

The Organization of Diagnostics of Students' Polycultural Competence

*Marfuga Absatovna Absatova, Kalipa Tursynovna Atemova,
Diana Dzhumabayevna Tektibayeva and Akkenzhe Mukanovna Ussenova*

Kazakh National Pedagogical University Named After Abai, Almaty, Kazakhstan

Abstract: The problem of students' polycultural competence is the difficult pedagogical category, uniting various approaches, connected with the cultural heterogeneity of a society. Studying and reproduction of the own national culture elements by students becomes the basis of its creative interpretation in various kinds of activities and on the other hand this process promotes the formation of their interest to other national cultures. The analysis of data received from the ascertaining and forming experiments has shown, that at the final stage the students' polycultural competence was formed at the level of manifestation of their own positions and properties, of openness to other cultures, of the ability to mutual recognition of the national-cultural identity, keeping the national culture and individuality, understanding and recognizing multidimensionality of the world, of activity in the polycultural environment and defining complete readiness of a person to the development of a new way of life on the basis of tolerance.

Key words: Polycultural education % Polycultural person % Ethnoses % National culture % Tolerance

INTRODUCTION

The Aim of the Research: To present the results of experiment on the basis of the empirical-pedagogical work on the formation of students' polycultural competence.

At a present time, in the globalization epoch, when the isolated existence of different people and cultures becomes impossible, when the reconsideration of aims and objectives of education from the positions of new competence-based paradigm is happening, the strong necessity for the polycultural personality training appears.

The development and perfection of such personality can lead to the qualitative change of social life conditions, formation of the new culture, influencing on the well-being of a society. In these conditions the scientific-practical importance of the development of general philosophical-ideological outlook basis, of unitary principles, conventional norms of peaceful, tolerant, mutually respectful coexistence of people, states, cultures, civilizations raise as never before.

The acknowledgement to that is the Report of the International commission of UNESCO on global strategy of the development of education in the XXI-st century in which it is underlined, that one of the most important functions of school - is to learn people to live together, to

help them to transform existing interdependence of states and ethnoses to the conscious solidarity. For these purposes education should promote, on the one hand, the realization by the person of his/her roots and, thereby, the definition of a place he/she occupies in the world and on the other hand - to instill him/her the respect to other cultures [1].

Multi-ethnicity and multi-confessionality of the ethnonational structure of Kazakh society puts forward the necessity of accordance of an equal access for all ethnic groups, especially young generation, to social, cultural resources of a society. For this reason nowadays in Kazakhstan there function more than 3474 comprehensive schools with the Kazakh language of education, 2514 with Russian, 2017 with mixed, 78 with Uzbek, 13 with Uigur, 3 with Tadjik, 1 with Ukrainian language of education [2].

MATERIALS AND METHODS

The theoretical analysis, studying and generalization of the advanced pedagogical experience, observation, comparison, questioning, mental experiment, modeling, surveying of the literature read by students, the analysis of lessons and the results of teachers' and students' activity.

Main Part: The problem of students' polycultural competence formation is a socio-pedagogical problem. The modern situation in Kazakhstan is characterized, on the one hand, by the expansion and the realization of intercultural contacts and also self realization as the part of the world community and, on the other hand – by the retaining of a split tendency in a society that causes the placement on the first plan of the problems of other peoples' cultures understanding, as well as the achievement of a harmony and mutual understanding between people. Education is not in a condition to overcome the problems facing the society, but it can bring the essential contribution to the formation of polycultural competence and to the development of tolerance and respect for cultural pluralism. It can help students to understand their own and other peoples' cultures, to get skills in an adequate estimation and understanding of an individual person and of socio-cultural groups and cultures as a whole.

The research of the contemporary condition of the problem under investigation has shown the scientific and practical value of the work for the development of sovereign Kazakhstan, where the requirement of a society for the person, able to self-identification with different cultures, aimed on mastering the new way of life on the basis of equality and pluralism has increased.

Apparently, the formation of polycultural competence is connected with the person's conceptualization of his/her place in the world, relation to the native culture, with self-comprehension as a subject of an ethnos, a citizen of the Republic of Kazakhstan and the world. Its achievement is possible only when students are actively joined into the cognitive activity, embedded into a situation of a cultural dialogue, with him/her, with coevals, with teachers. It is important, that the dialogue content placed students into a situation of a choice and included vital questions through solving which he/she could study himself/herself and others, define own preferences, sympathies and antipathies, independently build up opinions, coming to certain conclusions and generalizations.

At the same time in our research of a problem of students' polycultural competence formation in teaching and educational process several works of foreign scientists were taken as a basis: D. Gollnik, F. Chinn [3], K. Bennett [4], J. Banks [5, 6, 7], V.V. Makaeva, Z.A. Malkova, L.L. Suprunova [8], G.V. Palatkina [9], Gwendokyn C. Baker [10], Chaves L. [11], others.

Finding the basic qualities of the polycultural personality, considering the different points of view of scientists, teachers, concerning disclosing of an essence, competence kinds, characterizing component elements of competences, we provide our working definition.

In our understanding students' polycultural competence is difficult integrative quality of a person representing an ordered set of knowledge about saving and revival of national values in interrelation with general-humanistic and own positions and the properties appearing in the realization of universal ways of cognition, mutual relations, interactivity in the multicultural environment and defining the complete readiness of a student for the development of a new way of life in the system "I-monoculture-interculture-polyculture".

For the formation of polycultural competence of a person we have held the diagnostics and an empirical-experimental work..

Our experiment corresponded to the traditional program of its conduction and went in the following sequence:

- С Diagnostics and the analysis of the level of students' polycultural competence in real practice;
- С Introduction in the educational process of a school of the model of students' polycultural competence formation;
- С Generalization and systematization of the received data on the basis of its comprehensive analysis of the productivity of theoretical and practical work done.

Experiment consisted of two stages: ascertaining and forming. The first was carried out in an initial stage of research and has been directed on the revelation of polycultural competence level. The second one assumed the introduction of the model of polycultural competence formation in the pedagogical process.

Our integrated lessons were held in the form of excursions, journeys ("Regional sightseeings", "The history of nature and culture memorials" etc.). Students were divided into groups according to their interests: historical, geographical and others. They studied suburbs, surveyed libraries, museum of local lore, spoke with natives. On the integrated lesson on theme "the Nature of Almaty in poetry, music, painting" students talked about the oeuvre of their fellow countrymen.

Poems about the beauty of nature in different seasons became more expressive when music by Tchaikovsky sounded and Levitan's landscapes pictures were shown. By means of the language of poetry, tales, stories of paradise that appeared on the Earth, music, paintings, students shared their view about the Native land, imbued with feelings of landscape poetic beauty.

Students had the right to visit only obligatory educational activities, limiting their knowledge by the frames of a lesson. But the majority of them chose some special courses, open classrooms or individual works which were directed first of all on the development of polycultural competence.

Visits of special courses and open classrooms were voluntary. At this stage each student could either finish the route, or continue it, applying in practice the knowledge received on lesson, open classroom or special course; work in club, section or the educational project which were open at school.

For the definition of the efficiency of students' polycultural competence and a methodology of its realization offered by the author, the coefficient of linear correlation by Pearson according to the following formula (1) has been calculated:

$$r = \frac{\sum (x_i - \bar{x}) \cdot (y_i - \bar{y})}{n \cdot s_x \cdot s_y} \quad (1)$$

Here

- x – Is the indicator of value levels required from students in experimental groups;
- y – Is the indicator of value levels required from students in control groups;
- n – Is the quantity of compared pairs of participants;
- $(x_i - \bar{x})$ The divergence of each x value in respect with the arithmetic mean;
- $(y_i - \bar{y})$ The divergence of each y value in respect with the arithmetic mean;
- F_x, F_y – The average quadratic divergences.

Inserting values in the given formula, we have calculated the factor of the linear correlation, its value ($r = 0,925$) has appeared statistically significant and close to one, so this showed the trustworthy connection between the level of students' polycultural competence and introduction of the methodology offered.

For the control of probabilities, that both average values in the sample concern the same constellation and that students of experimental groups show high level of formation of the competence under investigation, the Student's t -criterion has been settled as follows:

$$t_{emp} = \frac{x - y}{s_{x-y}} \quad (2)$$

where

- t_{emp} – Is Student's t -criterion
- x and y – Is the arithmetic mean indicator;
- F_{x-y} – Is the standard divergence;

$$s_{x-y} = \sqrt{\frac{\sum (x_i - x) + \sum (y_i - y)}{n_1 + n_2 - 2} \left(\frac{1}{n_1} + \frac{1}{n_2} \right)} \quad (3)$$

where

- n – is the selection quantity (the number of selected participants);
- Selections $n_1 = 150$ and $n_2 = 155$ – is the total number of members;
- $X_{av} = 28,93$ and $Y_{av} = 27,52$ – is the calculation of the arithmetic mean indicators.

The calculations were done using the following formula:

$$s_{x-y} = \sqrt{\frac{(161,8 + 16,9)}{150 + 155 - 2} \cdot \frac{1}{150} + \frac{1}{155}} = 0,09,$$

$$t_{emp} = \frac{28,93 - 27,52}{0,09} = 15,6.$$

While comparing, the t -indicator with the tabulated value gained from the experiment, taking into consideration the latitude degree, was equal to $-2,1$ with the significance level of $0,05$. According to the data derived from the experiment, the number $15,6$ is $> 2,1$, so we find the argument supporting the advantage of experimental education.

At the same time the statistical significance of the distinctions between the primary and experimental training levels has been checked.

$$x^2 = \sum \frac{(f_i^1 - f_i^B)^2}{f_i^1 + f_i^B} \quad (4)$$

where,

- x^2 – Is the value of criterion;
- f_i^1, f_i^B – Are the frequencies of two compared selections;
- Σ – Is the sum symbol;

Table 1: The results of the statistical significance differences verification

Levels	f_1^1	f_1^B	$(f_1^1 - f_1^B)^2$	$f_1^1 + f_1^B$	$\frac{(f_1^1 - f_1^B)^2}{f_1^1 + f_1^B}$
High	30,9	11,9	1831,4	361	5,07
Middle	43,00	34,9	6068,4	65,61	92,4
Low	52,8	26,0	6209,4	718,2	8,6

Table 2: The dynamics of changes in the levels of students' polycultural competence formation (motivational).

In percents					
The number of students					

		Control group		Experimental group	

The levels of students' polycultural competence formation	Before the experiment	After the experiment	Before the experiment	After the experiment	
High	7,5	15,4	10,3	28,7	
Middle	25,2	32,5	28,7	43,2	
Low	67,3	52,1	60	28,1	

Table 3: The dynamics of changes in the levels of students' polycultural competence formation (cognitive)

In percents					
The number of students					

		Control group		Experimental group	

The levels of students' polycultural competence formation	Before the experiment	After the experiment	Before the experiment	After the experiment	
High	5,3	13,7	12,3	34,5	
Middle	44,2	52,5	38	43	
Low	50,5	33,8	49,7	22,5	

Table 4: The dynamics of changes in the levels of students' polycultural competence formation (operational).

In percents					
The number of students					

		Control group		Experimental group	

The levels of students' polycultural competence formation	Before the experiment	After the experiment	Before the experiment	After the experiment	
High	-	8	13,3	29,5	
Middle	45,2	44,5	38	43	
Low	54,8	47,5	48,7	27,5	

The gained results of the investigation proclaim the positive dynamics in the formation of students' polycultural competence that approves the advisability of the implementation of the offered methodology of its realization to the educational process.

The results of statistical significance verification are presented in the Table 1.

$x^2 = 106,1$ i.e. the differences between two classifications are considered valid, as $x^2_{emp} > x^2_{0,05}$.

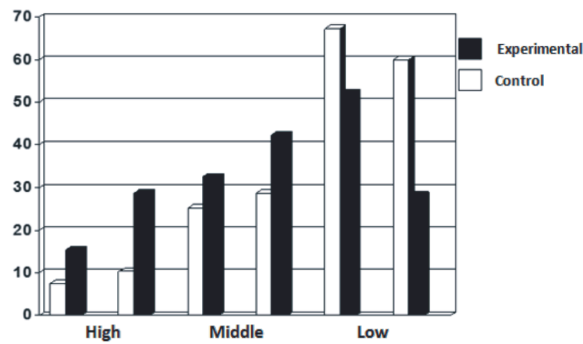
During the experimental work we tend to ensure that students have learned to appreciate the culture, language, historical experience, etc. of the country people, as well as cross-cultural differences, assess cultural diversity not as a problem and an obstacle, but as a

positive phenomenon, which can intellectually enrich them, expand their cultural outlook and help them acquire new experience.

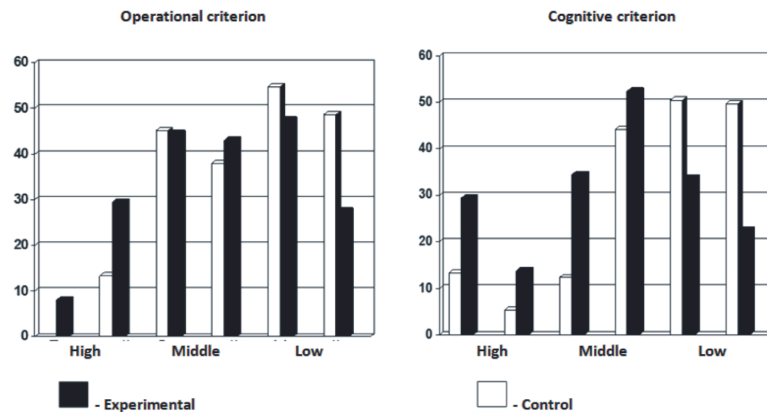
Thus, at the third control stage the complex analysis of results of a forming experiment has shown the efficiency of the methodology of students' polycultural competence formation (Table 2, 3, 4).

Graphical results of the experiments are as follows - Pictures 1, 2, 3.

The data presented on the Pictures 1, 2, 3 certify the fact that in the experimental group certain changes took place in the polycultural competence and this allows us to consider the validity of the general conclusion about the efficiency of the offered research.



Picture 1: The dynamics of changes in the levels of students' polycultural competence formation (motivational criterion)



Picture 2, 3: The dynamics of changes in the levels of students' polycultural competence formation

CONCLUSION

Thus, the investigation held and the results gained from it allow considering that the offered methodology supplies the formation of the students' polycultural competence in the conditions of educational environment.

The comparative analysis of data taken from the ascertaining and forming experiments has shown, that at the final stage the students' polycultural competence was formed at the level of manifestation of their own positions and properties, of openness to other cultures, of the ability to mutual recognition of the national-cultural identity, keeping the national culture and individuality, understanding and recognizing multidimensionality of the world, of activity in the polycultural environment and defining complete readiness of a person to the development of a new way of life on the basis of tolerance.

Comparison of the elements of other country culture with the knowledge of native culture brings an opportunity to gain the proof of the cultures variety idea, to understand the features of cultural evidences caused by specificity of economic, political and social development, to accept these features as a reality,

considering them in mutual relations with carriers of other cultures, to feel the respect for the cultural achievements of other people, the participation in their problems and difficulties, the aspiration to the cultural cooperation with foreign countries. At the same time it is necessary to help students to develop irresponsiveness to the worst samples of foreign, first of all, pop- cultures, which spreads inspirituality, cynicism, cruelty, mercantilism.

The data from the experimental training convincingly show, that the indicators of students' personal polycultural competence formation levels in experimental group, who were trained using our methodology based on application of interactive methods, both at the first and at the second stages of experimental work, were higher than the indicators of students from the control group, trained basing on usual methodological system.

REFERENCES

1. Education: the Hidden Treasure: The report of the International Commission on the Education for the XXI Century: UNESCO. Paris, 1997.

2. Kazakhstan, 2006. Model of multi-ethnic, multi-religious country with a thriving economy and large oil resources. *Kazakhstan Pravda*, 64: 3-4.
3. Gollnick, D.M. and P.C. Chinn, 1998. *Multicultural Education in a Pluralistic Society*. 5th ed. New Jersey, pp: 215.
4. Bennet, J., 1993. Cultural Marginality. Identity Issues in Intercultural Training. Paige M. (Ed.). *Education for the Intercultural Experience*. Yarmouth, pp: 213.
5. Banks, J., 2001. *Cultural Diversity and Education: Foundations, Curriculum and Teaching*. Boston, pp: 236.
6. Banks, J., 1997. *Multiethnic Education: Practices and Promises*. Phi Delta Kappa, pp: 111.
7. Banks, J., 1981. *Multiethnic Education: Theory and Practice*. Boston, pp: 236.
8. Makaev, V.V., Z.A. Malkov and L. Suprunova, 1999. Multicultural education - the actual problem of the modern school. *Pedagogics*, 4: 3-10.
9. Palatkina, G.V., 2002. Multicultural education: a modern approach to the education grounded on national traditions. *Pedagogics*, 5: 23-30.
10. Gwendokyn C. Baker, 1994. *Planning and Organizing for Multicultural Instruction*. Addison-Wasley Publishing Company Inc., pp: 154.
11. Chaves, L., 1998. *Civic Education in a Changing Society. Multiculturalism and American Democracy*. University Press of Kansas, pp: 257.