Avramenko Olena, Humeniuk Serhii. Implementation of technology for the formation of information and communication competence among future choreographers. Journal of Education, Health and Sport. 2020;10(6):394-404. eISSN 2391-8306. DOI http://dx.doi.org/10.12775/JEHS.2020.10.06.041

 $\underline{https://apcz.umk.pl/czasopisma/index.php/JEHS/article/view/JEHS.2020.10.06.041}$

https://zenodo.org/record/4168848

The journal has had 5 points in Ministry of Science and Higher Education parametric evaluation. § 8. 2) and § 12. 1. 2) 22.02.2019.

This article is published with open access at Licensee Open Journal Systems of Nicolaus Copernicus University in Torun, Poland
Open Access. This article is distributed under the terms of the Creative Commons Attribution Noncommercial License which permits any noncommercial use, distribution, and reproduction in any medium, provided the original author (s) and source are credited. This is an open access article licensed under the terms of the Creative Commons Attribution Non commercial license Share alike.

(http://creativecommons.org/licenses/by-ne-ss/4,0) which permits unrestricted, non commercial use, distribution and reproduction in any medium, provided the work is properly cited.

The authors declare that there is no conflict of interests regarding the publication of this paper.

Received: 29.05.2020. Revised: 02.06.2020. Accepted: 30.06.2020.

UDC 378.147

IMPLEMENTATION OF TECHNOLOGY FOR THE FORMATION OF INFORMATION AND COMMUNICATION COMPETENCE AMONG FUTURE **CHOREOGRAPHERS**

¹Olena Avramenko, ²Serhii Humeniuk

¹H. S. Skovoroda Kharkiv National Pedagogical University, Ukraine

selenadance.ev@gmail.com

²Kharkiv State Academy of Physical Culture, Ukraine

raoidstk@gmail.com

Abstract

The article is devoted to one of the current problems in vocational education – the formation of future choreographers information and communication competence (ICC). The author defines the essence of the concept of "information and communication competence". The article emphasizes that the result of the formation of choreographers information and communication competence in the learning process is the formed competence for this type of activity. When substantiating and developing the technology, the following stages of its implementation are distinguished: motivational, cognitive and technological. All three stages of the developed technology are aimed at the formation of future choreographers of information and communication competence. In the process of professional training of future choreographers for professional activity by means of information and communication technologies the criteria (motivational, semantic, reflective) and levels of formation (high,

average, low) are specified. 128 respondents of the first and second courses of the Faculty of Arts of the G. S. Skovoroda Kharkiv National Pedagogical University took part in the pedagogical research (by consent). The control group consisted of 66 people (CG), and the experimental group – 62 people (EG). The article describes the stages of technology implementation. At the control stage of the pedagogical experiment with the help of methods of mathematical statistics the results of the research were obtained, on the basis of which the efficiency of the introduced technology of information and communication competence formation was proved.

Keywords: training; technology; implementation; formation; information and communication competence; choreographer; educational process.

Introduction

One of the main trends in the creation of new technologies of modern education is its desire for individual orientation, taking into account the psychophysiological and artistic and creative characteristics of the individual. The search for opportunities for the individualization of education led us to the need to develop the content of modern professional training for future choreographers, the technological basis of which is information and communication competence, which consists in a different approach to teaching students. The educational program, aimed at the formation of information and communication competence of choreographers, is built taking into account the fact that the teacher begins teaching students from the first year, using information and communication technologies.

These educational technologies are of particular relevance for the development of choreographic education, since a modern choreographer must have the necessary level of information and communication competence formation.

The formation of the ICC of future choreographers is now the key in the process of professional training. State programs "One hundred percent", "Informatization of education" are carried out today by introducing ICC into the educational process of higher education institutions. It is also important for us to analyze the formation of information and communication competence of future choreographers in the leading countries of the world, taking into account the competence approach in the preparation of future choreographers. Taking into account the fact that the European Center for Development and Vocational Training (CEDEFOP) has published a European multilingual glossary, which aims to define key concepts in the context of a competency-based approach. The essence of the concept of "skills" in this glossary is defined as "the knowledge and experience necessary to perform

certain tasks in professional development." And the essence of the concept of "competence" is characterized as "the ability to apply knowledge, skills and abilities in professional activities that contribute to self-improvement and personal development" [7;8]. It should be noted that the basis for creating a glossary is the main documents of the European Commission, which indicates that competence is the ability to apply knowledge, skills and abilities, taking into account the ethical values of an individual.

The conducted theoretical analysis of scientific research and publications on the problem of professional training of specialists in higher education shows that the issues of building an integral concept of the formation of information and communication competence of future choreographers in domestic pedagogy have not been considered. As a rule, it is investigated either the professional competence in general, or the preparation of future specialists for professional activity by means of ICC: the essence and structure of information and communication competence and information and communication culture of future specialists as goal-setting pedagogical categories (G. Gurevich, A. Gurzhiy, M. Zhaldak, N. Morse, A. Ovcharuk, Y. Ramsky, A. Spirin) of ICC use in higher education (A. Alekseev, V. Bykov, A. Glazunova, A. Kolgatin, I. Kostikova, E. Polat, I. Robert, E. Smirnova-Tribulska, M. Shishkina) the problem of the formation of professional competencies of future specialists using ICC (G. Gurevich, L. Kartashova, S. Rakov, A. Spivakovsky).

A number of problems related to information and communication training of specialists in various fields have been presented in recent scientific works [3; 5; 10; 12; 15; 16; 17], however, the issue of determining the effectiveness of the educational process using ICC in the preparation of future choreographers remains insufficiently studied, which prompted the authors to research it.

Highlighting previously unresolved parts of a common problem. Low level of formation of information and communication competence among future choreographers, students of the Faculty of Arts of Kharkiv National Pedagogical University named after G.S. Frying pans (22%), provided the grounds to design further scientific activities of the team of authors for the development and phased implementation of technology for the formation of information and communication competence in future choreographers.

The purpose of the article is to theoretically substantiate, develop and implement a technology for the formation of information and communication competence in future choreographers.

Presenting main material

The competence of teachers in the field of information and communication technologies is defined as "the willingness and ability of the teacher to independently and responsibly use these technologies in their professional activities [2; 6; 11]. J. Romani defines ICC competence as "readiness and ability to independently use modern information and communication technologies in pedagogical activities to solve a wide range of educational tasks [16], ie the ability of an individual to solve educational, domestic and professional problems using information and communication technologies.

The analysis of the presented definitions allows to allocate the following:

1. There are two approaches to the interpretation of the concept of "information and communication competence" of a teacher.

Some authors emphasize the knowledge, skills and abilities to work with information and communication technologies necessary for a particular activity. Noting the pedagogical IC-competence, it is about the knowledge, skills and abilities to work with information and communication technologies, which are necessary for use in educational practice or often the essence of the concept of "IC-competence" is realized through the introduction of information and communication technologies in education. process.

3. Defining the IR competence of a teacher, scientists associate it with the personal quality of the teacher, which is manifested in the willingness and ability to independently use ICC in teaching.

Based on the analysis, we define the information and communication competence of the teacher as a unique combination of professional knowledge, skills, abilities and experience of the teacher, expressed in the technology of solving pedagogical problems by means of modern information and communication technologies. Moreover, we believe that the IR competence of the teacher – the quality of the specialist, which is formed in the process of all professional activities, and, therefore, the main condition for its formation is the availability of conditions for practical implementation of knowledge, skills and abilities in the field of ICC [1; 9; 13; 16].

Note that it is necessary to distinguish between information and communication competence in the general sense and pedagogical information and communication competence, as the latter is based on knowledge, skills not only in the field of ICC, but also in the field of pedagogy [4; 14].

The analysis of the scientific literature gives grounds to define the essence of the concept of "information and communication competence of the future choreographer"

readiness to use information resources that are responsible for the use of information obtained through any media resources, and use such information communication and organization of educational activities.

All the above contributes to the theoretical justification of the technology of formation of information and communication competence of the future choreographer.

Note that the technological approach in education allows you to choose the most effective and develop new technologies and models to solve socio-pedagogical problems [4, p. 47], as well as the organization of the teacher and students, taking into account personal characteristics, interests and abilities [3, p. 204].

Given the above, the technological approach in the training of future choreographers is aimed at building a comprehensive model in which the interaction of all its components, which ensures the achievement of the result - the formation of future choreographers information and communication competence in professional training.

To carry out the ascertaining stage of the pedagogical experiment, a complex of general scientific theoretical, empirical and statistical methods was used, namely: synthesis, conceptualization of theoretical knowledge to form the main provisions of the work; a pedagogical experiment to obtain results from the knowledge levels of future choreographers, educational motivation; mathematical and statistical methods for processing information that was obtained in the process of conducting the ascertaining stage of the study.

In the process of conducting the ascertaining stage of the pedagogical experiment, the theoretical and methodological aspects of using ICC in choreography for training future choreographers were studied; a cut of the knowledge levels of future choreographers was carried out based on certain criteria (motivational, meaningful, reflexive) and indicators of the formation of information and communication competence, the levels of formation of information and communication competence of future choreographers were determined (high, medium, low). The experiment also included the processing of data obtained at the constitutive stage of the study, their comparative analysis, verification of the results obtained by methods of mathematical statistics.

The pedagogical research involved 128 respondents of the first and second years of the Faculty of Arts of the G. S. Skovoroda Kharkiv National Pedagogical University (by agreement). The control group consisted of 66 people (CG), and the experimental group – 62 people (EG).

In order to develop the research program, there were grounded methods "Diagnostics of values and motives of information and communication activities" (motivational aspect)

"Diagnostics of knowledge, skills, skills of using ICC in future professional activities" (cognitive information criterion); "Diagnostics of the level of technological readiness" (technology-activity criterion); "Diagnostics of the level of personal and creative readiness of future choreographers" (personality and reflexive criterion).

A scheme has been developed for the implementation of the formation of information and communication competence among future choreographers, fits into the characteristics of the technology of the issue under study.

Based on the analysis of scientific literature [3; 6; 9; 12], it has been proved that the technology of forming information and communication competence in future choreographers should be implemented at the following stages: motivational, cognitive, reflexive. At the first stage, motivational, there is a development and deepening of interest in the profession of choreographer, the ability to analyze and solve professional problems, the development of general technology of training by ICC, self-analysis of themselves and their activities. At this stage, future choreographers learn to identify professional problems, analyze problem situations, determine the purpose and main opportunities of ICC in the work of choreographers, choose the form of presentation of the final product.

In the second stage, cognitive, future choreographers master the basics of ICC, acquire knowledge and skills, learn ICC (planning the stages of a pedagogical experiment, analysis and forecasting the use of ICC in future professional activities). At this stage of professional training of future choreographers, the search for methods and forms of solving problems is developed, the concept is developed, information is analyzed and processed, the following ICC functions are implemented.

At the last stage of technology, the control-evaluation and reflexive function of ICC are realized.

At the first, motivational, stage of realization of technology of formation of information and communication competence at future choreographers indicators and levels of formation of information and communication competence at future choreographers (high, average, low) were allocated [3]. The stage is called motivational, because it was the points of view of motivation that determined the indicators and criteria.

At the second, substantive, stage of implementation of the technology of formation of information and communication competence of future choreographers, a special course "Formation of information and communication competence of future choreographers" was introduced into the educational process.

Let's analyze in more detail what was done at this stage, which provides for the implementation of a special course.

The special course "Formation of information and communication competence of future choreographers" is a component of preparation of students of choreographers for professional activity on the basis of studying of information and communication technologies. The purpose of the special course: the formation of future choreographers theoretical and practical knowledge, skills and abilities of the formation of aesthetic information and communication competence.

At the third, reflexive, stage of realization of technology of formation of information and communication competence at the future choreographers of accordingly certain indicators the comparison of results at the beginning and the end of carrying out pedagogical experiment was carried out.

The results of the study at the beginning and end of the pedagogical experiment are shown in table 1.

Table 1

Results of the study of the formation of the aesthetic culture of future educators

(ascertaining and control stages of the pedagogical experiment)

Criteria		EG (62 persons)		CG (66 persons)	
	Levels	At the	At the end of	At the	At the end of
		beginning of the	the experiment	beginning of	the experiment
		experiment		the	
				experiment	
motivational	В	7,4	21,4	7,8	12,4
	С	39,5	62,8	39,4	42,7
	Н	53,1	15,8	52,8	44,9
substantive	В	11,9	22,7	11,8	16,9
	С	37,9	72,9	37,8	44,2
	Н	50,2	4,4	50,4	38,9
reflective	В	15,0	22,6	15,4	19,6
	С	41,7	75,4	41,5	52,9
	Н	43,3	2,0	43,1	27,5

Note: $B - high, \ C - medium, \ H - low levels of information and communication competence$

Table 2 shows the generalized results of the experimental work.

Table 2

Generalized results of experimental work (increase in%)

Criteria	Levels	EG (62 persons)	CG (66 persons)
	В	+14,0	+4,6
motivational	С	+23,3	+3,3
	Н	-37,3	-7,9
substantive	В	+10,8	+5,1
	С	+35,0	+6,4
	Н	-45,8	-11,5
reflective	В	+7,6	+4,2
	С	+33,7	+11,4
	Н	-41,3	-15,6

Note: B – high, C – medium, H – low levels of information and communication competence

On the basis of a quantitative analysis of the obtained experimental data, calculations were carried out using nonparametric methods of mathematical statistics using a criterion for comparing the distribution of future educators in the samples from the EG and CG by the levels of formation of information and communication competence among future choreographers.

A null hypothesis was put forward that the implementation of theoretically grounded and developed information and communication competence among future choreographers at certain stages will contribute to its formation.

In the process of comparing the quantitative data of two samples of future choreographers of the experimental and control groups in the process of calculating the reliability of the results obtained at the end of the pedagogical experiment. It should be noted that the value of the criterion statistics was calculated by the formula

$$t = \frac{|x_1 - x_2|}{\sqrt{|m_1^2 - m_2^2|}}$$

For the level of significance $\alpha = 0.05$ and a degree of freedom equal to 2, T=5,991.

Calculated according to table 1, the value of statistics for all indicators (in relation to the formation of information and digital competence) is the arithmetic mean $\overline{X_{K\!\Gamma}}$ significantly different from that in $\overline{X_{E\!\Gamma}}$ (t-estim. (2,69) > t- tabular (1,96); P>0,05). This indicates significant changes that have occurred during the formative stage of the pedagogical experiment. The highest results were obtained on such an indicator as the attitude to the

formation of their own information and digital competence, ie on the motivational criterion (t-estim.=6,02) and semantic criterion (t-estim.=5,14). However, all three criteria show an increase in the control group (t-estim.=4,88). With a confidence probability that $\alpha = 0.95$, $T = 11.56 > T_{\kappa} = 4.97$ for the experimental group.

So, the conducted pedagogical experiment confirmed the position of the hypothesis put forward and proved the effectiveness of the developed technology for the formation of information and communication competence in future choreographers and its implementation at the following stages: diagnostic, molding, evaluative and effective.

Conclusions

So, in the process of conducting the pedagogical experiment, the technology of information and communication competence was implemented in future choreographers at the following stages: diagnostic (pedagogical diagnostics based on observation, conversations, questionnaires, questionnaires); formative (introduction of the developed special course "Formation of information and communication competence among future choreographers" into the educational process of choreographers); evaluative and effective (analysis of the results obtained using the methods of mathematical statistics).

At the ascertaining and control stages of the pedagogical experiment to determine the levels of information and communication competence formation among future choreographers, a pedagogical study was carried out, in which 128 respondents of the first and second years of the Faculty of Arts of the G. S. Skovoroda Kharkiv National Pedagogical University took part. The control group consisted of 66 people (CG), and the experimental group – 62 people (EG).

Using the methods of mathematical statistics, the results of the study were obtained, on the basis of which the effectiveness of the developed technology for the formation of information and communication competence in future choreographers was proved and its implementation at the following stages: diagnostic, molding, evaluative and effective.

References:

- 1. Barrett H. C. Electronic Portfolios A chapter in Educational Technology ABC-CLIO Encyclopedia. URL: http://electronicportfolios.com/portfolios/ encyclopediaentry.htm.
- 2. Bawden D. Information and digital literacies: A review of concepts. *Journal of Documentation*. 2001. Issue 57(2). P. 218-260/
 - 3. Bednall T.C., Kehoe E.J. Effects of Self-Regulatory Instructional Aids on Self-

- Directed Study. *Instructional Science: An International Journal of the Learning Sciences*. 2011. Vol. 39. No. 2. P. 205–226.
- 4. Ben Youssef A., & Dahmani M. The Impact of ICC on Student Performance in Higher Education: Direct Effects, Indirect Effects and Organizational Change. Revista de Universidad y Sociedad del Conocimiento (RUSC). UOC. 2008. URL: http://www.uoc.edu/rusc/5/1/dt/eng/benyoussef_dahmani.pdf.
- 5. Bolger B.B., Rowland G., Reuning-Hummel C., Codner S. Opportunities for and Barriers to Powerful and Transformative Learning Experiences in Online Learning Environments. *Educational Technology*. 2011. Vol. 51. №2. P. 36–41.
- 6. DeSeCo. Definition and Selection of Competencies. Theoretical and Conceptual Foundations (DESECO). Strategy Paper on Key Competencies. An Overarching Frame of Reference for an Assessment and Research Program OECD (Draft). URL: http://www.deseco.admin.ch.
- 7. European Union. Key Competencies for Lifelong Learning. Recommendation of the European Parliament and to the Council of 18 December 2006 (2006/962/EC). Official Journal of the European Union. 2006. 30 December. P. 394.
- 8. Ferrari A. Digital Competence in Practice: An Analysis of Frameworks. Euaropean Commission Joint Research Center. Institute of Prospective Tdechnologies Studies.: European Union, 2012. 92 p.
- 9. Formation of information and communication competencies in the context of European integration processes of creation of information educational space: manual / O. V. Bilous, O. O. Gritsenchuk, I. V. Ivanyuk, O. E. Kravchina, M. P. Leshchenko, I. D. Malitskaya, N. V. Morse, O. V. Ovcharuk, D. B. Rozhdestvenskaya, N. V. Soroko, L. I. Timchuk, V. A. Tkachenko, M. A. Shinenko, A. V. Yatsyshyn. K.: Atika, 2014. 212 c.
- 10. Harm Biemans, Martin Mulder and others. Competence-based VET in the Netherlands: background and pitfalls. *Journal of Vocational Education and Training*, 2004. Vol. 56. PP.523–538.
- 11. Hoffmann T. The meanings of competency. *Journal of European Industrial*, 1999. Vol.23. 6. P.275–285.
- 12. Laura H. Salganik, Dominique S. Rychen, Urs Moser, John W. Konstant. Projects on Competencies in the OECD Context: Analysis of Theoretical and Conceptual Foundations, SFSO, OECD, ESSI, Neuchatel, 1999. P. 124-135.
- 13. Paul R., Elder L. Critical Thinking Competency Standards. *The Foundation for Critical Thinking*. 2006. 57 p.

- 14. Petukhova L. E. Information competence of the future specialist as a pedagogical problem. *Computer at school and family*. 2008. №6. Pp. 3-5.
- 15. Quality in education and training. European Centre for the Development of Vocational Training, 2011. P. 23–24.
- 16. Romani J. Strategies to Promote the Development of E-competencies in the Next Generation of Professionals: European and International Trends: monograph. Communication and Information Technology Department. Latin-American Faculty of Social Sciences, Campus Mexico (FLACSO-Mexico). 57 p.
- 17. The Digital Literacy resource pack Launched by Becta, 2009. URL: http://nationalstrategies.standards.dcsf.gov.uk.