ICT in the Teacher Training System for Academic Vocals: Structured Mentoring

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Abstract: The subject of the research of this article is the system of advanced training of teachers in vocal of children’s art schools and children’s music schools, the evolution of approaches (from “learning management systems (LMS)” to “personal learning environments” (PLEs), including during the training and professional development of teacher’s academic vocals. The article explores the approaches and methods of professional development of teachers in vocal in the modern informational music-educational environment. On the basis of a comparative analysis of pedagogical practice, the conditions for the development of “personal learning environments (PLEs)” have been identified. The development of an advanced vocational education program for teachers on academic vocals is justified.

1. Introduction

Questions about the development of the concept and practice of structured mentoring were considered in the works of Russian and foreign scientists both in the context of consulting in education [1, 2], and in the context of the transition from the traditions of the “old school” system of teaching academic vocals [3].

Thus, Personal Learning Environments (PLE) is an innovative new development in musical educational practice through the introduction of information and communication technologies (ICT) and the ability to promote the creation of “universities without walls” that can meet the needs of the knowledge society, and this approach is effective in the conditions of advanced training of teachers on academic vocals [3].

2. Materials and Methods

The article examines some aspects of empirical research on the modification of the vocal teacher’s professional activities conducted on the basis of various educational organizations in Russia and abroad. The results of the experimental advanced training courses of the Gnesins Music School of the Russian State Academy of Music named after the Gnessins are given, the development of a vocational education program for teachers on vocal basis based on IEM RAE is justified.

Changes in the professional environment of future vocalists, modifying requirements for teacher training and the development of ICT competence of teachers and applicable for training and raising the qualifications of teachers for vocal “adult learners” [18], are considered in the works foreign researchers [28, 29, 19, 12]. “Online learning environment” (OLE) in the system of additional music education, in particular, when preparing a vocal teacher, requires adaptability [9] and the formation of “special set of teaching skills”, since the modern approach to teaching vocal integrates key features. “The master instructor” uses them in ensuring the quality of training [4] in the system of advanced training of teachers themselves in the context of informatization of education, including additional education [8, 9, 10].
“Experimental research often begins with the fact that we formulate [our] values and ask ourselves the question of whether we adhere to them” [22]. Some values that are important for the formation of the personality of a vocal teacher (and teachers who train teachers) are not always preserved during musical contacts, as a result of which we are confronted with “life contradictions” [30].

In recent years, the use of ICT in the professional activities of vocal teacher has been considered in various aspects by both Russian and foreign researchers.

Thus, in modern studies [13], devoted to the analysis of the concepts of immersive media reality in the context of the methodological support of teacher training in spatial interfaces and interactive 3D environment for immersive musical performances, immersive reproduction and spatial interfaces are considered as topics poorly studied in areas focused on developing creativity and enhancing emotional experience. A number of works [17, 13] are devoted to modifying ICT technologies, expanding the boundaries of creating musical works, as well as the experience of performing in digital format where the goal is to integrate sound and interactive 3D graphics that musicians, vocalists can work with and viewers can watch.

As for the modification of the educational process and its methodological support in the conditions of the development of ICT technologies, vocal teacher activities, the works devoted to the assessment of skill using the supporting vocal training system based on the visualization of the acoustic properties of the student’s singing voice [23] substantiate the development of a vocal support system, which is based on the visualization of the acoustic properties of the student’s singing voice, as well as methods for assessing the level of the student’s singing skill using this system. As a result of the study, the high convergence of the training results in both methods was revealed, and the differences between owning a singing voice of students who used the vocal support system based on the visualization of the acoustic properties of the trainee's vocal voice, and the students who listened to the performance by a live vocalist, were not found.

The study on the teaching of music teachers and non-formal education in the concept of the Freire model of the dialogical model [20] on the example of distance education programs (Brazil) [26] notes that the specifics of teaching consist of three areas that were emphasized during teacher training. Namely, they include the area of practical musical skill, the area of their authority and theoretical knowledge and the area of their relationship with the musical world of students. These areas were identified as a result of attempts to find a dialogical relationship between teachers and students. In the study, an attempt was made to improve practical work and bring it in line with the values that are necessary for the process of professional self-improvement. The informal learning model applicable to the vocal teacher’s vocational activity [21] motivates the methods of teaching music, vocal and the position that it proposes the teacher and student to play in [14, 31, 16]. In recent studies [26], the results of a pilot research project are presented, in which the Green model was integrated into a mixed model of distance education teacher training program in Brazil.

Personal Learning Environment (PLE) has become a promising new way of responding to the needs of the knowledge society and represents a significant change in understanding the role of ICT in education (see Adell & Castañeda, 2010). Many higher education institutions have implemented the institutional PLE (iPLE) in their programs (refer to Casquero, Portillo, Ovelar, Romo & Benito, 2010). The iPLE is a digital environment created by institutions that allow students to create and organize their own networks of learning resources, applications and tools in accordance with their interests and tasks, as well as communicate with people participating in specific learning events. These environments provide students with the opportunity to integrate work areas and individual and group training, which can be divided to a greater or lesser extent, and link learning acquired in formal or informal settings. From a constructivist and sociocultural point of view, learning is understood as a process of building knowledge, which is social and general.

As part of the implementation of the PLE concept, the author developed and tested the additional professional development program “Academic vocals and ICT in the modern musical and educational environment” for teachers of musical educational organizations of different levels (additional, vocational and higher education), methodologists and heads of relevant departments in the field of music, art, culture, and education. The program was tested on the basis of the Institute of Education Management of the Russian Academy of Education. In this program, the planned learning outcomes include developing the ICT competence of teachers on academic vocals (knowledge in the application of teaching methods and ICT tools, information educational resources in the vocalist’s professional activities); skills in collecting, analyzing, and adapting information related to academic vocals; networking skills between participants in the educational
process. In this program, the planned learning outcomes include: improving hearing skills and intonation; ideas about modern technologies of teaching academic vocals; expanding the possibilities of professional activity in music education, mastering, and professional testing of the technique and technology of vocal art education, developed by domestic and foreign masters of vocal art.

Thus, the analysis of the practice of ICT implementation in the musical and pedagogical process, including the formation of vocal skills (in the process of teaching vocals), made it possible to identify the main directions of the development of pedagogical technologies:

- Introducing electronic educational resources, allowing to provide free access to the database of vocal and educational environment, where any concept or term used in the context of the studied topic is associated with multimedia images (texts, pictures, sounds);
- Creating a Web-portfolio of students (work in the classroom, independent work, work in projects, at competitions);
- Using social media to enhance the interaction between the participants of the music-vocal educational environment by placing audio and video recordings with comments;
- Organizing international projects between students to create joint musical compositions in real time (intercontinental integration of musical cultures);
- Modification of students’ composers, arranging and sound engineering activities with the help of optimal software corresponding to pedagogical tasks [1, 2].

Analysis of the existing teaching practice in the process of experimental work revealed an insufficient amount of ICT use in the formation of vocal skills of students. The establishing experiment was conducted on the basis of advanced training courses of the Gnessin Music College of the Russian Academy of Music named after the Gnesins in 2014-2015. With the method of questioning and interviewing, readiness was revealed by vocal teachers to expand the use of ICT in the process of developing vocal skills of students, 237 people took part in the experiment [2].

Among the trainees of advanced training courses, a survey was conducted regarding the goals of using ICT in the process of developing singing skills (Fig. 1):

- For practicing skills between students – 15%;
- For collegial projects between teachers – 19%;
- Operational exchange of information – 24%;
- Structured storage of information, portfolio – 23%;
- Not currently used – 49%;
- Do not plan to apply – 25%.

![Goals of ICT application in the process of vocal skills formation](image)

**Fig. 1.** The results of a survey of students of advanced training courses on the purpose of using ICT in the process of developing vocal skills.
Further, the survey was conducted regarding the reasons hindering the introduction of ICT in the musical and pedagogical process by the teacher:

- Underestimation of the artistic possibilities of digital tools – 87%;
- There is no material and technical base for the introduction of technology – 64%;
- Negative attitude to the process of introducing ICT – 56%;
- Lack of trust from colleagues – 47%;
- No user skills – 35%;
- There is no understanding of the prospects for implementation – 36%.

![Diagram: The reasons restraining the introduction of ICT in the musical and pedagogical process by the teacher](image)

**Fig. 2.** The results of the survey of students of the advanced training system.

4. **Conclusion**

Analysis of the problem of continuity of the tradition in the process of vocal training allowed to consider it in the context of a factor constraining the introduction of ICT by the teacher in the process of formation of singing skills. The question arises of translating the “new” and “old school” conflict into a constructive dialogue, developed and supported by introducing into the educational process modern pedagogical technologies for designing a musical educational environment. Analysis of the existing teaching practice led to the conclusion that there is no contradiction in the “inheritance of the positive aspects of the traditions of various vocal schools in organizing the process of teaching the singer, mastering certain vocal-pedagogical principles of teachers of the past”, where new information and communication technologies contribute to the improvement of the modern system of the formation of singing skills and improving the quality of students’ performing skills.

**References**


