

INNOVATION OF MOOC+SPOC ONLINE AND OFFLINE HYBRID TEACHING MODE BASED ON OBE CONCEPT (TAKING DIGITAL INTELLIGENCE MUSIC COURSE TEACHING AS AN EXAMPLE)

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Abstract. В данной работе рассматриваются онлайн-курсы, которые включают в себя множество новых ресурсов и новых методов обучения. Актуальность и масштабы применения передовых научных исследований и научных исследований заключаются в том, что они повышают уровень школьного опыта учащихся. На основании проведенного исследования гибридная модель образования с замкнутым контуром внешней схемы SPOC, основанная на онлайн-трансляции.

Keywords: MOOC, SPOC, OBE concept, music course teaching.

The topic of the research is relevant given the growing interest of scientists and artists towards exploration of opportunities implying technologies and arts fusion. Artificial Intelligence (AI) advancement increases its potential usage in a sphere of artistic creativity, including music creation. Several Russian and CIS researchers [1, 2, 3] studied various aspects of AI's ability to generate new musical content and prerequisites to do so.

These multiple studies compare music to mathematics based on definitions given by R. Descartes [4] and A. Losev [5]. Both are defined as a harmony, whose internal order and unity of its major constituent elements are externally expressed via a series of certain symbols. Subsequently, classical music might be considered as an audio manifestation of laws of measure, which have an ultimate concentration in arithmetic.

The tasks set by the author are:

1) to reveal some historical prerequisites that can be considered from the perspective of the distance learning method in music education in the middle of the XX century;

2) to study the conditions for the successful implementation of the described method;

3) to determine the further practical significance and expediency of using the

distance form as a teaching method in working with students – performers.

It should be noted that the main circumstance of using the distance learning method in teaching can be considered the rapid penetration of information technologies into the educational sphere.

Let's pay attention to the fact that the active use of technologies and experiments in the field of musical art began quite a long time ago, at the end of the 19th century, when the first attempts at sound recording were made. Their introduction into the process of vocational training in Russia begins in the middle of the twentieth century. Pavel Lobanov, an outstanding graduate of the Russian Academy of Sciences.

Gnesinykh, a student of V. Sofronitsky, is one of the first who managed to draw the attention of the musical educational environment to the possibilities of technological progress in the process of training and educating future professionals.

More than 30 educational records were released by Melodiya (with my participation as an editor and sound engineer, and in some cases – as an author). Among them, the documentary recordings of the lessons of G. Neuhaus and V. Sofronitsky (recorded by me in 1954, 1955 and 1962), as well as the lessons of M. Grinberg, A. Ioheles,

E. Gnesina, T. Dokshitsera. On these recordings, prominent performers and teachers perform and comment on specific compositions and the subtleties of their performance. At the congress of the ISME (International Society for Musical Education) in Budapest in 1964, these records-manuals were noted as the first in the world" [1] Such an idea of creating voiced musical manuals and using recordings of lessons to improve the professional level of students found sufficient response from the teachers themselves, and the recordings were in great demand among the musical community of that time.

This naturally led to the activation of musical educational activities, provided an opportunity for everyone to indirectly receive qualified methodological "help" from leading specialists of that time.

Not to mention the fact that such manuals are of considerable historical value, preserving for future generations the pedagogical experience of great performers of the past. Note that the voiced musical aids proposed by P. Lobanov in the middle of the twentieth century, continue to exist in the system of modern music education as a methodological support for the professional training of students.

The student does not always have sufficient listening skills, attention to detail, sensitivity to sufficiently complete the tasks assigned to us without the help of a teacher. Moreover, in such an off-line training format, feedback from the teacher will also be carried out through recording (video or audio). It is desirable that the quality of this recording was made at a good level and allowed the teacher to hear all the details of the performance in as much detail as possible for their further correction.

Unfortunately, in our reality, when the quality of Internet communication is still not stable enough, when not every teacher and student has the appropriate equipment for recording and reproducing performance, and "excessive personal and in-class time costs" that are required for off-line classes are unlikely to be compensated by stable performance growth of the student.

Materials and Methods

For reaching the goal, next tasks were achieved:

1) Describe the ultimate goal of learning and teaching is to improve students' ability. To achieve this goal, a hybrid closed-loop teaching mode is established. The mode includes high-quality resources, reasonable teaching methods, rich feedback data, and dynamic adjustment strategy. Through practice, this mode is beneficial to improve students' self-study ability, and it also brings convenience for teachers to analyze and adjust teaching methods.

2) To define online resources as the foundation of hybrid closed-loop teaching mode. Besides recording videos and making courseware by teachers themselves, the other way is to lead into other excellent online courses to meet the needs of student resource selection. Three excellent courses are introduced in the analog circuit course.

3) Discuss teaching methods which are the key of hybrid closed-loop teaching mode. Bloom's education goal classification in analog circuit courses is studied. Corresponding to the cognitive domain, affective domain and psychomotor domain of the Blume classification model, the requirements of each chapter of the analog circuit course are designed.

4) Understand that each course is a whole, and it is an important link to use the periodic summary to run through the knowledge points in the learning process. PBL is a good tool for teaching summary. Students work in groups to complete a project. After group discussion, report writing and class defense, PBL activities cultivate students' ability of summary, expression and cooperation.

The research results show that the live broadcast SPOC mode is suitable for analog circuit learning and teaching, and the test and homework results are better than the previous online and offline mixed teaching. With the continuous improvement of network speed, online teaching will develop faster. More courses will join the online SPOC in the future. This teaching mode is bound to be applied in digital circuit, signal and system, digital signal processing and other courses, and play a greater role.

Results

The global market of music creation software is on a growth trend, supposedly to hit \$6,26 billion by the end of 2022 [6]. The key factor stimulating industry growth is an increasing demand for digital audio content, which is becoming even more popular due to the recent boom of streaming services. It results in a growing number of performers and producers generating musical content, positively impacting music creation software development.

AI algorithms are also used to identify musical tastes and provide personalized settings and recommendations to users of streaming services. Active investments into AI technology in general resulted in explosive activity focused on music creation re-shaping the musical content development process. Both show business and music markets undergo an accelerated transformation, e.g., in China and Korea virtual performers run concerts and shows on the regular basis for millions of fans. This trend also gradually penetrates more traditional European markets.

- it helps musicians (composers, arrangers, producers) in the process of music creation in composing, arrangement, orchestration;

- it enables people without musical education or an ear for music to create their own musical content based on specific inputs (e.g., style, pace, transitions, mood, etc.) provided by users to the algorithm;

- it can act independently, creating its own original pieces of music, which might be treated as objects of art (in case humans decide to consider them as having such a value).

All these creative directions have a great commercial potential in view of the increasing demand for musical content boosted by digitalization, streaming services development, and trends for personalization.

Discussion

Taking the results of our experiment under consideration, we can conclude that to conduct lessons remotely, not to see students, not to be able to explain personally and help at the time of the problem - a few years ago, teachers could not even imagine such situations in their work. But the pandemic has made unexpected adjustments and forced

everyone to urgently master digital tools and new pedagogical approaches and techniques.

Forced distance learning has become a challenge for all participants of the educational process: teachers, students and parents. It turned out to be quite difficult to organize high-quality training using digital technologies, inspire and motivate students, cope with them, and give an idea of technical problems. But we are no exception – no state, no educational system in the world was ready for this.

Distance learning is an individualized process of acquiring knowledge, skills, and methods of human cognitive activity, which occurs mainly in the indirect interaction of remote participants in the educational process in a specialized environment operating on the basis of modern psychological, pedagogical and information and communication technologies.

The distance learning form provides Internet access, technical support (computer, tablet, smartphone, etc.) for all participants of the educational process, as well as the fact that teachers have distance learning technologies. There is no doubt that we will all need the experience we gained during the pandemic, because quarantines due to outbreaks of seasonal flu occur every year. In addition, the world is becoming more and more mobile, education is becoming more individualized and flexible; consequently, every day there are new and new reasons for some children to study remotely for a certain time.

The most important mission of music education is to discover, nurture and develop the ability of every child. Therefore, the training should take place under any conditions.

Conclusion

Summing up, we came to the conclusion that by limiting the admission conditions and student scale of the course, SPOC can customize the course for these specially selected students, provide them with differentiated and stronger professional support, improve the students' complete experience of the course, avoid the high dropout rate and low completion rate of

MOOC, and make it easier to obtain the certificate.

The SPOC experiment further shows that compared with the traditional classroom, the MOOC video used by SPOC can attract students to prepare carefully and stimulate their participation, especially for those students with insufficient learning motivation. Compared with pure MOOC, SPOC makes

online learning beyond the stage of copying classroom courses, and produces more effective learning effect.

SPOC model makes full use of the important characteristics of MOOC, including obtaining high-quality course materials and quickly feedback to students through automatic scoring, so as to maximize the effectiveness of scarce resources.

References

1. Pavlov, S.A. "Nejroseti i iskusstvenny intellekt v muzyke." In Studencheskaja nauchnaja vesna, 2021. – Pp. 558-559.
2. Sushkevich, N.S. Jeksperimental'naja muzyka i iskusstvennyj intellect // In Muzykal'noe obrazovanie v XXI veke. Prepodavanie v oblasti jelektronnogo muzykal'nogo tvorchestva. – 2018. – Pp. 20-23.
3. Popova, A.V., Gorokhova, S.S., Aznagulova, G.M. and Abramova, M.G. K voprosu ob opredelenii roli iskusstvennogo intellekta v muzyke. Problemy muzykal'noj nauki/Music Scholarship. – 2020. – №2. – Pp.7-17
4. Zhenghao, C., Alcorn, B., Christensen, G., Eriksson, N., Koller, D., & Emanuel, E. Who's Benefiting from MOOCs, and Why. Harvard Business Review, 2015.
5. Clow, D. MOOCs and the funnel of participation // In Proceedings of the Third International Conference on Learning Analytics and Knowledge. – 2013. – Pp. 185-189.
6. Schmidt, F. L., & Hunter, J. E. (2014). Methods of meta- analysis: Correcting error and bias in research findings. Sage publications.

ИННОВАЦИЯ ГИБРИДНОГО РЕЖИМА ОБУЧЕНИЯ MOOC+ SPOC ONLINE И OFFLINE, ОСНОВАННОГО НА КОНЦЕПЦИИ OBE (НА ПРИМЕРЕ ПРИМЕРА ПРЕПОДАВАНИЕ МУЗЫКАЛЬНОГО КУРСА DIGITAL INTELLIGENCE)

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Аннотация. В данной работе рассмотрены онлайн-курсы, которые включают в себя множество новых ресурсов и новых методов обучения. Актуальность и важность применения передовых учебных ресурсов и образовательных концепций заключается в том, что они могут улучшить учебный опыт учащихся. На основании проведенного исследования предлагается гибридная модель обучения с замкнутым контуром аналоговой схемы SPOC, основанная на онлайн-трансляции.

Ключевые слова: MOOC, SPOC, концепция OBE, преподавание музыкального курса.