Multimedia technologies as a tool for teaching supervision over the students' skills (within the course on “music theory training”)

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Abstract. The article is devoted to finding the ways of exercising teaching supervision over the students' skills. The author sees the use of the multimedia technologies in the training process as the solution to this issue, which allow exercising teaching supervision in the best manner and assessing the establishment of the students' skills within the course on “Music Theory Training”. At the premises of the Mordovia State Pedagogical Institute named after M. E. Evseveva the work intended for the use of the multimedia technologies in the students' training process and finding the assessment tools for exercising teaching supervision over the skills is actively carried out. A supervisory assessment system, with has a holistic functional organization and combines the traditional and innovative methods of the skills supervision, has been developed at the university. As a result of the research it has been found out, that exercising teaching supervision using the multimedia technologies allows optimizing, adapting and personalizing the training process and improving the quality of the educational services.
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Introduction

The quality control of the education process is based on teaching supervision. The focus of the modern education on establishing the students' skills results in finding the modern tools for exercising teaching supervision. Hence, the need for developing the supervisory assessment tools for skills in several subjects occurs. One of the effective ways to solve this issue within the course on “Music Theory Training” could be the use of the multimedia technologies.

The supervision over the education activity in our country has the rich and varies teaching experience. Scientists have published a sufficient amount of works defining the functions of the knowledge assessment, the supervision methods, the types of knowledge recording (V. Zvonnikov, M. Chelyshkova [1], N. N. Samylkina [2], T. I. Shamova, S. N. Belova, I. V. Ilyin [3], etc.), including those using the information technologies (L.I. Doliner, Y. V. Kosyakin [4], A. A. Polozov et al.). There are researches in the field of implementing the innovation forms of supervision into the practice of the music theory training (M. S. Dyadchenko [5] et al.).

It should be noted, that teaching supervision is eclectic in nature at the present stage of the social development, and along with the traditional assessment tools for supervision both the point-rating system and the supervision using the information and Internet-technologies are used. All these forms could not be recognized as quite sufficient ones for defining the establishment of the students' skills and examining their successful learning of the education program which implements the skill approach. However, there is no uniform integrated system of the skills assessment. The Russian universities are given the task - of developing the assessment tools within each several subject which allow carrying out the integrated assessment of the students' skills.

The main part

The Federal State Educational Standard for Higher Vocational Education (hereinafter referred to as FSES) in the specialty # 050100 "Teacher Education" implemented by the order # 46 of the Ministry of Education and Science of the Russian Federation dated January 17, 2011, provides that a graduate should possess the general cultural and occupational skills. FSES poses the requirements for the results of learning the main bachelor's degree programs in education providing a list of the required skills. However, FSES leaves the field clear to select the subjects for establishing the set skills and gives the possibility to introduce the skills required for training the highly-qualified specialists in a particular field.

The course on “Music Theory Training” relates to the variable part of the professional training cycle of the main bachelor's degree programs in education. This course includes a group of modules: "Elements of Musical Language", "Special Music

Education", "Theoretical Basis for Classical Harmony", "Practical Harmony", "Analysis of Harmonic Polyphony", "Multi-voice and Contrast Polyphony", "Imitative Polyphony", "Fundamentals of Music Piece Analysis" "Musical forms of Song and Dance Genre Basis", "Multiple Forms of Music".

The study of these modules is aimed at the subject-oriented students' training, particularly at the extended and advanced study of the fundamentals of the music theory. Hence, we have defined the requirements for the level of the student's training at the end of studying the course on "Music Theory Training" and identified:

The general cultural skills (GCS):

– the knowledge of the thinking principles, the ability to generalize, analyse and acquire the information, to set the goal and to choose the ways of its achieving (GCS-1).

The occupational skills (MOS and OS):

– the awareness of the social significance of one's future occupation, the possession of motivation for carrying out the professional activity (MOS-1);

– the ability to use the learning environment features for forming the universal types of the training activity and ensuring the quality of the educational process (OS-5);

– the competence in the use of systematic theoretical and practical knowledge for identifying and solving the research tasks in the field of education (OS-11).

The special skills (SS):

– the command of the music theory knowledge system (SS-1);

– the competence in analysing music pieces of different forms, genres and styles (SS-2);

– the knowledge of fundamentals of the logical musical thinking (SS-3).

We have identified its constituent elements to see the result of the skill establishment more clear:

– *the motivation and value one,* which involves the need for accumulating the experience in the field of the musical culture; the awareness of the creative nature of the musical and teaching activity, its social significance, responsibility; establishing the relations between the training objective, outcomes and reason, that for which it is carried out;

– *the cognitive and intellectual one,* based on the extension of the information knowledge, skills and the opportunities to use it in the professional and teaching activity;

– *the information and activity one,* based on the competence in being familiar with the professional information sources (magazines, websites, education portals) and the occupational self-knowledge and self-development using the multimedia technologies.

Nowadays there is a considerable amount of works, which reveal the education potential of the multimedia technologies and touch upon the issues of its use (Neo Mai [6], Ken T. K. Neo [7], Kevin J. Graziano [8], G. Molnar [9], A. V. Osin, O. G. Smolyaninova, O. V. Shlykova et al.).

Although the use of the multimedia technologies is widely spread in education, the efficiency of its application as the supervisory tool is insufficiently developed. While integrated capabilities of representing any kind of information in a digital content and its interactive use open the unique opportunities for interpreting these technologies in the course on "Music Theory Training" as a supervisory assessment tool.

The well-developed supervisory assessment tools with the use of the multimedia technologies give a professor the possibility not only to objectively assess the level of the students' learning of the music theory knowledge system, the fundamentals of the musical thinking development and the competence in analysing music pieces of different forms, genres and styles, but also to see the need for developing the training process correction intended for the skill establishment.

Over the last years, at the Mordovia State Pedagogical Institute named after M. E. Evseveva the modern supervisory assessment system, with has a holistic functional organization combining the traditional and innovative supervision methods has been evaluated (T.I. Shukshina [10].) One of the organizational forms of the teaching supervision is carried out through a corporate information system INFO-University. This system represents the academic knowledge management and the organization of e-learning through the coordination of the students' independent work using the self-control, electronic teaching and supplementary materials (tests, training simulators, training tasks, materials for hands-on courses and seminars; tasks for the independent work, etc.).

The information system allows working with any kind of information, maintaining an electronic journal, putting students to passing a test and performing tasks with the access control, as well as monitoring the performance of the supervisory tasks. This form of work saves time of lectures and hands-on courses for carrying out a controlling slice. The electronic supervision allows making the individualized and differentiated approach, what is particularly important within the course on "Music Theory Training" as the student musicians have mainly the tiered pre-university training (training in the system of the further and vocational music education in different divisions of a children's music school, a culture college, a music school).

The teaching supervision system within the course on "Music Theory Training" includes the electronic assessment and on-going monitoring using the applied multimedia software along with examinations, pass/fail tests, recitation, written tests, abstracts, courseworks, project works.

The structure of organizing teaching supervision is a holistic system in providing the feedback within the training process, identifying the level of its results for compliance with the educational standards the procedure of checking the professor's and university's work, the management tool for the corrective actions. The structure of organizing teaching supervision includes: a purpose, a content, functions, supervision principles, supervision tools and methods. Selecting the supervision types, forms, methods and tools provides the systematic, complete, accurate and timely acquiring the information on the training process, and the compliance with the set goals that could be common or private.

At the university the teaching supervision is diversified. The supervision types could be divided into the following categories:

– a supervisory body (the Institute of Education Quality Monitoring, the Education Department, a professor, a student (a self-control, a mutual control));

– a supervision period (incoming, on-going, intermediate, final supervision);

– supervision forms (oral, written, theoretical, practical supervision, an examination, a pass/fail test, written tests, courseworks, a controlling slice, an assessment);

– supervision tools (using the training hardware and a computer);

– a number of the examined students (individual, frontal, group, individual and group supervision);

– using the didactic material (hand-outs, tests, exam papers, the applied multimedia software, etc.).

The applied multimedia software (hereinafter referred to as SW) - is the programs designed for a computer, which allow working with the multimedia information and intended to solve the specific tasks. While studying the course on "Music Theory Training" the following SW allows carrying out the ongoing monitoring of knowledge and controlling slices:

– music editors,

– simulation software;

– software for slide show creating and running;

– software for creating tests and assessing;

– sound editors.

The music editors Cakewalk Sonar, ACIDMusic Studio, Cubase, Sibelius, Finale, etc. are widely spread SW among the musicians. Thus, for example, the Sibelius and Finale software programs are used by us upon the ongoing monitoring as "music books" while studying the modules "Elements of Musical Language", "Theoretical Basis for Classical Harmony", "Practical Harmony", "Multi-voice and Contrast Polyphony", "Imitative Polyphony".

The advantage of using the music editors lies in the possibility to create music compositions, editing and reproducing the digital sound, in flexible changes and correction of audio materials. The features of these programs allow:

– building intervals, chords, sound and key harmonies;

– solving harmonic tasks;

– picking out an accompaniment;

– composing backgrounds or variations to a given melody;

– defining the basic techniques of a contrapuntal technique from different types of simulation to a complex counterpoint;

– composing a piece in a given form;

– performing creative tasks.

The music editors have a function of reproducing the sound of the musical language and music composition elements, what allows carrying out an acoustic analysis of the done practical work. This type of supervision is useful not only for on-line discussions and carrying out a collective examination of the students' proficiency, but also promotes the development of the musical thinking logic, accumulation of the musical experiences and carrying out the self-control.

The simulation software is of interest as the supervisory tool. Simulators allow monitoring the students' extracurricular independent work on learning the theoretical basis for music, the interval, chords, harmonies auditory monitoring. Thus, the EarMaster, School, Musical Examiner, Note Trainer simulation software, intended to auditory training and monitoring, is effective upon the students' self-control. The simulation software creates a file which represents the data on a number of the correct answers and the time spent for studying, what makes it possible to trace the process of the student's work. The professor's role in carrying out such supervision lies in the "alongside management".

The PowerPoint program functionally intended to the development and preparation of slide shows could be used for supervision within the course on "Music Theory Training". The program potential, which consists of representing any kind of information and interactivity, allows developing a

slide show with slides containing the supervisory tasks under one's own scenario. Such type of supervision is worthwhile to solidify the learned material at the end or in the beginning of a lecture, as a repetition of the previously learned one. Using hyperlinks while preparing slide shows allows exercising supervision over any module of the course.

Out of the many programs for creating tests and organizing computer-based testing we use the SunRav Test OfficePro program, which allows carrying out a remote test. The program features include the use of an image, a formula, a diagram, a table, an audio and video-file.

Using SW while studying the course on "Music Theory Training" allows checking not only the level of the occupational knowledge, but also the establishment of the skill elements.

Conclusion

This article presents and reveals the system of teaching supervision over the students' skills through the example of the music theory subjects using the multimedia technologies applied in the Mordovia State Pedagogical Institute. The work results have led us to the conclusion that exercising teaching supervision using the multimedia technologies allows assessing the level of the students' skill establishment more completely. Teaching supervision, performing the function of managing the education process, is one of the main elements of assessing the education quality. While carrying out the teaching supervision procedure the need for developing a necessary correction of the training process in order to achieve the high-quality training of students could be seen. Exercising teaching supervision using the multimedia technologies stimulates the learning motivation of students, helps to carry out the self-control during trainings, to identify and to fill in the gaps during the independent work.

Successful exercising the teaching supervision over the students' skills using the multimedia technologies includes the specially developed supervisory assessment tools and has a holistic functional organization combining the traditional and innovative supervision methods. The conducted study has shown how it is possible to extend and enrich the experience of using the multimedia technologies.

Teaching supervision over the students' skills using the multimedia technologies based on the applied multimedia software within the course on "Music Theory Training" has some advantages and allows:

– carrying out the individual and group assessment of the motivational and value, cognitive and intellectual, information and activity elements of skills;

– evaluating the efficiency of training with the minimum time and money outlays;

– exercising supervision over the distribution of the training material by the diagnostic modules and its interactions.

– using on-line the sound and music material during the supervision;

– managing the students' self-control during auditory monitoring;

– ensuring the protection of the teaching supervision outcomes in the students' portfolios and observing the training process dynamics.

The proposed system of teaching supervision has its own characteristic and specific features of application within the course on "Music Theory Training" which could be cited while studying the other courses.

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