveyed students (73%) have never had to hide their ethnicity. However, almost all respondents (97%) felt at least once offensive about their ethnicity, and prejudiced attitude towards people of another culture. While their attitudes towards other ethnic groups and their

cultural heritage were tolerant or neutral. Students were asked the question: "How will you behave when you are in a situation of the humiliation of your ethnic dignity", and the typical answers were: "Aggressively, I may get violent"; "In my country, I will not allow oppressing my ethnic dignity. I will defend my ethnic dignity". Meanwhile, there were also answers like: "I will humiliate them back"; "I will not pay attention". Students were also asked the question: "What do you think can unite ethnicities into one nation – a political nation?", and the majority of the students (89%) did not answer this question. Therefore, the analysis of the results gave grounds to a claim that future teachers do not know of a methodology of working in the context of an intercultural environment in an educational institution, which indicates the need for special training for them to carry out such activity.

To determine the levels of students' intercultural competence, the authors modeled the Intercultural Maturity Model developed by R. King and M. Baxter Magolda in 2005 (King, Baxter Magolda, 2005). Levels of intercultural development of future teachers at the beginning of the experiment were the following: Initial Development Level – 40 people (63.5%), Intermediate Development Level – 21 people (33.3%), Mature Development Level – 2 people (3.1%). The data are presented in Table 2 and Table 3.

Table No.2. Levels of intercultural competence of future teachers at the beginning of the experiment (at the Diagnostics Stage) according to Intercultural Maturity Model (King, Baxter Magolda,2005)

Levels of intercultural competence	Cognitive	Intrapersonal	Interpersonal
Initial Development Level	38 %	39 %	43 %
Intermediate Development Level	18 %	21 %	24 %
Mature Development Level	2 %	2 %	2 %

Table No.3. General data of intercultural competence of future teachers at the Diagnostics Stage according to Intercultural Maturity Model (King, Baxter Magolda,2005)

Levels of intercultural competence	General data at the Diagnostics Stage
Initial Development Level	40 (63.5 %)
Intermediate Development Level	21 (33.3 %)
Mature Development Level	2 (3.1 %)

Formation of an Intercultural Competence

At the Stage of Formation, the students were divided into groups in such a way that the group had approximately equal representatives of all three levels of intercultural competence as well as foreign students. This made it possible to balance groups. The aim was to develop the intercultural competence of future teachers in the created intercultural educational space. First, the content of education was reviewed. In several

disciplines and courses taught by different faculty members, with their agreement, from 4 to 10 hours were added to study specific topics to form intercultural competence. Certain topics were elaborated on additional lessons, others on trainings, and some on self-study (also evaluated). Within the discipline «Theory and Methodology of Education» the topic «Education of Tolerance and Culture of international Coexistence» was additionally studied (4 hours added). Within the discipline "General Pedagogy" one additional module was offered – "Culture Pedagogy" (4 hours added), which included the following topics: "Pedagogy, Culture, and Society", "Culture-Based Education", "The Concept of Tolerance and Culture at School", "Interculturally Competent Teacher". Such discipline as "Comparative Pedagogy" also has been supplemented and systematized. The objective of the course was to study and make a comparative analysis of the theory and practice of educational work in different countries, to generalize of positive experiences (4 hours added). Students also attended the course "Professional self-regulation of the future teacher". An unsure teacher, with prejudices and stereotypes, can be a problem for students, that is why this course was supplemented by the topics "Exploring Your Own Identity", "Overcoming Stereotypes and Prejudices" (2 hours). The course "Psychology" was supplemented by two modules: "Ethnic Psychology" (4 hours) and "Conflictology" (2 hours), where students studied, for example, the topic "Intercultural conflicts in school: how to prevent and resolve them".

Despite such extra hours, students were not overloaded, because some modules of other disciplines in the program have been shifted to the next semester. Such correction of the content component of future teachers' professional training became possible in cooperation with faculty and university teachers. Virtually every academic discipline in the educational training program directly or indirectly addressed the issues of interculturalism, intercultural interaction, and the introduction of a transdisciplinary approach to the disciplines. Taking this approach into teaching, it facilitated the acquisition of sound information about the peculiarities of professional activity in an intercultural society.

Scholars say that elective courses, such as intercultural communication courses, can substantially enhance special intercultural training for future teachers (Demchuk, 2015). Participants in our study also listened to a course developed by Pryshliak Oksana, "Intercultural Competence and Intercultural Communication", 42 hours (Pryshliak, 2018), the purpose of which was to promote the development of intercultural competence of future educators by developing the ability for the implementation of pedagogical activity in the intercultural environment. The objectives of this course were as follows: to acquaint students with interculturalism, its various manifestations, and problematic aspects; peculiarities of pedagogical work in the intercultural society; to master the methods, techniques, and means of pedagogical work in the multicultural community; to master the method of organization of educational process in multicultural educational environment of educational establishments of different types; to involve students into various aspects of intercultural practical pedagogical activity through participation in role-playing, business games, pieces of training, e.g.; to educate tolerance towards representatives of different cultures; to develop positive social potential: social interest, social sensitiv-

ity, capacity for empathy and sympathy. Students listened to lectures, the first of which was entitled "Intercultural Competence and Intercultural Communication Skills as an Investment in Future", they also attended practical classes, seminars, wrote essays, and conducted a quiz on intercultural education. The topics of such classes were as follows: "The Importance of Tolerance in Society", "Benefits of Intercultural Communication", "Obstacles of Intercultural Communication", "Stereotypes and Intercultural Communication", "National Identity and Mentality", "Social and Cultural Identity", "Intercultural Workplace Communication", "Interculturally Competent Personality: Characteristics". Also, the course "Intercultural Competence and Intercultural Communication" included weekly trainings, for example: "Essence, Prerequisites, Types of Intercultural Conflicts: Ways to Overcome", "Intercultural Dialogue – Overcoming Stereotypes", "Reassessment of Cultural Values". Besides, attention was paid to the management of students' work, it was directed to preparing the future specialist for work in the intercultural environment. It should be noted that in the last sessions of the course the atmosphere of cohesion, agreement, and cooperation prevailed due to the cooperative participation of students in various classroom and non-classroom socio-cultural activities.

To ensure the completeness of the intercultural educational space in this higher educational institution, cooperation with various socio-cultural institutes of the region (national educational and cultural societies of the city of Ternopil and region) was established. Ternopil is home to about a hundred nationalities, but the largest communities are Poles, Jews, Germans, Bulgarians, and Azeris, communities of African, Asian, and South American origin. We have established relationships and communication with some organizations: "Society of Revival of Polish Culture of the Kremenets District Y. Slovatsky", "Ukrainian-Polish Cultural and Educational Society named after Y. A. Mickiewicz", "Cultural Educational Society of Ternopil region", "Jewish Community", and others. In cooperation with different cultural organizations of the region, various intercultural events were held related to the cultural traditions and customs of the Ukrainian people and the peoples representing foreign cultures, namely *presentations*: "Mysterious World of China", "Unknown Turkey", "Traditions of Arab Countries"; "Incredible Greece"; *literary artistic events:* "Song Traditions of Africa", "Oriental Motives"; *theatrical performances:* "Charm of the East", "Ukrainian Christmas", "Ancient Greece"; *conversations with guests* "Cultural Diversity", "Stereotypes and Intercultural Communication", "How Tolerant Are You?", "What Does It Mean for a Person to be Transgender?", "Interpreting Intercultural Situations in School"; *Saturday viewing and discussion of films* of ethnographic content depicting different cultures of the world; *master class:* "Origami Creation"; *excursions* to cultural fairs held in the city and the region. The issue of tolerance towards the Russians was especially acute during certain events, as a military conflict involving the armed forces of Ukraine and Russia is currently taking place in eastern Ukraine, and Ukrainian soldiers are being killed every day. However, the authors noticed the harmonization of intercultural relations between the participants of the pedagogical process at the end of the experiment, as well as overcoming difficulties in communicative and other forms of interaction with representatives of different

ethnic communities. In general, there was an atmosphere of cohesion, agreement, and cooperation through the organization of the joint participation of students and representatives of public organizations in various socio-cultural activities.

Findings of the Experiment

At the Stage of Control, an expanded questionnaire was conducted that contained 200 questions and was focused on solving professional interculturally oriented situations. As a result of diagnostic measures, it was found that all 63 students (100%) expressed a desire to know more about their own and other cultures; the majority of students – 58 students (92%) consider Ukraine as a multicultural state, inhabited by representatives of many nationalities, accordingly, the school acquires signs of interculturalism, so it is necessary for the future teachers to receive intercultural training while still in academia. The constructive solution of intercultural and religious conflicts offered by the respondents is a positive result. In the questionnaire, students gave the following answers: "it is necessary to understand not to judge", "to talk on the relevant subject from a very young age", "to educate young people in intercultural dialogue and to teach tolerance", "to respect each other", "to live peacefully", "to teach common values young people", "to change prejudice against particular ethnic groups", "to promote other ethnicities and their cultures", "to introduce appropriate educational courses to provide intercultural education in schools".

Also, respondents were again asked the same question: "How will you behave when you are in a situation of the humiliation of your ethnic dignity" and no one responded: "Aggressively, I can hit" or "In my country, I will not allow oppressing my ethnic dignity". Instead, the answers were more moderate and tolerant than before: "I will not humiliate them", "I will not pay attention", "I will ignore", "I will try to explain the inadmissibility of ethnic discrimination" and "I will try to convince that such behavior is unacceptable". Students were again asked the question: "What do you think can unite ethnicities into one nation – political nation?", and the majority of the students (68.7 %) answered "lack of prejudice", "common human ideas, cultural heritage and friendship", "respect, the ability to compromise", "common views", "intercultural dialogue", "joint activities", "mutual respect". However, the results showed that 18 students (28.5%) were prejudiced against particular ethnic groups, although they considered themselves to be tolerant. In general, the analysis of solving intercultural situations has given grounds to state that future teachers have mastered the intercultural activities, and the self-assessment data confirmed that fact.

According to the results of the experiment, at the Stage of Control the following levels of intercultural development of future teachers were revealed: Initial Development Level – 5 people (7.9%), Intermediate Development Level – 34 people (53.9%), Mature Development Level – 24 people (38%). The data are presented in Table 4. Figure 1 shows the comparative analysis of the levels of intercultural competence at the Diagnostics Stage and the Stage of Control in percentages.

Table No.4. *General data of intercultural competence of future teachers at the Stage of Control according to Intercultural Maturity Model (King, Baxter Magolda,2005)*

Levels of intercultural competence	General data at the Stage of Control
Initial Development Level	5 (7,9 %)
Intermediate Development Level	34 (53,9 %)
Mature Development Level	24 (38 %)
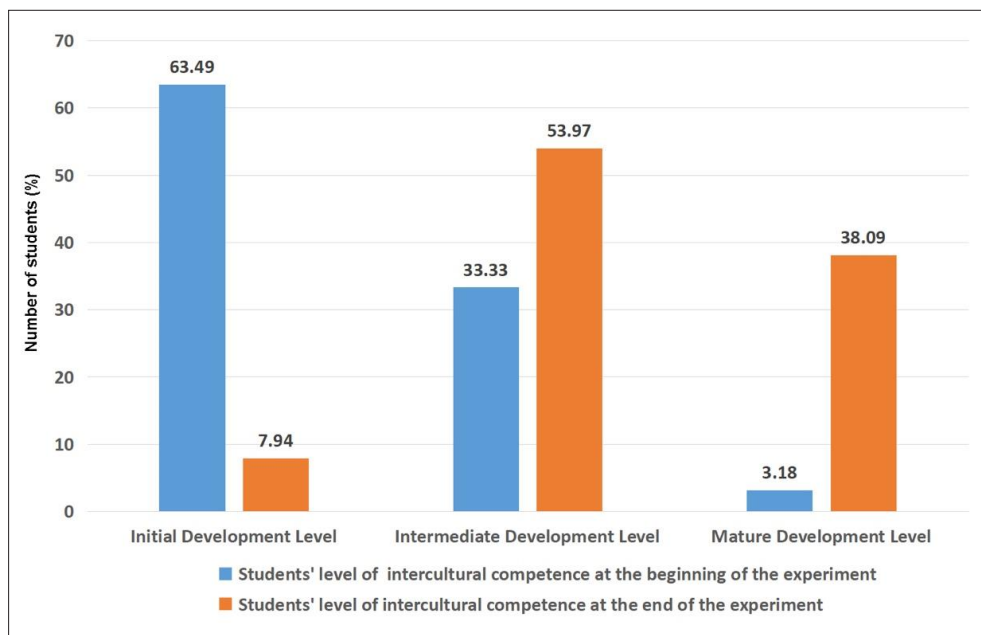
Figure 1. *Comparative analysis of levels of intercultural competence at the Diagnostics Stage and at Control Stage in percentages*

Significant changes are evident between the formation of students' intercultural competence at the beginning (*Diagnostics Stage)* and the end (*Control Stage)* of the experimental study. The percentage of respondents with the Initial Development Level decreased significantly from 40 students (63.5%) to 5 (7.9%), and the Intermediate Development Level increased – from 21 students (33.3%) to 34 (53.9%), also the Mature Development Level increased – from 2 students (3.1%) to 24 (38%).

Our hypothesis is supported by mathematical calculations. Evaluation of the reliability of the obtained results involves determining the reliability of the difference in the statistical results using the *t* test (Student's test). We have determined the average measurement error of relative values in % by the following formula:

$$m_p = \sqrt{\frac{P * q}{n}},$$

where m_p – the average measurement error of relative value; P– a relative indicator; q – is the inverse to P (q = 100% - P); n – is the total number of observations. In statistical studies, the probability of a reliable prediction should be at least 95.0%. The Student's t-test was used to compare data to find if they were different from each other and how significant the differences were. The t-test also showed if those differences could have happened by chance. At 95.0% probability, the Student's criterion for more than 30 observations is 1.96; at 99.0% – 2.58, at 99.9% – 3.26.

a) calculation of Initial Development Level:
m_{p1} = 6,07. So 63,49 ± 6,07%. m_{p2} = 3,41. Thus 7,94 ± 3,41%.
b) calculation of Intermediate Development Level:
m_{p1} = 5,94. So 33,33 ± 6,28%. m_{p2} = 6,28. Thus 53,97 ± 6,28%.
c) calculation of Mature Development Level:
m_{p1} = 2,21. So 3,18 ± 2,21%. m_{p2} = 6,12. Thus 38,09 ± 6,12%.

We evaluated the significance of the difference between the indicators of levels of intercultural competence at the beginning (Diagnostics Stage) and at the end (Control Stage) of the experimental study by the coefficient of difference (Student's device) determined by the formula:

$$t = \frac{|p_1 - p_2|}{\sqrt{m_1^2 + m_2^2}}$$

a) calculation of Initial Development Level:
t = 7,98. According to the table ST p < 0,001.
b) calculation of Intermediate Development Level:
t = 2,39. According to the table ST p < 0,02.
c) calculation of Mature Development Level:
t = 5,36. According to the table ST p < 0,001.

Thus, mathematical calculations showed that the results of the experimental study are reliable and confirm the validity of the experimental study. The findings of the study confirmed the need for targeted intercultural education to form the intercultural competence of future teachers, which will facilitate their professional activity in the intercultural society.

Discussion

In the future, teachers need to be interculturally competent themselves to prepare their students for success in an interconnected world. Intercultural competence must be acquired during education at a higher education institution. When intercultural competence is an integral part of learning, future teachers are involuntarily learning to build relationships and understand other cultures. Including an intercultural component into a vocational program shows how the intercultural educational space of a higher education institution influences the transformation of students' values, the system of their perception of diversity, and attitude to it. Particular attention should be paid to the special

courses on intercultural competence. Thus, the special course "Intercultural Competence and Intercultural Communication" was not initially welcomed by students, they were indifferent during classes at first. However, the students got involved in activities aptly, practiced intercultural games, and analyzed intercultural situations. Subsequently, the relationships between foreigners and Ukrainians were harmonized, they even started to treat one other differently – with respect and tolerance. An influential principle of the course "Intercultural Competence and Intercultural Communication" was the selection of knowledge from different areas of science, which ensured the development of complex skills that contribute to the formation of intercultural competence of the future teacher. The subject, theoretical and practical tasks of this course have integrated into the system of previously acquired philosophical, cultural, historical, psychological, pedagogical, and other humanitarian knowledge and skills of students. It allowed them to take a new level of judgment and to re-evaluate themselves, to form critical thinking, and to develop the capacity for introspection. Each student assessed a new level of readiness for professional activity, personal qualities as a future specialist, ability to work in a multicultural environment. We observed a redistribution of respondents in groups – significant decrease in the percentage of students on Initial Development Level (the difference is 55.6%), and an increase on Intermediate Development Level (the difference is 20.6%), the calculation of Mature Development Level also showed an increase (the difference is 34.9%). Why was there a large redistribution of respondents in groups according to the levels of intercultural competence at the beginning and the end of the experimental study? The authors suggested that this was due to the attendance of the course "Intercultural Competence and Intercultural Communication", complementing an intercultural component to different disciplines, various intercultural events and activities, all above created the holistic intercultural educational space at the Institute of Pedagogics and Psychology at Ternopil Volodymyr Hnatyuk National Pedagogical University.

Conclusions

Scientific studies in higher education set clear goals for improving the intercultural competence of students, but ways to implement it still need to advance. Today, there is considerable heterogeneity in the methodology used by educational institutions to achieve this. The research presented in this paper is an attempt to reveal one of the possible approaches to the formation of intercultural educational space in higher education and show the possibilities of using its potential for the formation of intercultural competence of future teachers. Based on the analysis of the study we have concluded that the creation of the intercultural educational space at the higher education institution has a positive effect on the process of intercultural competence formation. Thus, it can be summarized that we observed the positive dynamics in changes of groups' indicators across levels of intercultural competence at the beginning and end of the experimental study. Most students belong to the Intermediate Development Level – 34 respondents (53.9%). They can adopt crucial values that are specific to different cultures and peoples, are tolerant

of diversity, have experience in self-management and management of negative states, are open to innovation and change, are conscious of the need to achieve the Mature Development Level. Students at the final stage of intercultural competence formation (Mature Development Level) – 24 respondents (38%) demonstrate active participation in intercultural communication regardless of the situation, not only effectively process and present information, but also competently conduct discussions, easily build relationships at the level of intercultural cooperation with the region's cultural organizations, partners, accumulate experience of successful cultural interaction, they have potential of successful future leaders. As a result of the implementation of intercultural education of future teachers, 91.9% of respondents recognize the universality of fundamental human rights of any nationality, respect human dignity and freedom regardless of their nationality, religion, accept social, cultural, the religious diversity of society; are aware of the importance of intercultural dialogue in a modern multicultural society; support the development of interethnic communication based on the principle of tolerance. Students have formed the abilities and qualities that allow them to perform the professional activity in an intercultural society: a system of knowledge about ethnic, cultural, confessional diversity, ability to resolve cross-cultural situations and conflicts. The experience of positive interaction with representatives of different cultures is realized through a complex of skills, including the ability to think critically, to conduct dialogue, the ability to self-evaluate professional actions in the intercultural environment. It testified to the development of the intercultural competence of future teachers in general.

Thus, the implementation of intercultural education of future teachers is realized through the creation of intercultural educational space at a higher pedagogical institution. For a comprehensive implementation of intercultural education of future teachers, recommendations are as follows:

1. The creation of a united intercultural educational space at a pedagogical institution that will ensure the coordination of the intercultural orientation of the educational process and tasks at each stage and sphere of work;

2. The specification of the content of the future teacher's professional training that takes into account the intercultural vector: activities in an intercultural environment; allocation of the intercultural component in academic disciplines, implementation of courses for the formation of intercultural competence; planning and management of students' work (creative intercultural orientation); engaging intercultural training, presentations, artistic events, cultural discussions with guests, and viewing films of ethnographic content depicting different cultures of the world; excursions to cultural fairs held in the city and the region;

3. The organization of cooperation with various social-cultural institutes of the region (national educational and cultural societies and communities, joint intercultural events, e.g.);

4. The harmonization of interethnic relations in education between students – representatives of different cultures in the multinational educational space of the university, city, and even region of residence; organization of practical training aimed at

overcoming communication difficulties and other forms of interaction with members of different cultural communities; cooperation through the organization of various intercultural extracurricular activities;

5. The combination of traditional and innovative methods of forming the intercultural competence of future teachers at a pedagogical institution.

In studying and analyzing the problem of professional preparation of future teachers and educators, we have concluded that the issue of conducting interculturally oriented practice for the process of the formation of intercultural competence and the implementation of intercultural education requires further study.

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