

USE OF INFORMATION TECHNOLOGIES TO MANAGE UNSUPERVISED ACTIVITIES OF FUTURE MUSIC TEACHERS

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Abstract: This paper reviews the relevant issues of professional training of future music teachers. The standards and regulations governing the educational process have been analyzed and the academic foundations in the researched field have been explored. A need to improve the unsupervised activities of students through the use of information technologies has been determined. An overview of the educational program based on which the future music teachers are currently trained has been presented. A questionnaire survey was conducted among the future music teachers, which results we present in this paper. The tasks from the field of music arts have been offered. The offered tasks may be used to provide methodical support and guidance to the students in their unsupervised activities within the module "Professional ICT Training of a Music Teacher".

Keywords: unsupervised activities, music education, information technologies, information competence, music teacher, educational program, professional training, professional activity.

1 Introduction

In the present context of societal development, when the information technologies permeate across all human activities, it is important to adapt the future graduate to the real conditions already at the stage of professional training at the university. In today's world, a teacher is not the only source of information for a student (Gruzdeva & Tukenova, 2019).

The relevance of this research lies in the fact that transition of all activity areas to a new stage of the societal formation and development is an objective reality reflecting the present state of education. In this regard, the activity of an actor in various subject areas is associated with organization of the search, selection, use, assimilation and analysis of the obtained information (Medvedeva et al., 2018; Strielkowski & Chigisheva, 2018; Dmitrova et al., 2019; Soltovets et al., 2019). The most recent socio-cultural needs of the information society demand changes in the system of professional training of a specialist. Moreover, after enactment of the Professional Standard "Teacher" (Order of the Ministry of Labour of Russia dd 18.10.2013 N 544n On Approval of the Professional Standard "Teacher", 2013) another need emerged pertaining to the development of teachers' skills necessary for the efficiency and success in their professional activities. (Medvedeva et al., 2019). The requirements laid down by this document reflect the need for obtaining such ICT competencies as basic digital ICT competence; general pedagogical ICT competencies; field-specific pedagogical ICT competencies. Therewith, the need to develop music teachers is determined by the social demand for training of competitive and qualified specialists, as well as by the need to grow a creative personality capable to adapt quickly to the qualitative changes occurring in the labor market in the conditions of society informatization. In the conditions of implementation of the activity-based concept for the personality development, the importance of training the specialists geared towards active interaction with students in the process of education increases. However, we understand that with the advent of information technologies, the risks have arisen associated with insufficient immersion of students in the subject area, and it is for the management and coordination of this process that we consider it crucial to integrate tasks aimed at developing digital skills in the learning process. The teacher's supervision will help to avoid spontaneous use of various information resources. Use of information systems should be

meaningful and efficient and be an effective tool for the professional activity of a music teacher in the subject area. In this connection, examination of possible ways to manage the unsupervised activities for the development of information technology skills of future music teachers is urgent and vital for designing an educational process aimed at raising a future professional - a music teacher.

2 Literature Review

A.A. Tolsteneva and colleagues (2016) researched the process of management of unsupervised activities, and from the standpoint of this researcher, the management process is a purposeful influence on the groups of people in the process of production. The purpose of management is to ensure high efficiency of the managed system, which is expressed in the best possible achievement by the system of its goals with the lowest possible consumption of resources. In the opinion of another researcher, S.V. Beloborodova (2013), the system of management of unsupervised activities performed by extramural students is an educational and developing means representing the integral unity of scientific knowledge and cognitive activity, based on general laws and derived principles for management of unsupervised activities of students.

E.V. Zakharova (2008) considers unsupervised activities of students as a multi-faceted and multifunctional phenomenon having not only educational, but also personal and public value, and representing a way to organize the educational and cognitive activities of students under the guidance of a teacher, which purpose should be to solve educational and cognitive problems, explore educational and professional questions, thus contributing to the formation of cognitive independence, and triggering an ability and a need for self-education.

3 Research Methodological Framework

The theoretical value of the research lies in the study of the features peculiar to the professional activities of future music teachers in conditions of the information society. The quality of activities of future music teachers largely depends on their ability to obtain and process information. At the same time, the analysis of the main directions of professional training, the purposes of training of special disciplines, programs and textbooks shows that there is no solution to the problem of using digital means of professional purpose in the process of preparing the future music teachers for professional activity in the conditions of informatization. The training tasks developed through this research can also be used in the training of future music teachers pursuing the same field of study and the same specialty.

The following contradictions served as prerequisites for the research:

1. between rapid changes in the standards and regulations governing the educational process and professional activity of a music teacher and the content of professional training of future music teachers;
2. between the requirements placed by the employers to the university graduates and the insufficient level of digital competence of future music teachers;
3. between the need for a music teacher to carry out unsupervised professional activities at school and the insufficient use of ICT means in practice when the unsupervised activities of future music teachers are organized.

The research hypothesis is based on the assumption that if the unsupervised activities of a future music teacher are managed with a focus on the skills in the use of ICT in their professional life, the quality of training of future graduates in the use of information technologies will be improved.

The research purpose is to provide a theoretical justification for a need to manage the unsupervised activities of students with a focus on the development of their information competence.

The research objectives are:

- To analyze the current state of professional training of future music teachers;
- To explore the demand for teaching staff competent in the subject area "Culture and Arts";
- To analyze the content of educational program in the field of training 44.03.01 Pedagogical Education, Music Specialty;
- To reveal the attitude of future graduates of a pedagogical university to the use of information technologies in their professional activities;
- To develop the training tasks intended to enable the management of unsupervised activities of future music teachers by means of information technologies.

The research methods: this paper employs such *theoretical methods of scientific research* as analysis of scientific literature, analysis of the wording of standards and regulations governing professional activity of future music teachers.

The empirical methods were also used in the course of the research: questionnaire survey of students, observation.

4 Results and Discussion

In 2019, by mutual efforts of regional executive authorities, employers and educational organizations of the Nizhny Novgorod Region the Regional Personnel Constructor project was launched to assess the need in the qualified staff. The functions of the Regional Personnel Constructor project, inter alia, were to ensure the career growth, provide support for professionals throughout their employment and introduce the postgraduate education service. The project covered high school students who were surveyed using the Country of Professionals tool. The survey aimed to reveal the levels of expression of the potential for professional development among students, and high results were observed for the field of study "Arts and Culture", thus, demonstrating a need to train professionals in this field, who are demanded in the labor market of Nizhny Novgorod region, and should be able to navigate in a massive flow of information; to handle diverse data in the subject area concerned, and to have a developed information competence in a broad sense.

Let's explore the subject area "Arts". For teaching the subjects included in this module, a teacher needs an ability to use various information technology solutions to ensure intrasubject linkage within the subject area under scrutiny. It is obvious that a teacher specializing on this subject area should have the vast knowledge in the history of arts for the most efficient presentation of the educational material, and to accomplish this task, during the class the teacher may refer to various arts such as painting, photography, literature. In accordance with the Federal State Education Standard of the Primary General Education, the task of a music teacher is to transfer to the students the basic knowledge in the field of musical art and to develop their skills of intonational reproduction of basic music material. Along with that, a music teacher, who is a representative of the cultural community, should have general knowledge of this subject area. (Order of the Ministry of Education of Russia dd 06.10.2009 N 373 (revision dd 31.12.2015) On Approval and Enactment of the Federal State Standard of Primary General Education, 2009).

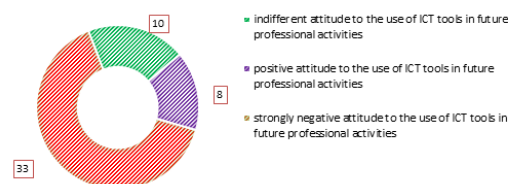
Therefore, the use of information technology solutions for education of a future music teacher is highly relevant in the modern context, when the digital tools and information systems spread across all spheres of life. And the unsupervised activities of students should include tasks involving work with information technology to polish the IT skills for further use in their professional activities.

Within the scope of professional training of future music teachers based on the educational program in the field of training

44.03.01 Pedagogical Education, Music Specialty, we created the module "Professional ICT Training of a Music Teacher". Throughout this module, the students carried out specially designed tasks. Before commencing training under this module, students are supposed to take the starting questionnaire survey intended to reveal their attitude to the use of information technology solutions in professional activities. The questionnaire survey should be conducted by the teachers engaged in implementation of the module. The questionnaire form was created by us specifically for the students studying in the field of training 44.03.01 Pedagogical Education, Music Specialty, in order to measure the attitude of future music teachers to the use of information technology in professional activities. The questionnaire survey covered 51 students of Kozma Minin Nizhny Novgorod State Pedagogical University in the field of training 44.03.01 Pedagogical Education, Music Specialty. The materials for the questionnaire survey were developed with account of key aspects. The survey questions were structured around three main dimensions: positive attitude towards the use of ICT tools in professional activities, indifferent attitude towards the use of ICT tools in professional activities, and strongly negative attitude towards the use of ICT tools in professional activities.

However, our survey of students, who are future music teachers, found that most respondents are negatively viewing the use of ICT resources in professional life. They believe it to be unreasonable. The questionnaire survey results are summarized in the figure produced by the authors (Figure 1).

Figure 1 Results of the questionnaire survey of students regarding the prospects of ICT use in professional activities



Source: authors

As seen from the diagram, 33 respondents are not going to use ICT in their professional activities, only 10 people see the possibility of using ICT in their professional activities and as few as 8 people will use ICT in their professional activities, which in our opinion is an acute problem.

Meanwhile, as stated in the professional standard, a music teacher should perform the following activities related to the use of information technologies, namely, develop the skills related to information and communication technologies (hereinafter ICT). Here we understand not only an ability to use the information technology solutions in professional activities, but also an ability to develop student's ICT skills (Sizova, 2018). In the professional routine of a music teacher that is related to the use of multimedia equipment and work with music notation software. In the teaching process such music notation software may be used as Muse Score, Sibelius, Final.

This problem becomes relevant also because "in the conditions of modernization of higher education the particular significance is attached to on-the-job training and improvement of the quality of extramural education" (Beloborodova, 2013). In this connection, the process of organization of unsupervised activities of students is becoming increasingly important. The researcher S.V. Beloborodova (2013) defines the following conditions for the most effective management of unsupervised activities of students: "Creation of information-communication educational space, collection of online feedback, individual monitoring, and introducing corrections in educational and cognitive activities. The conditions imply the creation of a spiritual and moral atmosphere; the use of the basic principles of pedagogical interaction (dialogization, problematization, individualization, and conscious approach to learning); and

organization of a dialogue-based management of unsupervised activities" (Beloborodova, 2013). Due to the growing volume and importance of unsupervised learning activities of students, the problem of self-regulation and self-control of students in organizing this process and maintaining conditions for fostering educational independence of bachelors and undergraduates from university teachers gets more and more acute (Yakovleva, 2019).

Kozma Minin Nizhny Novgorod State Pedagogical University is providing professional training to future music teachers in the field of training 44.03.01 Pedagogical Education, Music Specialty. Since February 2018, due to the enactment of the Federal State Standard of Higher Education in the field of training 44.03.01 Pedagogical Education, approved by the Order of the Russian Federation Ministry of Education and Science on February 22, 2018, N 121, the content of professional educational program in the above field of study has been adjusted. All components of this educational program have been revised. The content of the subject modules has been brought into compliance with the Professional Standard "Teacher" (Pedagogical activities in the field of preschool, primary general, basic general, secondary general education) (educator, teacher). A new structure of the basic professional educational program includes both methodological and subject-specific modules.

- Federal State Standard of Higher Education in the field of training 44.03.01 Pedagogical Education, approved on 22.02.2018, N 121 (2018);
- Professional Standard 01.001 "Teacher" (Pedagogical activities in the field of preschool, primary general, basic general, secondary general education) (educator, teacher), approved on 18.10.2013, N 544n (2013) ;
- Academic curriculum in the field of training 44.03.01 Pedagogical Education, Music Specialty, approved by the by the meeting of the Academic Council of the Minsk University on 22.02.2019 N 6.

In the context of implementation of the basic professional educational program of higher education, psychological and pedagogical training modules as well as subject-specific modules have been developed. The subject-specific modules are intended to deliver training focused on the vocal and instrumental choral performance skills. Moreover, the design of educational program includes a separate module aimed at the development of information technology skills to be used in professional activities, named "Professional ICT Training of a Music Teacher". Within the above module, future music teacher will learn how to use various professional information solutions. Those include websites with theoretical music materials, audio records; music notation software of different type: both web and desktop applications. The purpose of this module is the development of information competence of a music teacher.

The unsupervised activities of a future music teacher may be organized as follows: the relevant professional information resources should be picked, and then specific tasks should be developed and selected which content should be directly related to the educational program profile.

Below we provide some examples of the developed tasks:

Task 1

1. Write music scores for the piano piece "Ancient French Song" by P.I. Tchaikovsky (1995) from the Children's Album cycle of pieces for piano using Sibelius scorewriter program according to the given example (fig. 2).

Figure 2



Source: P.I. Tchaikovsky, *Children's Album, Ancient French Song* (Tchaikovsky, 1995, p. 26)

2. Write scores and then transpose those in two flat and in two sharp keys of the first degree of relationship on the circle of fifth.

This task is intended to develop the skills of independent work with Sibelius scorewriter.

In addition, the open digital space is rich in information resources which may be accessed by any Internet user. For example, MELODUS tool. MELODUS is a simple online music notation tool. For its operation a browser with HTML5 support is needed (and these are almost all modern browsers). Any user with minimal or even no musical education now has the opportunity to try it as a melodic composer and create simple melodies. We believe that this tool can be used to organize unsupervised activities aimed at developing the scorewriting and transposition skills needed by future music teachers for their professional activities. This tool offers a possibility to choose the note duration, whole, half, quarter, etc., the keys and alterations, and the tempo. For those users whose level of training in musical art is not high, for example, amateur users, students of educational institutions, etc., the tool has a Theory section, using which you can check the correctness of the created musical material.

Task 2

1. Write scores with their further transposition using Melodus scorewriting tool (Fig. 3). We offer you to work with the piece of chamber-vocal music. "I'm Sad" romance by A.S. Dargomyzhsky (1947). Note material from the concertmaster's repertoire, which is appropriate for transposition into other tonalities.

Figure 3



Source: A.S. Dargomyzhsky, "I'm Sad" romance by (1947) (Dargomyzhsky, 1947, p. 257).

5 Conclusion

High demand for specialists in the Arts and Culture field gives rise to a need to train music teachers meeting the requirements of the modernity and mobility. The use of information systems for professional training of music teachers may become an efficient tool for managing and organizing future professional activities. In this respect, it is important to strengthen the professional training of future music teachers with regard to allocation of their intellectual resources by engaging in the most optimal unsupervised activities at the stage of university training. The provided arguments point to the need to revise and reconsider the usual forms of organization of students' unsupervised activities. Introduction of professional information systems into the unsupervised activities of future music teachers and training on the use of information resources in the field of musical art will allow students not only to work with open-access information tools, but also to immerse deeper in the musical context, as within the said activities the student will obtain the valuable practical experience of work with sheet music as well as sound material.

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