

## THE ROLE OF INTERACTIVE METHODS IN BUILDING PROFESSIONAL IDENTITY OF FUTURE MUSIC ART TEACHERS IN THE CONTEXT OF ONLINE LEARNING

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**Abstract:** The article presents the results of an experimental study of the impact of using interactive methods on building professional identity of future music teachers in the context of online learning. The professional identity of a music teacher is interpreted as an integral property of the individual, which combines a positive perception of the subject of his belonging to the profession and motivational activity to realise themselves in the chosen profession. The aim of the study was to empirically verify the effectiveness of interactive methods for building professional identity of future music teachers in online learning. The object of the study were second-year students majoring in Music Art. The level of building professional identity of students was diagnosed using the method of J. Marcia.

**Keywords:** Music Art teacher, interactive teaching methods, online learning, professional identity, motivation for music and pedagogical activity, academic performance.

### 1 Introduction

In the modern world there are new requirements to the system of teacher training, in particular music teachers, able to form a vision of their professional future, to master the latest educational technologies, to succeed in their professional and pedagogical activities. It is a question of building professional identity of the future musical art teacher that is integral property of the person endowed with ability to conscious self-regulation and self-development in the professional activity.

The rapid development of digital technologies is leading to changes in traditional perceptions of education. The established concepts of education are being replaced by the fourth generation of education, which is the result of the implementation of technological solutions in Industry 4.0, the key factors of which are the spread of wireless communication, increasing the availability of artificial intelligence and other smart technologies.

However, the conservative part of professors who train music teachers in higher educational institutions is prejudiced about the possibilities of modern online learning. In this case, the main argument is the caution that such training increases the distance between the student and the teacher, and thus does not provide direct contact, which is essential for the transfer of pedagogical skills.

This statement is questionable, as online learning through the widespread introduction of interactive methods creates new opportunities for free exchange of ideas and interaction, both between teacher and students, and between students. Services, platforms and programs of the latest concept of education help to minimize routine in the work of the teacher and help each student to pay more attention to mastering pedagogical skills, prepare for the challenges of the modern world, as well as form flexible thinking and ability to learn quickly. These include the use of online resources such as Digital Audio Workspaces (DAW) and Soundation and SoundTrap cloud applications, which provide an opportunity to creatively organize the process of training music teachers.

The analysis of the educational process in Ukrainian higher educational institutions shows a number of contradictions

between: active introduction of the latest network technologies in professional training and lack of in-depth analytical and theoretical generalizations in the spectrum of processing and adaptation of empirical data in accordance with the specifics of professional training of students of art specialties; rapid development of computer and multimedia support of the educational process and low efficiency of its use in the practice of professional training of future teachers of music; the general orientation of the educational process and insufficient development of methodological support for building their professional identity, in particular, in the process of distance learning.

This allows formulating the purpose of the study, which is to empirically verify our proposed approach to the use of interactive methods in building professional identity of future music teachers in the context of online learning. Accordingly, the following tasks were formulated: develop a program for building professional identity in students-future music teachers; experimentally test the impact of interactive methods of online learning on building professional identity of students in this specialty.

### 2 Literature Review

The development of the program of our research was based on the analysis of the world practice of using interactive methods in the context of online learning when building professional identity in future music teachers. First of all, we took into account global trends in changes in learning technologies according to the concept of Education 4.0, which provides for the use of interactive methods and the introduction of online learning. In this regard, the materials of the report "Schools of the Future" presented at the World Economic Forum held in January 2020, (Schools of the future report – world economic forum, 2020) as well as the OECD Future of Education and Skills 2030 were valuable (OECD future of education and skills 2030, 2018).

It was also important to study the experience of the United Kingdom in realizing the potential of modern information technology in education and training. In particular, the strategy developed by the British government to support the education sector and educational technologies, as well as to promote innovation in accordance with the needs of the education system (Realising the potential of technology in education: A strategy for education providers and the technology industry, 2019) deserves particular review. In our opinion, this strategy needs further specification in the local conditions of world regions and countries, as well as certain areas of professional training. Therefore, we believe that our study contributes to the development of this aspect of the above conceptual projects.

Studying the experience of the University of Southern California's Thornton School of Music, we analysed the use of web technologies in the educational process, including Digital Audio Workspaces, Soundation and SoundTrap applications, etc (Four effective music teaching strategies for today's diverse classrooms, 2019).

In the course of the research, scientific publications related to various aspects of music teacher training in higher educational institutions were analysed. Among the many relevant scientific studies, attention should be paid to the research of A. Karaolis, G.N. Philippou, whose object was the identity of teachers. Using the original measurement tools, the authors found that there are three groups of teachers with different characteristics of professional identity: positive, negative and neutral. This technique can be used to study the professional identity of music teachers (Karaolis & Philippou, 2019). Our attention was also drawn to the thesis of the professional identity of a music teacher conducted by Elizabeth Reed at the School of Music, University

of South Carolina (USA). Using a special method, the author interviewed graduates of this higher educational institution for the last 20 years. The results of her research showed that experience, self-knowledge, adaptability to their environment and reflection are the main components in the development of the professional identity of a music teacher at different stages of his career. In addition, all graduates had a combination of three aspects of professional identity: subject, didactic and pedagogical (Reed, 2018).

S. L. Chua considered the problem of personality development of a music teacher, driving factors and inhibitors of this process is considered in the thesis. The author substantiates the concept of transformational learning in the professional development of music teachers (Chua, 2018).

An important factor in building professional identity of music teachers is their interpersonal relationships, in particular, in public life, which became the subject of Michael Benn's doctoral research. The author explored the role characteristics of primary school music teachers, as well as studied how participation in learning communities affects accumulation of the experience by these specialists (Benn, 2017).

Studying the pedagogical conditions for building professional competence of future music teachers, R. Chulpan, Ch. Gromova and L. Saitova put forward the idea of the multifunctional nature, complexity, integration and personal orientation of the professional competence of music teachers. This allowed the authors to define the professional competence of a future music teacher as a professional and personal quality, characterized by a high level of integration of common cultural, professional, special, interdisciplinary competencies, mastery of modern technologies and techniques of music education (Chulpan et al., 2016).

N. Inoue examines the role of subjectivity in teacher development research. Referring to Japanese culture, he emphasizes the organic and true integration of thinking with one's feelings, denoted by the term "omoi", which combines deep-rooted feelings, one's integrated thinking, and personal experience. According to the author, this approach allows a better understanding of the role of subjectivity associated with the development of teacher experience (Inoue, 2016).

One aspect of the study was to examine the international experience of training music teachers. In this regard, a useful source was the work of T. Lindskog, A. Renberg and T. Tegler, which analysed the information and training programs for music teachers in Denmark, Finland, Latvia, Poland, Slovakia and Sweden. Based on the study of data from the web pages of educational institutions that train music teachers, the researchers found that the curriculum does not pay enough attention to music subjects (Lindskog et al., 2007).

It is worth paying attention to the article by E. Boone, which presents the results of a study of self-regulated learning of future music teachers in Turkey. It is important that the author in his study proves significant differences in the self-regulation of learning depending on gender: female students had a clearer planning and goal setting compared to male students. This study increases the relevance of the study of gender issues in the training of music teachers (Boon, 2020).

During the outbreak of the COVID-19 (coronavirus) pandemic, in the situation of closures of educational institutions, the problems of training music teachers in the context of online learning become relevant. This prompted an information search and analysis of publications on this topic. In particular, E. Caldwell, a member of the National Association of Music Education, reviewed relevant online resources and recommendations for using Zoom and Nearpod, as well as general tips for organizing virtual learning, including general music subjects, individual lessons, and ensemble rehearsals (Caldwell, 2020).

Besides, the focus of our study were publications on methodological issues of curriculum development, in particular the work of M. Bialik and Ch. Fadel. According to the authors, the goal is to rid the curriculum of outdated, irrelevant information, while modernizing it, systemically distributing the sequence and introducing content into the competence. The authors explain their ideas on the example of an analogy with teaching to play a musical instrument. (Bialik & Fadel, 2018). This conceptual approach was concretized by J. Gonzalez, (Gonzalez, 2015) as well as M. Giorgadze and M. Dgebuadze. (Giorgadze & Dgebuadze, 2017). In their publications, they described the introduction of interactive teaching methods, as well as the use of online resources in training music teachers (Gonzalez, 2015; Giorgadze & Dgebuadze, 2017).

### 3 Methods

Three groups of methods were used in the study. The first group included interactive methods used to form the professional identity of students of future music teachers: problem-oriented discussions; case-study, that is collective consideration of a real case when there is a need to solve one or more problems and there may be many solutions; simulations; work in small groups, when students of 3-5 people performed an assignment for which they were responsible together as a team.

The second group of methods concerned diagnostic procedures, which allowed determining the levels of built professional identity, motivation for the profession of music teacher, and student success before and after the experimental work.

The level of professional identity of students was diagnosed using the method of J. Marcia, who identified four levels of professional identity: blurred (diffuse) identity; premature identity; moratorium; acquired identity.

The level of motivation for future professional activity of students was diagnosed using Rean's method adapted by the author. The questions of the questionnaire concerned specific intentions regarding the content of the future profession (see Appendix).

The academic performance was evaluated according to the ECTS system (European Credit Transfer and Accumulation System (2020), which was generalized into a four-level quality scale: a high level of practical training corresponded to grade "A" excellent (90-100 points); "B" and "C" (75-89 points), medium level — grades "D" and "E" (60-74 points), low level — grades "FX" and "F" (1-35 points). Academic performance was determined by the results of the current certification and final control.

The third group of methods ensured the reliability and representativeness of the data obtained during the experiment: the development of the experiment plan, sampling, formation of experimental and control groups, statistical methods for evaluating the results. The object of our study were second-year students majoring in 025 "Musical Arts", who took a university course during the second half of the 2019-2020 academic year (the Primary Education Department of the Pedagogical Institute of Borys Grinchenko Kyiv University, the Department of Pedagogy of Art and Piano Performance of Anatolii Avdiievskiy Faculty of Arts of National Pedagogical Dragomanov University, Department of Art Subjects and Methods of Their Teaching of the Faculty of Social and Pedagogical Education and Arts of Taras Shevchenko Regional Humanitarian and Pedagogical Academy of Kremenets).

The sampling procedure consisted of the gradual selection of students to participate in the study from the general population, which amounted to 257 people aged 20 to 25 years, by gender — 90% of women and 10% of men. At the first stage, a sample of 154 people was formed by random sampling. The second stage was the formation of experimental and control groups. The selection procedure was randomized at this stage, with 73 students in the experimental group and 84 in the control group.

The groups were equalized according to the following criteria: higher musical education, musical instrument skills, and computer technology.

In the experimental work, the plan “Before-after with the control group” was used, according to which the first (experimental) group of students applied interactive methods using online technologies, while the second (control) group studied with the use of traditional (lecture and practical) methods.

**4 Results**

To test the effectiveness of the proposed method for building professional identity of future music teachers using interactive methods in the online learning process, we surveyed students for their motivation for music teaching, and recorded levels of academic success. In order to compare the effect of the experimental technique, these procedures were performed twice: before the experiment and after. First of all, let us analyse the performance of students in the experimental and control groups before the experiment (Table 1).

Table 1. Student academic performance rates (before the experiment)

Academic performance levels	Experimental group		Control group	
	People	%	People	%
High	10	13.70	12	14.28

Medium	20	27.40	23	28.58
Sufficient	33	45.20	36	42.86
Low	10	13.70	12	14.28
Total:	73	100	84	100

According to Table 1, the distribution of student performance indicators in the experimental group allowed determining that 10 (13.70%) of them had a high level, 20 (27.40%) had medium, 33 (45.20%) — sufficient, and 10 (13.70%) — low. Similar calculations in the control group showed that there were 12 students (14.28%), with a high academic performance, 23 (28.58%) had medium, 36 (42.86%) — sufficient, and 12 (14.28%) — low (Figure 1).

Since in Table 1 levels of student academic performance are presented on an ordinal scale, this allows using Pearson’s chi-squared test to test the statistical hypothesis of the difference between the experimental and control groups. Calculation of the empirical value of the  $\chi^2$  criterion according to Table 1 is 0.063 at the level of confidence  $p=0.996$ , which gives grounds to reject this hypothesis:

$$\chi^2_{emp} = 0.63 < \chi^2_{cr,0.05} = 7.815.$$

Therefore, it can be argued that there were no differences between the experimental and control groups before the experiment. Figure 1 demonstrates comparison of student performance indicators in the experimental and control groups.

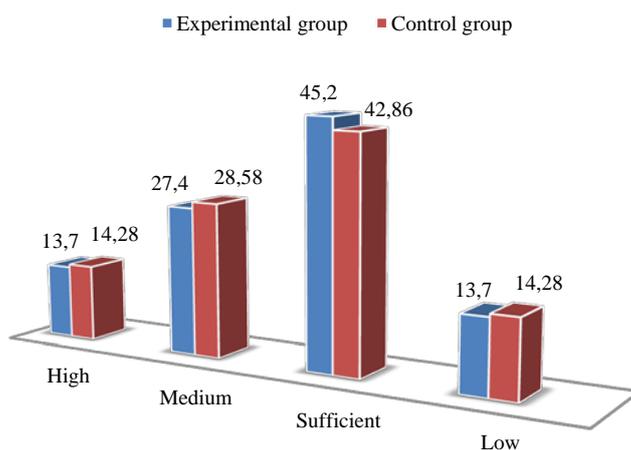


Figure 1. Distribution of students by levels of academic performance in the experimental and control groups before the experiment (in %)

An essential component of the professional identity of future music teachers is their motivation for music-pedagogical activity. Table 2 presents survey data conducted in the experimental and control groups before the experiment.

Table 2. Motivation of students to music-pedagogical activity (before the experiment)

Levels of motivation according to the survey results	Experimental group		Control group	
	People	%	People	%
High	7	9.59	10	11.90
Medium	24	32.88	25	29.76
Sufficient	29	39.72	32	38.10
Low	13	17.81	17	20.24
Total:	73	100	84	100

Table 2 data show that in the experimental group a high level of motivation was recorded in 7 (9.59%), a medium level in 24 (32.88%), a sufficient level in 29 (39.72%), and a low level in 13 (17.81%) students. Accordingly, in the control group similar data were as follows: 10 students (11.90%) had high level, 25 (29.76%) had medium, sufficient was found in 32 people (38.10%), and low - in 17 students (20.24%).

Having calculated empirical value of the  $\chi^2$  criterion according to Table 2, and comparing it with the critical indicator ( $\chi^2_{emp} = 0.462 < \chi^2_{cr,0.05} = 7.815$ ) at the level of confidence  $p=0.928$ , we can conclude that there are no statistically significant differences between the experimental and control groups on the criterion of student motivation to music and pedagogical activity. Figure 2 shows the distribution of students by levels of motivation for musical and pedagogical activities.

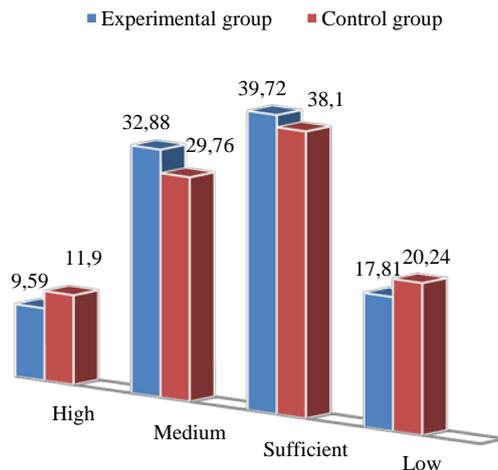


Figure 2. Distribution of students by levels of motivation for music and pedagogical activity (in %)

The evaluation of the results of the experimental work was carried out using the tools described above. Table 3 provides empirical data of the re-design of the academic performance of students in the experimental and control groups.

Table 3. Student performance indicators (after the experiment)

Academic performance of students	Experimental group		Control group	
	People	%	People	%
High	18	24.66	15	17.86
Medium	32	43.83	25	29.76
Sufficient	21	28.77	34	40.48
Low	2	2.74	10	11.90
Total:	73	100	84	100

Table 3 shows that 18 (24.66%) students had a high level of success in the experimental group, 32 (43.83%) had a medium level, and 21 (28.77%) had a sufficient level. Typically, 8 students who had a medium level before the experiment raised it to a high level, as well as 8 students who had a low level moved to a group with a sufficient level. The generalization of student

performance indicators in the control group showed that 15 (17.86%) students had a high level, a medium level was recorded in 25 students (29.76%), 34 students (40.48%) had a sufficient level, and 10 (11.90%) had a low level.

Calculations in the situation “after the experiment” showed that the value of the  $\chi^2$  criterion is 8,811 with a critical value of 7.815 at the level of confidence probability  $p < 0.05$ , that is  $\chi^2_{emp.} = 8.811 > \chi^2_{cr, 0.05} = 7.815$ , which indicates a statistically significant difference between the experimental and control groups after the experiment, gives grounds to conclude about the significant positive impact of experimental methods on the academic performance of students in the experimental group. Comparison of the levels of academic performance of the experimental and control groups showed that the share of students in the experimental group with high and medium level significantly exceeded that in the control group — 68.49% vs. 47.62%, instead, the corresponding comparisons of students with sufficient and low levels only confirmed the trend of prevailing in the experimental group (Figure 3).

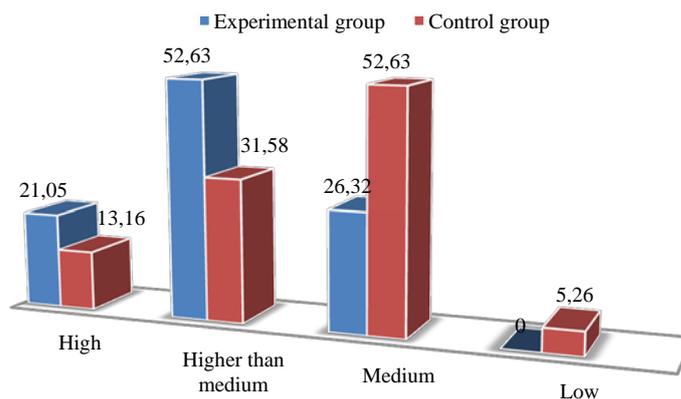


Figure 3. Comparison of student academic performance rates of the experimental and control groups after the experiment (in %)

Further analysis of the data obtained was to determine changes in student achievement under the influence of experimental factor. Table 4 contains data on the academic performance of students in the experimental group before and after the experiment for comparison.

Table 4. Changes in the success of students in the experimental group

Levels of academic performance	Before the experiment		After the experiment	
	People	%	People	%
High	10	13.70	18	24.66
Medium	20	27.40	32	43.83

Sufficient	33	45.20	21	28.77
Low	10	13.70	2	2.74
Total:	73	100	73	100

According to Table 4, a high level of academic performance after the experiment was recorded in 18 students, which is 8 people or almost 11% more than before the experiment. The most significant increase in academic performance was observed in the subgroup with an average level: from 20 to 32 students or

more than 16%. This was due to the fact that the level of academic performance of 12 students increased from sufficient to medium. It is worth noting that 8 students increased their level of academic performance from low to sufficient. The dynamics of academic performance give grounds to conclude about the significant positive impact of experimental methods on the academic performance of students in the experimental group. Figure 4 illustrates these changes.

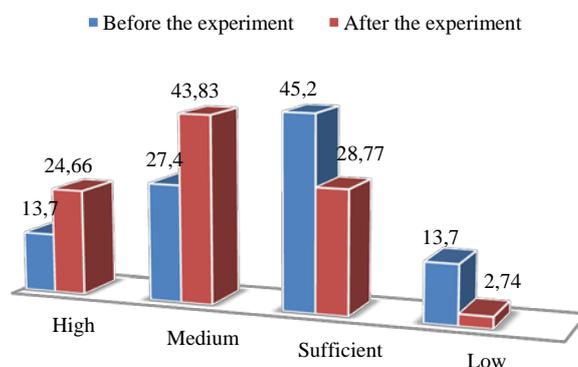


Figure 4. Changes in student achievement levels as a result of the experiment (in %)

One of the tasks of the experiment was to form students' motivation for music and pedagogical activity as a component of the professional identity of future music teachers. In order to record changes in this indicator after the end of the experimental work, it was re-designed (Table 5).

Table 5. Motivation of students to music and pedagogical activity (after the experiment)

Levels of motivation by the results of survey	Experimental group		Control group	
	People	%	People	%
High	19	26.03	9	10.71
Medium	35	47.94	21	25.00
Sufficient	15	20.55	33	39.29
Low	4	5.48	21	25.00
Total:	73	100	84	100

Analysis of Table 5 shows that in the experimental group the share of students with a high level of motivation is 19 (26.03%), and significantly exceeds the same indicator of the control group 9 (10.71%). The same trend is observed with respect to the average level: 35 (47.94%) in the experimental group as opposed to 21 (25.00%) in the control group. Instead, due to the increase in the level of motivation there was a decrease in the share of students with a sufficient level in the experimental group (15, 20.55%) compared to the control group (33, 39.29%), where the number of students at this level has not changed. According to the calculations of changes in the situation "after the experiment", it was found that the value of  $\chi^2$  reached 24.732, while the critical value of  $\chi^2$  at a significance level of  $p=0.01$  is 11.345. This gives reason to conclude that the indicators of motivation in the experimental group significantly exceed those in the control group.

To establish the effectiveness of the influence of experimental methods on the formation of professional identity of students, the task was to compare the motivation of students to music and

pedagogical activities in the experimental group before and after the experiment. Table 6 shows the corresponding comparative data.

Table 6. Changes in students' motivation for music and pedagogical activity of students of the experimental group

Levels of motivation by the results of survey	Before the experiment		After the experiment	
	People	%	People	%
High	7	9.59	19	26.03
Medium	24	32.88	35	47.94
Sufficient	29	39.72	15	20.55
Low	13	17.81	4	5.48
Total:	73	100	73	100

According to Table 6, it can be found that the share of students with a high level of motivation after the experiment increased by 12 people, or more than 16% more than before the experiment. There was also a significant increase in the number of students with a medium level of motivation: from 24 to 35 people or 15%, which was due to an increase in students' level of motivation from sufficient (before the experiment) to a medium level (after the experiment). Similarly, in 9 students who had a low level of motivation before the experiment, this figure rose to a sufficient level.

Using the  $\chi^2$  criterion, a significant increase in motivation for music and pedagogical activities of students in the experimental group was established. The value of this criterion calculated according to Table 6 was  $\chi^2=16.809$ , provided that its critical value at the level of significance  $p=0.01$  is 11.345. This gives grounds to conclude that the experimental method has a significant positive effect. Figure 5 shows the dynamics of indicators of motivation for music and pedagogical activities in the experimental group before and after the experiment.

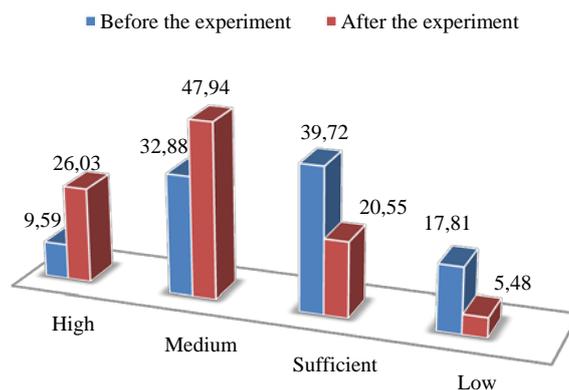


Figure 5. Dynamics of indicators of motivation for music and pedagogical activity in the experimental group before and after the experiment (in %)

The analysis of the results of the conducted experimental research gives grounds to claim that the proposed interactive methods in the context of online learning are effective in building professional identity of future music teachers. Changes in building professional identity were recorded using indicators of student motivation for music and pedagogical activities (motivational component) and academic performance (activity component). The reliability of the obtained data was ensured by the elimination of factors of possible influence, except for the experimental factor.

Analysing the results of the experiment, it should be noted that the students of the experimental group built a system of competencies for the use of interactive methods of online learning, as well as competencies related to reflection, analysis, generalization and finding ways to improve their professional skills as future music teachers:

- develop an outline plan of an online lesson of musical art;
- present materials on their musical and pedagogical activities, exchange their experience with classmates, structure discussions;
- use musical-didactic, plot-role and problem-modelling games and methods of involving students in playing in the process of online teaching of musical art in the future;
- conduct creative online music lessons using the e-learning system Moodle;
- use various types of web-quests in their future music pedagogical activity, for example, such as essay-rendering, quest-compilation (concert, virtual museum, music portfolio), development of a creative project, etc.;
- master a method of using blended learning models: Station Rotation Model, Lab Rotation, Flex, Flipped Classroom to combine traditional classes and on-online lessons;
- introduce an inclusive approach in the study of music, that is involve participants in the study of various musical genres and styles, adapting classes to different levels of abilities, interests and needs of participants, as well as establishing cooperation between them;
- use Internet resources to master production and composition with GarageBand for iOS, cloud applications Digital Audio Workspaces (DAW) Soundation and SoundTrap;
- organize distance learning communication and exchange of relevant information between participants who have common musical interests using the tandem method and the PeerToPeer method;
- determine the factors of success and the reasons for failures in their future teaching activities, structure their experience according to the criteria: "What parts of the lesson were successful? What succeeded and thanks to what? What elements of the lesson can be considered unsuccessful? What failed and for what reasons?";
- ability to generate and select ideas, as well as find ways to improve competencies in teaching Music Art;

- ability to develop and implement plans for personal development and improvement of pedagogical skills as Music Art teacher in secondary school.

These competencies, along with indicators of learning success and motivation for music and pedagogical activities, indicate an increase in the level of professional identity of students in the experimental group and gives grounds to conclude about the effectiveness of interactive methods in online learning of future music teachers.

## 5 Discussion

Comparing the results of our study, it is worth paying attention to the publications of E. Caldwell, who provides an overview of the experience of music education in the United States using a variety of online resources and practices for the development of musical creativity. (13) However, in our opinion, the focus of these articles on technology can lead to excessive enthusiasm for the technical side of the learning process. Therefore, the primary attention was paid in our experimental study to building professional identity of students as future music teachers, and a variety of web technologies were an effective means of this process.

We obtained Valuable methodological material for the development of the experimental program from the article by T. Ilieva, which provides examples of various interactive techniques for learning in a virtual classroom. (17) However, in our opinion, this work is theoretical and descriptive. Instead, in our study, preference is given to the experimental verification of the interactive methods we have developed in the context of online learning. Similarly, we can evaluate the publication of M. Gvyazdovskiy, which expressed ideas about peer-to-peer (P2P) platforms for knowledge exchange, learning in the format of games, Scheller's teacher training program developed at the University of Massachusetts Institute of Technology, services aimed at learning in the game format. However, the author does not provide experimental data that would indicate the effectiveness and conditions of application of the above methods. (18)

The work of K. Yee is worth noting, which collected 289 interactive teaching methods related to classroom-based, distance and online learning. These methods are classified according to the areas of the teacher's activity; student activities (individual, in pairs and groups), testing technology, use of social networks, mobile and tablet devices, game technologies, student presentations; brainstorming, interactive teamwork in chat, etc. (19) However, these materials are not accompanied by critical analysis and can only serve as a guide for further use in research and proving their didactic value.

The materials of the article by J. Gonzalez, which were tested in our study, are more practical in the context of our study. We are

talking about conducting various formats of structured discussions in teacher training. It is important that the author classifies these formats as those that require careful preparation, as well as those that can be used “with a rush” without preparation, as well as those that can be integrated with other learning strategies. (15)

Comparing our experimental research, it is worth paying attention to the thesis of Z. S. Dubovyi, concerning the development of independence of future music teachers in the context of distance learning. The author developed a comprehensive methodology for studying professional subjects by future music teachers in a distance environment. (Dubovyi, 2019) It should, however, be noted that the general approach to the training of music teachers prevails in Z. S. Dubovyi’s thesis, while our research focuses on building competencies in the methodology of teaching music, which are the core for future music teachers.

Thus, it can be argued that our experiment differs significantly from similar studies on the training of future music teachers in terms of the originality of the approach, and reveals the potential of interactive methods for the training of future music teachers in online learning.

## 6 Conclusions

The experiment helped to prove that interactive methods of online teaching of future music teachers contribute to building their professional identity, which is manifested in a significant increase in motivation for music teaching and improving academic performance. The students of the experimental group developed competencies in the use of interactive methods of online learning, in particular, such as: development of outline plans for online music lessons, use of game methods in the e-learning system Moodle and online music resources, introduction of an inclusive approach in studying music, organizing distance learning communication and exchanging relevant information between peers using the tandem method and the Peer-to-Peer method.

It was found that students showed increased interest in interactive online learning methods during the first two months of the semester, while in the second half they preferred blended learning models such as Station Rotation Model, Lab Rotation, Flex, Flipped Classroom, etc. The topic of using Internet resources for production and composition using DAW cloud applications was of particular interest to students.

The results of the research can be used by teachers of higher educational institutions to improve methods of teaching professional subjects in training music teachers. In the future, it is planned to deepen the study of this topic in terms of the formation of students’ competencies related to reflection, analysis and finding ways to improve their professional skills as Music Art teachers.

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## Primary Paper Section: A

## Secondary Paper Section: AM

## Appendix

**Methods of diagnosing learning and professional motivation of students**

## Test instruction

Rate the motives of educational and future professional activity on a 5-point scale according to the significance for you: 1 point corresponds to the minimum significance of the motive, 5 points — to the maximum.

Item No.	Motivational statements	Points				
		1	2	3	4	5
1	I study because I like the profession of Music Art teacher					
2	I study to ensure the success of my future professional activity as Music Art teacher					
3	I study to give answers to urgent questions related to the teaching music					
4	I want to make full use of my available talents, abilities and inclinations to the chosen profession — Music Art teacher					
5	I like to develop outline plans of Music Art lessons					
6	I like to choose methods of teaching Music Art					
7	I like to improve my pedagogical skills as Music Art teacher					
8	I like to teach Music Art at school					
9	I like to find interesting materials to motivate students					
10	I like to test and evaluate students' knowledge and skills in Music Art					
	The sum of points for each option:					
	Total points:					

The answers to the questionnaire were rated on a five-point scale. The results of the survey were generalized by translating the quantitative scale into a qualitative one, that is according to the respondents the sum of 41–50 points corresponded to a high level of motivation, 31–40 — to an average level, 21–30 — to below medium level, and 10–20 — to low level.