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An Integration Model of Professional Training of a Music Art Teacher by Means of Innovative Technologies

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Abstract

The results of the research conducted showed the integrative model formation of music art teacher's professional training by means of innovation technologies is a complex process due to the abundance of variables that should be taken into account both in the curriculum and at the individual level. It has been found that the application of the integrative model benefits both students and teachers in the following way: establishing a reliable two-way relationship between a teacher and a student; developing practical skills as future music art teachers in the integration of innovative pedagogical technologies; developing the ability to apply them in music and pedagogical activities with students; encouraging active and purposeful intellectual and creative activity with the help of a computer; improving students' training forasmuch as the curriculum integrates different topics into a single lecture in which the teacher observes how students actually learn; enhancing engagement as integrated thematic blocks make teaching and learning more interesting for teachers and students; providing opportunities for self-expression as students have ample opportunities to demonstrate their potential as future music art teachers.

Key words: *innovation technologies; integrative model; music art; professional training; teacher.*

Introduction

One of the most important challenges of modern educational policy worldwide is to improve the quality of art education with the use of innovative learning technologies.

Addressing this issue becomes particularly important in the context of the coronavirus pandemic, forasmuch as teachers' educational functions should be performed with the active use of advanced education and art technologies, including remote ones. Increased requirements for the education level and quality encourage scientists to find new ways to improve the teaching process (Iryhina et al., 2020). From this perspective, the issue of improving the technological culture level of future music art teachers in the process of vocal training is of particular importance, which, in turn, involves mastering innovative vocal and pedagogical technologies, singing technologies in the context of studying world vocals and gaining pedagogical experience in higher music and music- pedagogy education (Ovcharenko et al., 2020).

The 21st century is connected with the active development of computer technology, which can significantly expand the ways of obtaining and processing information. The high-tech information education environment necessitates a search for new approaches and fundamentally new systems of education at higher education institutions due to the digital age development (Voronov et al., 2013). Innovative music pedagogy at the present stage is connected with the use of music computer technologies, which are effective innovative means of improving the quality of teaching music art at all levels of the educational process (Gorbunova & Govorova, 2018).

Professional training of future music art teachers is the leading strategic challenge of music and pedagogy education. This complex multi-level process is aimed at the formation of students' personal music and pedagogy culture, a set of knowledge, skills and abilities in the field of music art and methods of teaching it, the development of music, creative and pedagogy skills (Lobova et al., 2020).

The research objectives of the study are as follows:

1. To analyze the structural components of the formed integrative model of music art teacher's professional training.
2. To analyze the processes of creating an effective thematic unit (topic) by the teacher and the implementation of an integrative model for training music art teachers by means of innovative technologies.
3. To develop criteria for assessing the social and emotional competence of music art teachers in order to measure the experimental study's results regarding the implementation of an integrative model of music art teacher's professional training.
4. To establish the features of implementation and the benefits of using the integrative model for the music art teacher's professional training by means of innovative technologies.
5. To establish an assessment of the effectiveness of the proposed integrative model of the music art teacher's professional training by means of innovative technologies.
6. To identify the key skills that music art teachers will acquire when applying the integrative model in the educational process.

Literature review

In pedagogical theory, investigating the essence of music art teachers' professional training causes considerable interest of scientists in view of the fact that it is connected

with their methodological competence and culture. Methodological competence of the teacher is defined as the formation of readiness and ability to conduct studies (Nikonova, 2010); general training and ability of the individual to perform tasks and responsibilities for obtaining the appropriate education level (Smirnova, 2008); forming the methodological knowledge system of theoretical and practical skills in the learning process, which determine the ability of students to conduct research and admnistrative and practical pedagogical activities (Wegner, 2007).

In contemporary scientific papers on art education, the music art teachers' professional training, based on mastering the methodology of music and pedagogy education, is investigated within the scope of a competency approach (Oleksiuk, 2014). The issue of the music art teacher's professional training cannot be discovered without solving the question of the organization of his methodological culture, which researchers consider as a complex multilevel structure. It should be mentioned that this structure includes special subject-based, general scientific and philosophical knowledge, special learning aptitudes and skills that form the ability to identify and create universal strategic forms of teaching (Ovcharenko et al., 2019); culture of thinking, specific to the particular field of education, based on methodological knowledge, skills, ability to reflect, scientific substantiation, critical reflection and creative application of certain concepts, forms and methods of cognition, management and design of pedagogical theory and practice (Lavrentieva, 2016); holistic formation that helps transform methodological experience into the achievements of future specialists, a factor in the development of their personality, creative thinking and the development of a scientific worldview (Wegner, 2007). In the scientific works of researchers in the field of art education, the methodological culture of a music teacher is an integrative quality of personality, which implies interest in the methodology of music pedagogy, understanding its importance; acquisition of professionally oriented methodological knowledge; the ability to think systematically, independently compare and contrast different points of view, to express one's position, scientifically substantiate and professionally defend it in the field of pedagogy of music education (Rastrigina, 2016).

The musical art teacher's professional training provides the development of skills and knowledge of the basics of music art theory. Teachers' training and the study materials on how to teach music competences ensure changes in the technology of the educational process (Julia et al., 2020). Innovation-based plans and artistic and pedagogical technologies keep music education relevant and competitive (Henry, 2001), and national professional development programs can influence the effectiveness of music teaching (Kushnir et al., 2021). Professional training of future music art teachers focuses on two most important factors, namely: performing (vocal and instrumental) and methodological, the choice of which explains the fact that they are responsible for the diversified development of the student as a musician capable of independent musical performances and as a teacher capable of teaching music art (Lobova et al., 2020).

In our research, we rely on the definition of (Provorova, 2018)., who interprets the phenomenon of "professional training of a musical art teacher" as a process of

musical and pedagogical training aimed at mastering methodological knowledge, experience, practical skills in the field of musical education, resulting in methodological readiness. The professional development of a music art teacher determines the level of music and aesthetic work, the ability to establish a music culture at music lessons, to address the concerns of music education at educational institutions. A music art teacher possesses unique competences, including music and pedagogy technologies of teaching, education and music and aesthetic personality development, methods of organizing music activities and methods of music education. The basic skills of a music art teacher are the design and modelling of the teaching process, the practical application of various types of teaching activities and techniques for organizing music activities, lesson planning, various forms of music educational work, control and analysis of students' academic progress (Henry, 2001). The professional training of a music art teacher positively influences on the development of professional personality (Ballantyne et al., 2012).

According to current pedagogical practice, modern innovative teaching processes are developed in three basic directions, namely: changing the activities' system of the subject of learning (Lau & Grieshaber, 2018), functions, and hierarchical structure in the process of forming a personal working style of the future teacher (Osadchuk, 2018). From this perspective, the issue of future music art teachers' professional training and their readiness for innovative activities is extremely important (Chase & Hatschek, 2010; Ermekbaev, 2019). The music art teacher's instrument and performing training is of particular importance for his successful professional activity (Aróstegui & Kyakuwa, 2021). The modernization process is driven by external (motor skills, musical language, emotions, etc.) and internal features in the professional consciousness formation (memory, thinking, etc.) as well professional worldview development. Changing the components of the subject's activity in the cognitive sphere is manifested by an increase in the awareness of the object, in the emotional interest in interaction with it, in the practical awareness of the real possibilities of changing the object (Pankiv, 2017).

Scholars consider technological culture to be an important indicator of a teacher's professional culture, which, according to the viewpoint of Piekhota (2010), characterizes his creative professional activity, namely: a set of technological knowledge and skills ensuring teachers' activities and providing appropriate skills for the application of pedagogical technologies. Scientists outline various effective technologies of teachers' training, as follows: pedagogical technologies based on activation, intensification, effective learning management (Angelo et al., 2021), integrative technologies of adult training (Karlsen & Nielsen, 2021; Sysoyeva, 2011), pedagogical technologies in the process of developing the specialist's professional and personal qualities (Yerastova-Mykhalus, 2016).

Modern tendencies in artistic and pedagogical thought intensively represent scientific knowledge on the effective formation of the teacher's culture as the one, based on mastering innovation learning technologies, namely: artistic and pedagogical

technologies for preparing students for the system of art education (Padalka, 2010); music and pedagogical technologies of formation of the future teacher's music culture (Cherkasov, 2014). Naturally, scientists consider the technology of teaching singing as an effective means of future music teachers' professional development, which includes the following: the technology of teaching singing in the language mode, the technology of teaching in different styles of singing (Akbarova et al., 2018), technology of teaching singing using the algorithm of voice training, technology of students' vocal training in cross style (Semina & Semina, 2015), technology of students' vocal and methodical training, computer technologies of distance vocal training (Ovcharenko, 2020), voice development technology based on phonopedic technique-based exercises (Yemelyanov, 2010), technology of rehabilitation and restoration of speech and singing voice and others (Ovcharenko et al., 2020).

Digital and musical computer technologies are becoming an indispensable tool in the learning process. Their application in high art music culture is a unique technology for the implementation of an inclusive pedagogical process forasmuch as musical computer technology opens up new creative perspectives for music art teachers (Gorbunova & Govorova, 2018).

Integrative model formation of the music art teacher's professional training by means of innovative technologies is a purposeful educational model supporting students while working on the development of the ability to learn independently, using different thinking skills (Khan & Law, 2015; Cahill et al., 2019). The successful model implementation leads to the fact that students process information and ideas from a great amount of materials into new ideas and concept (Rajajeyakumar et al., 2015; Singh & Hardaker, 2014). In this process, students develop their ability to think, analyse, and draw conclusions on their own. The model supports the students' training from all subject areas, as well as gives them the opportunity to become independent (Canhoto & Murphy, 2016). The integrative model provides a practical structure for the educational process of students studying organized knowledge objects; in its content, it consists of a combination of facts, concepts, generalizations, and their interrelationships (The Integrative Model, 2013).

Thus, the issue of forming an integrative model of music art teachers' professional training by means of innovation technologies, examining obstacles and prospects of its application is not fully reflected in scientific publications in the form of theoretical studies and practical investigations. Therefore, the issue of promoting the implementation of an integrative model of music art teachers' professional training by means of innovation technologies in educational institutions remains relevant and open for further investigations.

The purpose of the research is to determine the effectiveness of the established model of the musical art teacher's professional training by means of innovativ technologies based on a survey of students, in order to reveal the benefits of using the integrative model in educational institutions.

The realization of the purpose of this study involves the use of qualitative research methods.

Methodology

The implementation of the present research involves the use of qualitative methods as follows:

– systematization of the basic features of creating and implementing an integrative model for music art teachers' professional training by means of innovative technologies;

– system and logical analysis, method of synthesis of information about key benefits in the process of music art teachers' training on the basis of integrative model;

– generalization of the latest scientific publications related to the development of criteria for assessing the students' social and emotional competence in order to measure the results of experimental research on the implementation of an integrative model of music art teachers' professional training;

– method of comparison to distinguish between global and basic specific skills and competences that will be acquired by music art teachers as a result of training based on the application of an integrative model.

To determine the individual features and effectiveness of the integrative model of music art teachers' professional training by means of innovative technologies, descriptive statistics was carried out, the data obtained from a survey using MS Forms Pro. The online survey used in this study proved to be an extremely reliable and convenient data collection tool. It provided a quick and efficient way to obtain feedback from 3,100 students between 20 February and 30 May 2021. This survey has been successfully used for similar studies, which confirms its reliability and efficiency in use. These participants answered questions about their learning experience, motivation, expectations, and general satisfaction from the application of an integrative model of the music art teacher's professional training by means of innovative technologies. The following research questions were considered in this survey: 1. What is the students' perception of the integrative model of music art teachers' professional training by means of innovative technologies? (This question aims to understand how students perceive the integrative model of professional development and their perceptions of overall satisfaction, engagement, and effectiveness of the model.). 2. What is the students' perception of the ability to absorb information in the context of the application of an integrative model of music art teachers' professional training by means of innovative technologies? (The focus of the question is the ability of students to absorb information in the context of the integrative model and whether this model is favourable for learning.). 3. Are there any shortcomings in the integrative model of the music art teachers' professional training by means of innovative technologies? (This question aims to identify any weaknesses or limitations in the integrative model. Feedback from students about the shortcomings can help educators to refine and improve the model to achieve better results.). 4. Is the integrative model of the music art teachers'

professional training by means of innovative technologies better than other models of training applied in the educational process? (By comparing the integrative model to other learning models, this question seeks to determine its comparative effectiveness. Answers may provide insight into whether students perceive the integrative model as superior to traditional or alternative approaches and why.).

Results

An integrative model of the music art teachers' professional training is designed to develop the personality and focuses on the interconnection of all curriculum areas, helping to master the basic learning tools. The structural components of the created integrative model of the music art teachers' professional training are depicted in Figure 1. Integrated teaching and learning processes allow students to acquire and use basic skills in all content areas as well as form a positive attitude to further successful learning.

When implementing an integrative model of the music art teachers' professional training at the initial stage, an orientation program is proposed to increase their awareness of reflective thinking and develop an understanding of reflective learning through an integrated learning model. After conducting the lecture, the student -

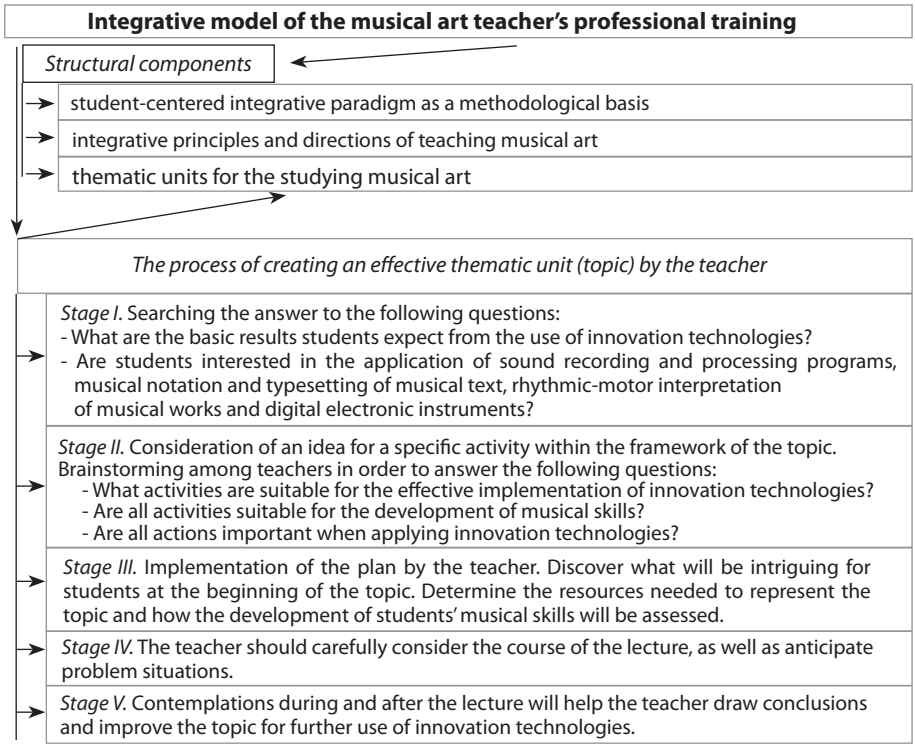

Figure 1. Integrative model of the music art teacher's professional training by means of innovative technologies
Source: Compiled by the authors based on official data of Kumari, (2014)

future teacher will be given some time for contemplation and elaboration, which can be specifically directed at self-fulfilment and personal development of a future teacher; consequently, they will form their own teaching style, such as providing a favourable classroom climate, managing students' behaviour in the classroom and ensuring interaction in the classroom.

After the teacher's self-reflection, students discuss the lecture, which has been based on the use of innovative technologies in an integrative model, and constructive feedback is provided in accordance with the observation. The joint study concludes with a "SWOT analysis" including the identification of strengths and weaknesses and precautionary measures to minimize threats. The teacher prepared an action plan for future lectures and practical classes based on a critical reflection of the integrative model of previous lectures.

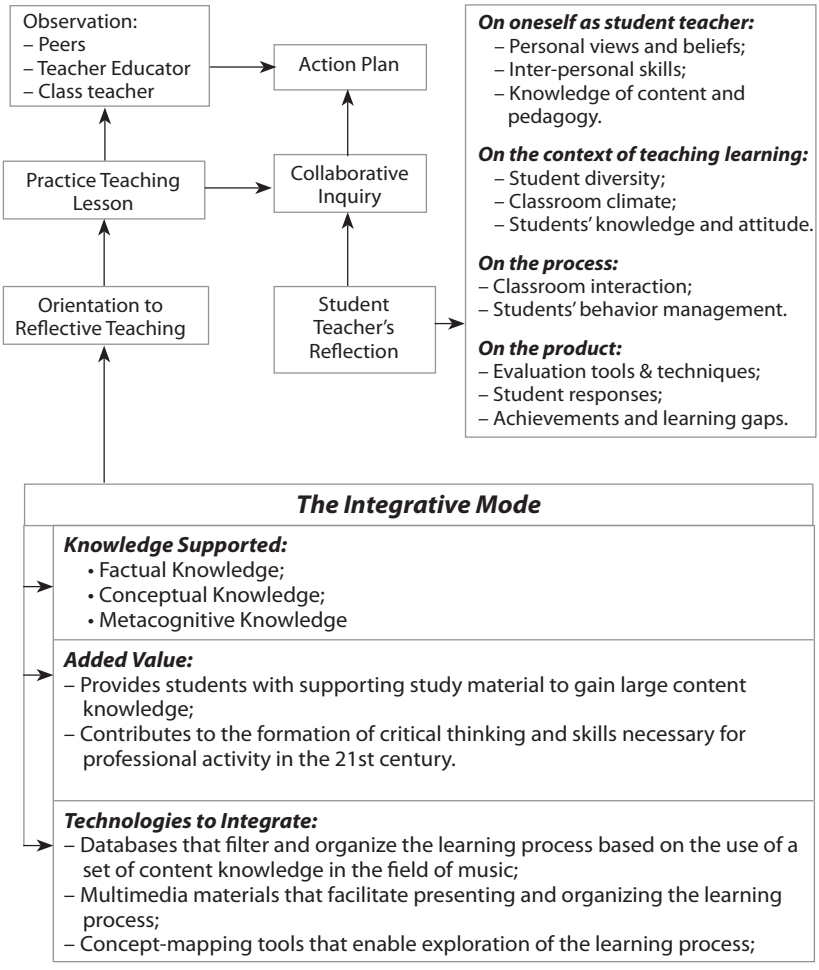

Figure 2. The integrative model
Source: Compiled by the authors based on official data from The Integrative Model, (2013), Kumari, (2014).

Implementing an integrative model of music art teachers' professional training *(see Figure 2)* requires students (1) to conduct a preliminary study of the topic, (2); to develop a basic understanding of the information contained in it (3); to understand how all the "parts" of the topic are correlated with each other and (if possible) with other previously studied thematic objects, and (4) to consider the links with the existing mental scheme *(see Figure 3)*.

Stages of the integrative model
Description, comparison and search of templates
The teacher asks students to describe, compare and find patterns in the research topic. Students analyze the content, describing, comparing and looking for patterns in the research topic. Students or teachers fill in information into graphic organizers developed by the teacher or students, or jointly developed by the teacher and students.
Examples: 1. The teacher sets a problem for the development of students' auditory thinking and suggests the use of music computer programs: MIDI constructor "Techno Maker", "Magix Music Maker", audio constructor "Dance eJaj", "Music shake". These programs contain templates that allow students creating their own music. 2. The teacher forms a list of songs for analysis that will be included in the repertoire of a vocal or choral group, changes the tone of a piece of music, records students' vocal sounds, creates video files for educational
Explanation of similarities and differences
The teacher asks students to explain the similarities and differences in the research topic and students justify their ideas using the data of a graphic organizer.
Example: 1. As a result of the created video files, students have an opportunity to analyze the data, to receive pieces of advice from skilled musical art teachers, to get methodical knowledge.
Hypothesis under different conditions
Students, based on different conditions, form hypotheses of possible results related to the research topic
Example: 1. When watching video lectures with subtitles, discussing the problems of musical art teachers' innovation activities, search for solutions to problem situations and musical art ICT support in order to ensure effective training of a professional
Generalizations for the formation of the interrelationship of musical art with innovation technologies
The teacher asks students to summarize the research topic with conclusions. Students form an understanding to demonstrate their vision of the broad interrelationship between the research topic of musical art and innovation technologies.
Examples: 1. As a result of investigating music art and innovative technologies, students form and conduct educational and methodical developments which will be tested by pupils in practice. 2. At the end of each video lecture, each student should take a test, the results of which indicate the level of acquisition of knowledge and practical skills.

Figure 3. Stages of the integrative model
Source: Compiled by the authors based on official data from The Integrative Model, (2013), Bondarenko, (2020)

To assess the effectiveness of the proposed integrative model of music art teachers' professional training by means of innovative technologies in 2021, the students of the following higher educational institutions were surveyed, namely: New England Conservatory of Music, Curtis Institute of Music, Royal Academy of Music, Royal College of Music and Kyiv National Ivan Karpenko-Kary Theatre, Cinema and Television University (Ukraine). Most of the students have noted that the integrative model has a positive effect on the provision of music art teachers' professional training by means of innovative technologies (47-5%); another part believes that the integrative model is better than other models applied in the teaching process (44-3%); however, a smaller number of students (6%) were not sure about the quality of the integrative model, and the rest of the students (2-2%) noted that the integrative model has certain shortcomings *(see Figure 4.)*.

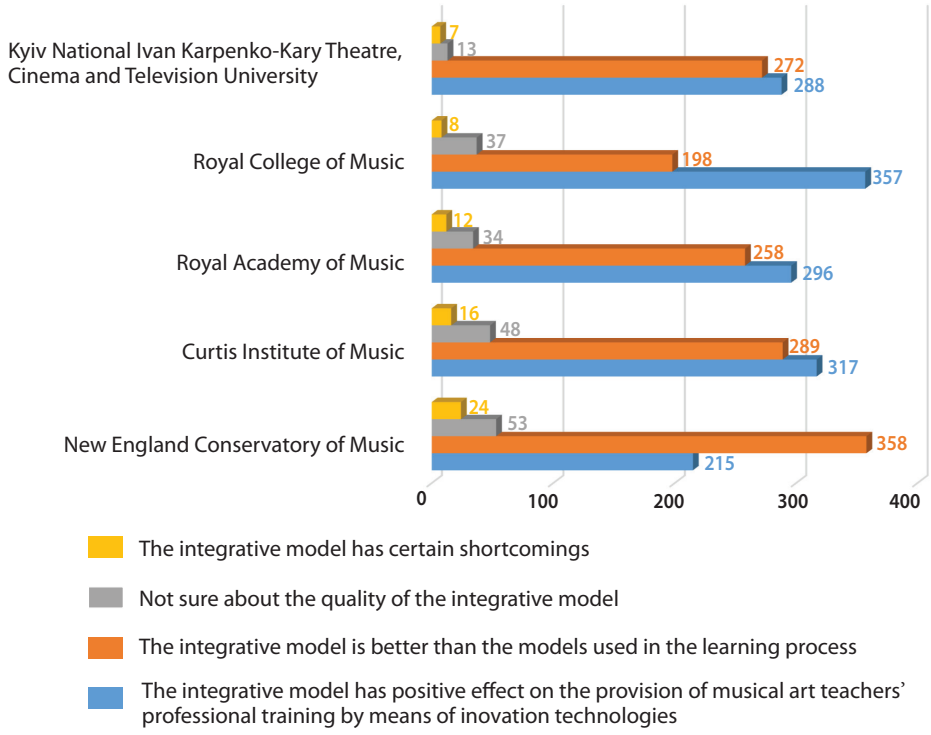

Figure 4. Evaluation of the effectiveness of the proposed integrative model of music art teachers' professional training by means of innovation technologies
Source: Compiled by the authors based on official data of The Kyiv State, (2021), McIntyre, (2020)

Thus, the purpose of applying the proposed integrative model of music art teachers' professional training by means of innovative technologies lies in revealing mastering and understanding of the research topic by the students. Based on conclusions obtained, it should be mentioned that students demonstrated тfull understanding of the research topic at higher levels of cognitive processes. When students can

substantiate a conclusion, they are able to demonstrate their understanding not only at the factual level but also on a conceptual level. In order to measure the results of experimental research on the implementation of an integrative model of music art teachers' professional training, criteria for assessing the students' social and emotional competence have been developed *(see Figure 5):*

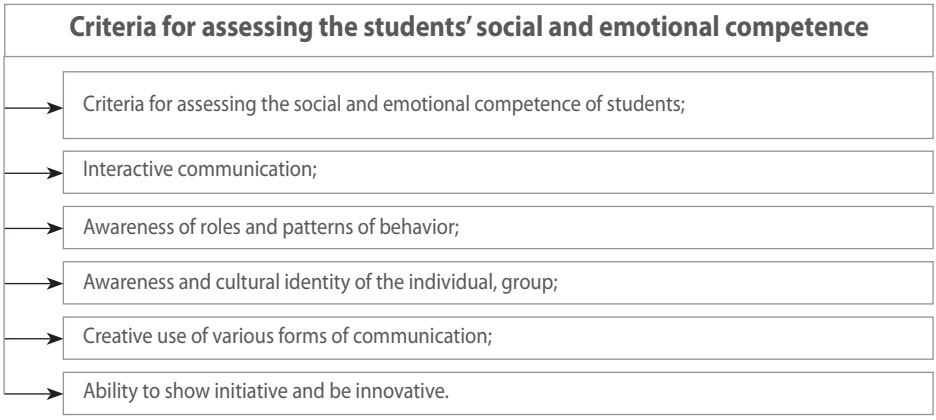

Figure 5. Criteria for assessing the social and emotional competence of students
Source: Compiled by the authors based on official data by Davidova, (2020).

The transition to an teaching process based on the application of an integrative model of music art teachers' professional training benefits both students and teachers (see Figure 6).

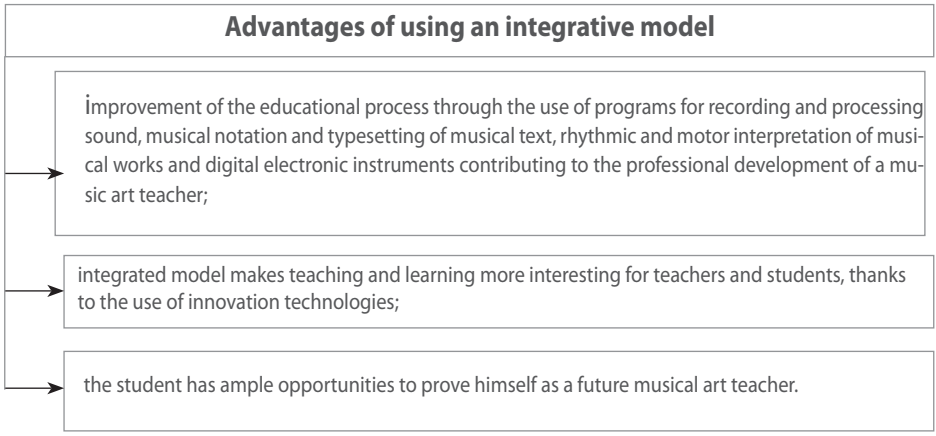

Figure 6. Advantages of using an integrative model
Source: Compiled by the authors.

The results of the musicart teacher's professional training based on an integrative model include global skills and competences forasmuch as they help provide knowledge, skills, understanding and contextualization for professional and personal life during and after graduation form higher educational institution. The second area of results

concerns knowledge related to core professional competences - the information that has been identified as the basis for knowledge and skills that are considered useful for the future career of a musical art teacher *(see Table 1)*.

Table 1

The results of professional training of music art teachers

Mastering the programs of sound recording and processing, music typing and typesetting of musical text, rhythmic-motor interpretation of musical works and digital electronic instruments, MIDI "Techno Maker", "Magix Music Maker", audio constructor "Dance eJaj", "Music shake", "Karaoke GALAXY", "Kar Maker", "Vocal Jam".	
Ability to apply the acquired practical knowledge in music teaching.	
Gaining skills of mastering performance skills.	
Ability to freely analyse musical works using innovative technologies.	
Ability to use computer and innovative technologies, development of practical skills of future musical art teachers in the development of innovation pedagogical technologies, development of skills to apply them in musical and pedagogical activities with students, encouragement of active and purposeful intellectual and creative activities with the help of computers.	
The results of professional training of music art teachers	
Global	Basic specific
Think, read, write, and effectively support the communication process	Understanding the basics of the structure of teaching musical art based on the use of innovation technologies
Get access, analyse, evaluate, synthesize, and represent information	Understanding the basics of modern music development and innovative technologies
Work with challenges alone or in a team	Possession of current software for the implementation of the educational process

Source: Compiled by the authors.

Discussion

The effectiveness of the integrated music art teacher`s professional training under pandemic conditions has decreased due to the transition to a more independent practice of teaching students; therefore, it is advisable to implement an integrative model of a music art teacher's professional training by means of innovation technologies (Canhoto & Murphy, 2016). This practice is widespread in Hong Kong schools, where teachers use creative integrative models in music education and teachers have the right to use the principle of flexibility and independence in the educational process (Lau &Grieshaber, 2018).

Integrative models based on artistic and pedagogical technologies of music art teachers' professional training are poorly integrated into the teaching practice at the university; consequently, they are less used in the teaching process. The frequency of using artistic and integrative means of innovation in art and pedagogical technologies is decreasing due to the prevalence of independent work of music art teachers. In particular, the use of such teaching aids as role-playing games, brainstorming, and

work in pairs, in small groups is limited. However, interactive technologies, such as discussion and working in small groups predominate. Integrative models based on art and pedagogical technologies include technology for modelling the situation.

Akbarova, Dyganova, Shirieva, Adamyan (2018) argue that "future music art teachers should be equipped with innovative technologies of scientific creativity based on independent research activities" (p. 138), where this process can be implemented by providing students with access to innovative technologies for independent development of vocal and choral compositions. A professional music art teacher is a qualified musician with professional pedagogical skills (Ballantyne et al., 2012). In order to ensure professional development, it is necessary to link more theoretical pedagogical courses with disciplines for the development of musical skills (Aróstegui & Kyakuwa, 2021).

The integration of theory and practice is an important component of the learning process (Angelo et al., 2021). Deep knowledge and musical skills, such as technical mastery of the instrument and knowledge of the standard repertoire, are of top priority for music art teachers. Pedagogical and musicиcompetence related to the teaching of music genres to students, including theoretical and practical aspects, are formed in the process of interaction between teachers and students through individual practice.

Music education is an important foundation for training of music art teachers in all countries. When applying the integrative model, it is assumed that the teacher will develop both professional musical skills and pedagogical skills, which ensures the development of integrated professional training of music art teachers. The basic disadvantages of professional training are the prevalence of using Western classical music as a key genre in the educational process and related pedagogical technologies and teaching practices (Karlsen & Nielsen, 2021). This practice is typical for Ukraine, where teachers conduct practical classes on the example of classical musical works, while popular musical genres and styles, common in modern music culture, are not used.

Therefore, the formed integrative model of musical art teachers' professional training by means of innovative technologies will face new challenges, in accordance with the change of requirements on the part of educational institutions for the formation of integrated professional training of a music art teacher. In-depth research will contribute to increasing attention to improving the integrative model of the musical art teacher's professional training using innovative technologies.

Conclusion

As a result of the analysis of integrative model formation of the music art teacher's professional training through innovative technologies, it has been established that educational institutions should provide integral fundamentality and practical orientation of the research. The formation of an integrative model directly depends on the involvement of students to use multimedia environment, multimedia tools, and modern means of innovative technologies. In the process of understanding the category of the music art teacher's professional training by means of innovative technologies as

a complex, integrative quality of professional and pedagogical structure of personality, the content of a certain pedagogical technology includes a developed and presented integrative model taking into account effective methods, tools and forms of learning.

The research conducted demonstrates that the integrative model can affect the quality of the music art teacher's training, forasmuch as respondents have reported that the integrative model is better than other models and has a positive effect on the provision of the music art teacher's training through innovative technologies. However, a small number of students were not sure regarding the quality of the integrative model and noted that the integrative model has some shortcomings. The proposed integrative model can be applied at educational institutions to strengthen students' pedagogical skills. Along with this, the model can be used by practicing teachers who are interested in professional growth as well as by the institutions organizing professional training of music art teachers.

The practical significance of the research conducted lies in the fact that the conclusions and recommendations developed by the author and proposed in the academic paper can be used for the music art teachers' training through innovative technologies based on an integrative model.

Further scientific investigations should be directed towards substantiating the effectiveness of the introduction of an integrative model of musical art teachers' professional training by means of innovativ technologies in the educational process for the formation of an innovative identity of future teachers.

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Integracijski model stručnoga osposobljavanja učitelja glazbene umjetnosti korištenjem novih tehnologija

Sažetak

Rezultati istraživanja pokazali su da je integracijski model osposobljavanja učitelja glazbene umjetnosti korištenjem novih tehnologija složeni proces s obzirom na mnoge varijable koje se moraju uzeti u obzir i u kurikulu i na individualnoj razini. Pokazalo se da primjena integracijskoga modela korisna i studentima i nastavnicima na sljedeći način: stvaranje pouzdanoga dvosmjernog odnosa između nastavnika i studenta; razvoj praktičnih vještina kod budućih učitelja glazbene umjetnosti u integraciji inovativnih pedagoških tehnologija; razvoj sposobnosti primjene istih u glazbi i u nastavnih aktivnostima sa studentima; poticanje aktivnih i svrsishodnih intelektualnih i kreativnih aktivnosti pomoću računala; poboljšanje osposobljavanja studenata u mjeri u kojoj kurikul integrira različite teme unutar predavanja pri čemu nastavnik promatra kako studenti zapravo uče; poticanje angažiranosti s obzirom na to da integrirani tematski blokovi čine učenje i poučavanje interesantnijim i za učenike i za nastavnike; nudi mogućnosti za samo izražavanje s obzirom na to da studenti imaju dovoljno prilika za demonstraciju vlastitih potencijala kao budući učitelji glazbene umjetnosti.

Ključne riječi: *glazbena umjetnost; integracijski model; nastavnik; nove tehnologije; profesionalno osposobljavanje.*

Uvod

Jedan od najvažnijih izazova moderne obrazovne politike širom svijeta je poboljšati kvalitetu nastave umjetnosti korištenjem inovativnih obrazovnih tehnologija. Rješavanje ovoga pitanja postaje posebno važno u kontekstu pandemije koronavirusa jer su nastavnici trebali obavljati svoje obrazovne zadaće aktivnim korištenjem naprednih obrazovnih i umjetničkih tehnologija, uključujući i one na daljinu. Povećani zahtjevi za razinom i kvalitetom obrazovanja potiču znanstvenike da pronađu nove načine za poboljšanje nastavnoga procesa (Iryhina i sur., 2020.). S tog aspekta, pitanje poboljšanja razine tehnološke kompetencije budućih učitelja glazbene umjetnosti u procesu vokalne obuke ima posebnu važnost, što opet uključuje usvajanje inovativnih vokalnih

i pedagoških tehnologija, tehnologija pjevanja u kontekstu studiranja svjetskih vokala i stjecanje pedagoškoga iskustva na studiju glazbe i glazbeno-pedagoškom studiju (Ovcharenko i sur., 2020.).

Dvadeset i prvo stoljeće obilježeno je aktivnim razvojem računalnih tehnologija koje mogu značajno proširiti načine pribavljanja i obrade informacija. Razvoj digitalnoga doba (Voronov i sur., 2013.) stvorilo je visokotehnološko informacijsko obrazovno okružje koje zahtijeva pronalazak novih pristupa i fundamentalno novih obrazovnih sustava na visokim učilištima. Inovativna glazbena pedagogija u današnje je vrijeme povezana s korištenjem glazbenih računalnih tehnologija, učinkovitih inovativnih sredstava za poboljšanje kvalitete nastave glazbene umjetnosti na svim razinama obrazovnoga procesa (Gorbunova i Govorova, 2018).

Profesionalno osposobljavanje budućih učitelja glazbene umjetnosti predstavlja vodeći strateški izazov glazbeno-pedagoškoga obrazovanja. Ovaj složeni, višerazinski proces usmjeren je na formiranje osobne glazbene i pedagoške kulture studenata, ukupnosti znanja, vještina i sposobnosti na području glazbene umjetnosti i nastavnih metoda te razvijanje glazbenih, kreativnih i pedagoških vještina (Lobova i sur., 2020).

Ciljevi istraživanja su sljedeći:

1. Analizirati strukturne komponente razvijenoga integracijskog modela profesionalnoga osposobljavanja učitelja glazbene umjetnosti.

2. Analizirati procese stvaranja učinkovite tematske jedinice (teme) te implementaciju integracijskoga modela osposobljavanja učitelja glazbene umjetnosti pomoću inovativnih tehnologija.

3. Razviti kriterije za procjenu socijalne i emocionalne kompetencije nastavnika glazbene umjetnosti kako bi se izmjerili rezultati eksperimentalnoga istraživanja vezana uz implementaciju integracijskoga modela profesionalnoga osposobljavanja učitelja glazbene umjetnosti.

4.Utvrditi značajke implementacije i prednosti korištenja integracijskoga modela za profesionalno osposobljavanje učitelja glazbene umjetnosti pomoću inovativnih tehnologija.

5.Izvršiti procjenu učinkovitosti predloženoga integracijskog modela profesionalnoga osposobljavanja učitelja glazbene umjetnosti pomoću inovativnih tehnologija.

6. Identificirati ključne vještine koje će učitelji glazbene umjetnosti steći prilikom primjene integracijskoga modela u obrazovnom procesu.

Pregled literature

U pedagoškoj teoriji, istraživanje suštine profesionalne osposobljenosti učitelja glazbene umjetnosti izaziva veliko zanimanje znanstvenika s obzirom na to da je povezano s njihovom metodološkom kompetencijom i kulturom. Metodološka kompetencija učitelja definirana je kao formiranje spremnosti i sposobnosti za provedbu istraživanja (Nikonova, 2010); opća osposobljenost i sposobnost pojedinca za obavljanje zadaća i odgovornosti radi postizanja odgovarajuće razine obrazovanja (Smirnova, 2008);

formiranje sustava metodoloških znanja teorijskih i praktičnih vještina u procesu učenja što određuje sposobnost studenata za obavljanje istraživačkih i administrativno-praktičnih pedagoških djelatnosti (Wegner, 2007).

U suvremenim znanstvenim radovima iz područja umjetničkoga obrazovanja, profesionalna osposobljenost učitelja glazbene umjetnosti, zasnovana na usvajanju metodologije glazbenoga i pedagoškoga obrazovanja, istražuje se u okviru kompetencijskoga pristupa (Oleksiuk, 2014). Pitanje profesionalne osposobljenosti učitelja glazbene umjetnosti ne može se razriješiti bez rješavanja pitanja organizacije njegove metodološke kulture, koju istraživači smatraju složenom višerazinskom strukturom. Treba napomenuti da ova struktura obuhvaća posebno predmetno znanje, opća znanstvena i filozofska znanja, posebne vještine i sposobnosti učenja koje čine sposobnost identificiranja i stvaranja univerzalnih strateških oblika nastave (Ovcharenko i sur., 2019); kulturu razmišljanja specifičnu za određeno obrazovno područje, zasnovanu na metodološkim znanjima, vještinama, sposobnosti razmišljanja, znanstvenom utemeljenju, kritičkoj refleksiji i kreativnoj primjeni određenih koncepata, oblika i metoda spoznaje, upravljanja i dizajniranja pedagoške teorije i prakse (Lavrentieva, 2016); cjelovito oblikovanje koje pomaže pretvoriti metodološko iskustvo u dostignuća budućih stručnjaka, faktor u razvoju njihove ličnosti, kreativnoga razmišljanja i razvoju znanstvenoga pogleda na svijet (Wegner, 2007). U znanstvenim radovima istraživača s područja umjetničkoga obrazovanja, metodološka kultura učitelja glazbene umjetnosti predstavlja integrativnu kvalitetu ličnosti koja podrazumijeva: zanimanje za metodologiju glazbene pedagogije, razumijevanje njezine važnosti; stjecanje profesionalno orijentiranoga metodološkog znanja; sposobnost za sistematsko razmišljanje, samostalno uspoređivanje i razlikovanje različitih gledišta, izražavanje vlastitoga stava, znanstveno utemeljenje i profesionalnu obranu toag stava na području pedagogije glazbenoga obrazovanja (Rastrigina, 2016).

Profesionalna osposobljenost učitelja glazbene umjetnosti omogućava razvoj vještina i znanja temelja teorije glazbene umjetnosti. Obuka nastavnika i studijski materijali o načinu poučavanja glazbenih kompetencija osiguravaju promjene u tehnologiji obrazovnoga procesa (Julia i sur., 2020). Planovi zasnovani na inovacijama i umjetničke i pedagoške tehnologije održavaju glazbeno obrazovanje relevantnim i konkurentnim (Henry, 2001), a nacionalni programi profesionalnoga razvoja mogu utjecati na učinkovitost poučavanja glazbe (Kushnir i sur., 2021). Profesionalno osposobljavanje budućih učitelja glazbene umjetnosti fokusira se na dva najvažnija čimbenika: izvođački (vokalni i instrumentalni) i metodički. Izbor tog čimbenika objašnjava činjenicu da su oni odgovorni za razvoj studenta u svestranoga glazbenika sposobnoga za samostalne glazbene izvedbe i kao nastavnika sposobnoga za poučavanje glazbene umjetnosti (Lobova i sur., 2020).

U našem istraživanju oslanjamo se na definiciju Provorove (2018) koja interpretira fenomen „profesionalnoga osposobljavanja učitelja glazbene umjetnosti" kao proces glazbeno-pedagoške obuke usmjerene na usvajanje metodičkog znanja, iskustva,

praktičnih vještina na području glazbenoga obrazovanja što rezultira metodološkom spremnošću. Profesionalni razvoj učitelja glazbene umjetnosti određuje razinu glazbenoga i estetskoga rada, sposobnost uspostavljanja glazbene kulture na satima glazbene umjetnosti te rješavanja problema glazbenoga obrazovanja u obrazovnim ustanovama. Učitelj glazbene umjetnosti posjeduje jedinstvene kompetencije, uključujući tehnologiju glazbeno-pedagoškog poučavanja, obrazovanja i razvoja glazbene i estetske ličnosti, metode organiziranja glazbenih aktivnosti i metode glazbenog obrazovanja. Osnovne vještine učitelja glazbene umjetnosti su dizajniranje i modeliranje nastavnoga procesa, praktična primjena različitih vrsta nastavnih aktivnosti i tehnika za organiziranje glazbenih aktivnosti, planiranje nastave, razne oblike glazbenoga obrazovnog rada, kontrola i analiza akademskog anapretka učenika (Henry, 2001). Profesionalna osposobljenost učitelja glazbene umjetnosti pozitivno utječe na razvoj profesionalne ličnosti (Ballantyne i sur., 2012).

Prema suvremenoj pedagoškoj praksi, moderni inovativni nastavni procesi razvijaju se u tri temeljna smjera, a to su: promjena sustava aktivnosti predmeta učenja (Lau i Grieshaber, 2018), funkcija i hijerarhijska struktura u procesu formiranja osobnoga radnog stila budućega učitelja (Osadchuk, 2018). S toga aspekta, pitanje profesionalne osposobljenosti budućih učitelja glazbene umjetnosti i njihove spremnosti za inovativne aktivnosti iznimno je važno (Chase i Hatschek, 2010; Ermekbaev, 2019.). Instrumentalna i izvođačka obučenost učitelja glazbene umjetnosti od posebne je važnosti za njegov uspješan profesionalni rad (Aróstegui i Kyakuwa, 2021.). Proces modernizacije pokreću vanjske (motoričke vještine, glazbeni jezik, emocije itd.) i unutarnje značajke u formiranju profesionalne svijesti (memorija, razmišljanje itd.), kao i razvoj profesionalnoga pogleda na svijet. Promjena komponenti aktivnosti subjekta u kognitivnoj sferi očituje se povišenom sviješću o objektu, emocionalnim zanimanjem za interakciju s njim, te praktičnom sviješću realnih mogućnosti promjene toga objekta (Pankiv, 2017).

Učenjaci smatraju tehnološku kulturu važnim pokazateljem profesionalne kulture nastavnika, koja, prema Piekhot (2010), ona karakterizira njegovu kreativnu profesionalnu aktivnost, a to je: skup tehnološkoga znanja i vještina koji osiguravaju aktivnost nastavnika i pružaju odgovarajuće vještine za primjenu pedagoških tehnologija. Znanstvenici su izložili razne učinkovite tehnologije za osposobljavanje nastavnika, kao što su: pedagoške tehnologije zasnovane na aktivaciji, intenziviranju i učinkovitom upravljanju učenjem (Angelo i sur., 2021), integracijske tehnologije za obrazovanje odraslih (Karlsen i Nielsen, 2021; Sysoyeva, 2011) te pedagoške tehnologije u procesu razvijanja profesionalnih i osobnih kvaliteta stručnjaka (Yerastova-Mykhalus, 2016).

Suvremeni trendovi u umjetničkoj i pedagoškoj misli intenzivno se bave znanstvenim spoznajama o učinkovitom oblikovanju kulture nastavnika kao cjeline temeljene na usvajanju inovativnih obrazovnih tehnologija, konkretno: umjetničko-pedagoške tehnologije za pripremu učenika za sustav umjetničkoga obrazovanja (Padalka, 2010);

glazbeno-pedagoške tehnologije za formiranje glazbene kulture budućeg učitelja (Cherkasov, 2014). Po prirodi stvari, znanstvenici smatraju tehnologiju poučavanja pjevanja učinkovitim sredstvom profesionalnog razvoja budućih učitelja glazbe, što uključuje: tehnologiju poučavanja pjevanja na jezičnom modu; tehnologiju poučavanja u različitim stilovima pjevanja (Akbarova i sur., 2018); tehnologiju poučavanja pjevanja pomoću algoritma treninga glasa; tehnologiju vokalne obuke studenata u transverzalnom stilu (Semina & Semina, 2015); tehnologiju studentske vokalno-metodičke obuke; računalne tehnologije za vokalnu nastavu na daljinu (Ovcharenko, 2020); tehnologiju razvoja glasa zasnovanu na vježbama tehnike fonopedije (Yemelyanov, 2010); tehnologiju rehabilitacije i obnove govornih i pjevačkih glasova i druge (Ovcharenko i dr., 2020).

Digitalne i glazbene računalne tehnologije postaju nezamjenjivim alatom u obrazovnom procesu. Njihova primjena u kulturi visoke glazbene umjetnosti predstavlja jedinstvenu tehnologiju za provedbu inkluzivnoga pedagoškog procesa jer glazbene računalne tehnologije otvaraju nove kreativne perspektive za učitelje glazbene umjetnosti (Gorbunova i Govorova, 2018.).

Formiranje integracijskoga modela profesionalnoga osposobljavanja učitelja glazbene umjetnosti pomouć inovativnih tehnologija predstavlja svrhishodan obrazovni model koji podržava studente tijekom razvoja njihovih sposobnosti za samostalno učenje uz korištenje različitih vještina razmišljanja (Khan i Law, 2015; Cahill i sur., 2019).

Uspješna implementacija modela vodi do toga da studenti obrađuju informacije i ideje iz velike količine materijala transformirajući ih u nove ideje i koncepte (Rajajeyakumar i sur., 2015; Singh i Hardaker, 2014). U tom procesu, studenti razvijaju sposobnost samostalnoga razmišljanja, analize i izvlačenja zaključaka. Model podržava osposobljavanje studenata iz svih nastavnih područja, a također im daje priliku da postanu samostalni (Canhoto i Murphy, 2016).

Integracijski model pruža praktičnu strukturu u obrazovnom procesu za one studenate koji proučavaju organizirane cjeline znanja; njegov se sadržaj sastoji od kombinacije činjenica, koncepata, generalizacija i njihovih međusobnih odnosa (The Integrative Model, 2013).

Dakle, pitanje formiranja integracijskoga modela profesionalnoga osposobljavanja učitelja glazbene umjetnosti pomoću inovativnih tehnologija te analize prepreka i perspektiva njegove primjene, nije u potpunosti zastupljeno u znanstvenim publikacijama u obliku teorijskih studija i praktičnih istraživanja. Stoga, pitanje promicanja implementacije integracijskoga modela profesionalnoga osposobljavanja učitelja glazbene umjetnosti pomoću inovativnih tehnologija u obrazovne ustanove ostaje relevantno i otvoreno za daljnja istraživanja.

Svrha je istraživanja odrediti učinkovitost utvrđenoga „integracijskoga modela" profesionalnoga osposobljavanja učitelja glazbene umjetnosti pomoću inovativnih tehnologija temeljem anketiranja studenata kako bi se otkrile prednosti korištenja integracijskoga modela u obrazovnim ustanovama.

Realizacija svrhe ovoga istraživanja uključuje uporabu kvalitativnih metoda istraživanja.

Metodologija

Provedba ovoga istraživanja uključuje uporabu sljedećih kvalitativnih metoda:

- Sistematizacija osnovnih značajki stvaranja i implementacije integracijskoga modela za profesionalno osposobljavanje učitelja glazbene umjetnosti pomoću inovativnih tehnologija.
- Sustavna i logička analiza metoda sinteze informacija o ključnim prednostima procesa osposobljavanja učitelja glazbene umjetnosti temeljena na integracijskom modelu.
- Generalizacija najnovijih znanstvenih publikacija povezanih s razvojem kriterija za procjenu socijalne i emocionalne kompetencije studenata kako bi se izmjerili rezultati eksperimentalnoga istraživanja o implementaciji integracijskoga modela profesionalnoga osposobljavanja učitelja glazbene umjetnosti.
- Metoda usporedbe radi razlikovanja globalnih i osnovnih specifičnih vještina i kompetencija koje će učitelji glazbene umjetnosti steći kao rezultat osposobljavanja temeljenoga na primjeni integracijskoga modela.

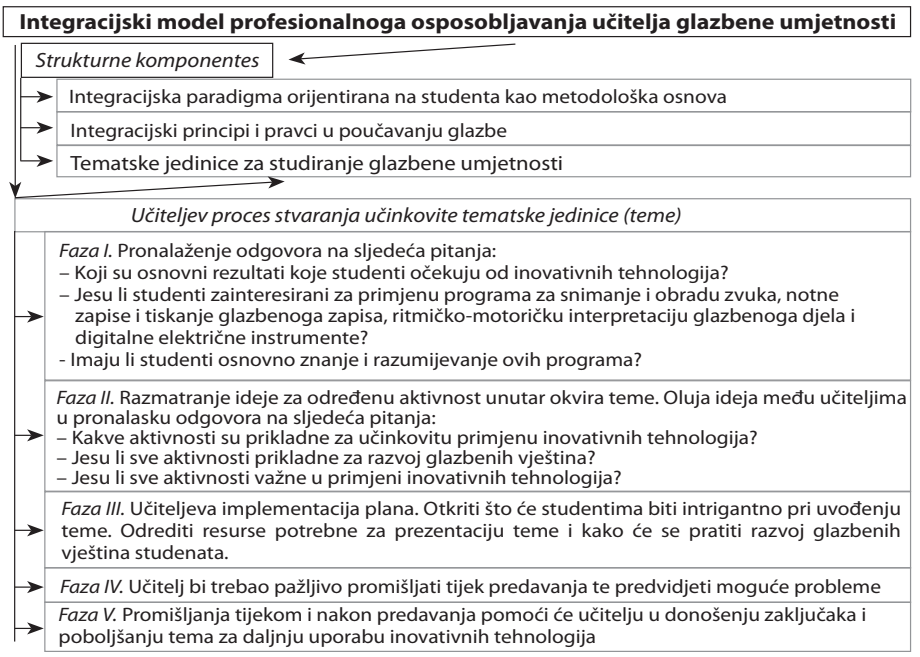
Za utvrđivanje individualnih značajki i učinkovitosti integracijskoga modela profesionalnoga osposobljavanja učitelja glazbene umjetnosti pomoću inovativnih tehnologija, provedena je deskriptivna statistika na podatcima prikupljenim anketom koristeći MS Forms Pro. *Online* anketa provedena u ovom istraživanju pokazala se iznimno pouzdanim i praktičnim alatom za prikupljanje podataka. Omogućila je brz i učinkovit način za prikupljanje mišljenja od 3100 studenata u razdoblju od 20. veljače do 30. svibnja 2021. Ista anketa uspješno je korištena u sličnim istraživanjima, što potvrđuje njezinu pouzdanost i učinkovitost. Sudionici ove ankete odgovorili su na pitanja o svojem iskustvu učenja, motivaciji, očekivanjima i općem zadovoljstvu primjene integracijskoga modela profesionalnoga osposobljavanja učitelja glazbene umjetnosti pomoću inovativnih tehnologija. Sljedeća istraživačka pitanja bila su razmotrena u ovoj anketi: 1. Kakva je percepcija iskustva studenata s integracijskom modelom profesionalnoga osposobljavanja učitelja glazbene umjetnosti pomoću inovativnih tehnologija? (Cilj ovoga pitanja razumjeti kako studenti percipiraju integracijski model profesionalnoga razvoja te kakva su njihova shvaćanja o općem zadovoljstvu, angažiranosti i učinkovitosti modela.); 2. Kakva je percepcija iskustva studenata vezana uz sposobnost zadržavanja informacija u kontekstu primjene integracijskoga modela profesionalnoga osposobljavanja učitelja glazbene umjetnosti pomoću inovativnih tehnologija? (Fokus ovoga pitanja je na sposobnost studenata da zadrže informacije u kontekstu integracijskoga modela i je li ovaj model povoljan za učenje.); 3. Postoje li nedostatci u integracijskom modelu profesionalnoga osposobljavanja učitelja glazbene umjetnosti pomoću inovativnih tehnologija? (Cilj je ovoga pitanja identificirati eventualne slabosti ili ograničenja integracijskoga modela. Povratne informacije studenata o nedostatcima mogu pomoći nastavnicima usavršiti i poboljšati model kako bi se postigli bolji rezultati.); 4. Je li integracijski model profesionalnoga osposobljavanja učitelja glazbene umjetnosti pomoću inovativnih tehnologija bolji od drugih modela

obuke koji se primjenjuju u obrazovnom procesu? (Uspoređujući integracijski model s drugim modelima učenja, ovim pitanjem nastoji se utvrditi njegovu komparativnu učinkovitost. Odgovori mogu pružiti uvid u to percipiraju li studenti integracijski model superiornijim tradicionalnim ili alternativnim pristupima i zašto.).

Rezultati

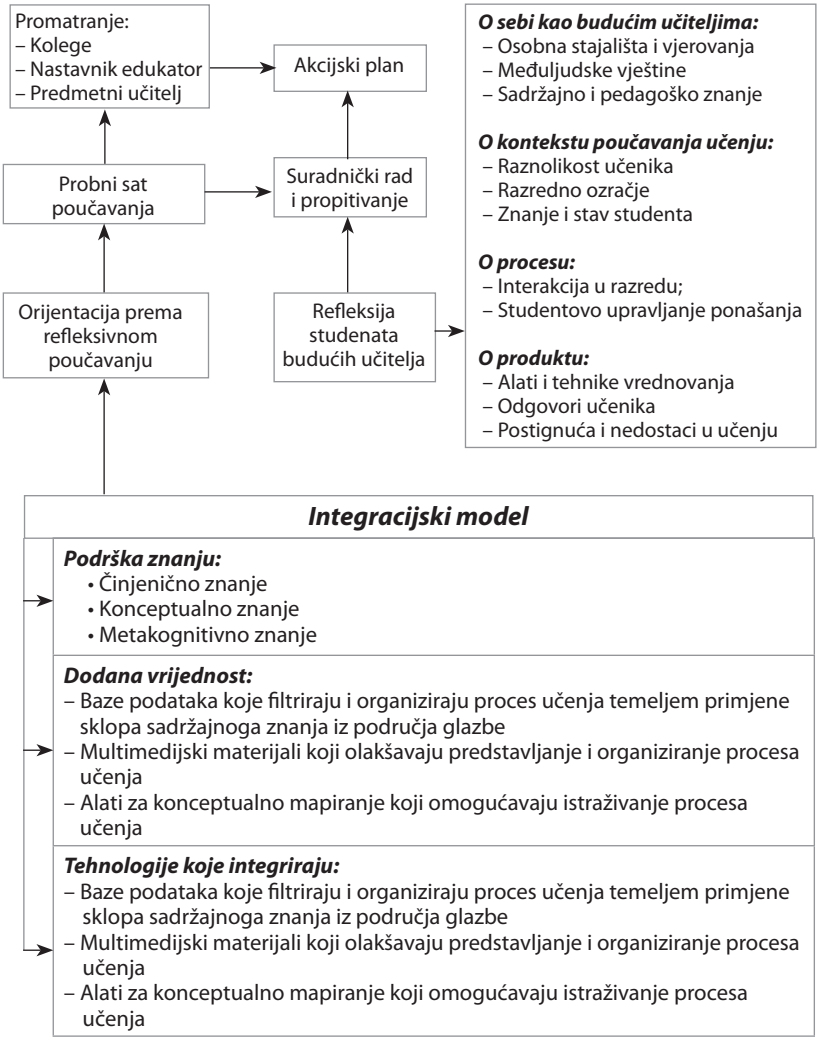
Integracijski model profesionalnoga osposobljavanja učitelja glazbene umjetnosti dizajniran je za razvoj ličnosti i fokusira se na povezanost svih područja kurikula, pomažući u svladavanju osnovnih alata učenja. Strukturne komponente formiranoga integracijskoga modela profesionalnoga osposobljavanja učitelja glazbene umjetnosti prikazane su na Slici 1. Integrirani procesi poučavanja i učenja omogućuju studentima da steknu i koriste osnovne vještine u svim područjima, a također i da formiraju pozitivan stav prema daljnjem uspješnom učenju.

Pri implementaciji integracijskoga modela profesionalnoga osposobljavanja učitelja glazbene umjetnosti u početnoj fazi predlaže se program orijentacije s ciljem podizanja svijesti o refleksivnom razmišljanju i razvijanju razumijevanja refleksivnoag učenja kroz integrirani model učenja. Nakon što se održi predavanje, budućim učiteljima – studentima, bit će dano vremena za razmišljanje i elaboraciju što se može specifično usmjeriti na samopoštovanje i osobni razvoj budućega učitelja. Posljedično, oni će oblikovati svoj vlastiti stil poučavanja koji podrazumijeva i stvaranje povoljne atmosfere u učionici, upravljanje ponašanjem učenika u učionici i osiguranje interakcije u razredu.



Slika 1. Integracijski model profesionalnoga osposobljavanja korištnjem invoativnih tehnologija
Izvor: Sastavili autori na temelju službenih podataka (Kumari, 2014)

Nakon samorefleksije učitelja, studenti raspravljaju o predavanju koje se temeljilo na uporabi inovativnih tehnologija u integracijskom modelu, a pruža se i konstruktivna povratna informacija u skladu s promatranim. Združeno poučavanje završava SWOT analizom koja uključuje identificiranje snaga i slabosti te mjere opreza za minimiziranje prijetnji. Učitelj je pripremio plan djelovanja za buduća predavanja i praktičnu nastavu na osnovi kritičke refleksije integracijskoga modela prethodnih predavanja.



Slika 2. Integracijski model
Izvor: Sastavili autori na temelju službenih podataka (Integracijki model, 2013), Kumari (2014).

Provedba integracijskoga modela profesionalnoga osposobljavanja učitelja glazbene umjetnosti (vidi Slika 2) zahtijeva od studenata da: (1) provedu preliminarno istraživanje teme, (2) razviju osnovno razumijevanje informacija koje ona sadrži, (3) razumiju

kako su svi dijelovi teme međusobno povezani i (ako je moguće) s drugim prethodno proučavanim tematskim blokovima te (4) razmotre poveznice s postojećom mentalnom shemom (vidi Sliku 3).

Faze integracijskoga modela
Opis, usporedba i pronalazak predložaka
Nastavnik traži od učenika da opišu, usporede i pronađu uzorke u temi istraživanja. Učenici analiziraju sadržaj, opisujući, uspoređujući i tražeći uzorke u temi istraživanja. Učenici ili nastavnici unose informacije u grafičke organizatore koje je razvio nastavnik, učenici ili su ih zajednički razvili nastavnik i učenici.
Primjer 1. Nastavnik postavlja problem za razvoj slušnoga razmišljanja studenata i predlaže korištenje računalnoga alata za glazbeno stvaralaštvo: MIDI konstruktor „Techno Maker", „Magix Music Maker", audiokonstruktor „Dance eJaj", „Music shake". Ovi programi sadrže predloške koji omogućuju učenicima da stvaraju vlastitu glazbu. 2. Nastavnik kreira popis pjesama za analizu koje će biti uključene u repertoar vokalne ili zborske grupe, mijenja ton glazbenoga djela, snima vokalne zvukove učenika, stvara videodatoteke u obrazovne svrhe pomoću računalnih programa poput:„Karaoke GALAXY", „Kar Maker", „Vocal Jam" i drugih.
Objašnjenje sličnosti i razlika
Nastavnik traži od učenika da objasne sličnosti i razlike u svojim istraživačkim temama i da obrazlože ideje koristeći se podatcima unutar grafičkoga organizatora.
Primjer 1. Zahvaljujući kreiranim videozapisima, studenti imaju priliku analizirati podatke, primati savjete od iskusnih profesora glazbene umjetnosti i steći metodičko znanje.
Hipoteza pod različitim uvjetima
Studenti, s obzirom na različite uvjete, formiraju hipoteze potencijalnih rezultata istraživanja.
Primjer 1. Gledanjem videopredavanja s prijevodnicima studenti razgovaraju o problemima inovativnih aktivnosti nastavnika glazbene umjetnosti, traže rješenja za problematične situacije i IKT podršku u glazbenoj umjetnosti kako bi se osiguralo učinkovito obrazovanje budućih stručnjaka.
Zaključci iz kojih se mogu formirati međusobni odnosi glazbene umjetnosti i inovativne tehnologije
Nastavnik traži od studenata da naprave sažetak istraživačke teme sa zaključcima. Studenti oblikuju svoje razumijevanje kako bi prikazali svoju viziju o širokoj međusobnoj povezanosti između istraživačke teme glazbene umjetnosti i inovativnih tehnologija.
Primjeri 1. Kao rezultat istraživanja glazbene umjetnosti i inovativnih tehnologija, studenti razvijaju i provode obrazovno-metodičke materijale koje će učenici testirati u praksi. 2. Na kraju svakog videopredavanja, svaki student treba napraviti test čiji rezultati pokazuju razinu stečenoga znanja i praktičnih vještina.

Slika 3. Faze integracijskoga modela
Izvor: Sastavili autori na osnovi službenih podataka Integracijski model (2013), Bondarenko (2020)

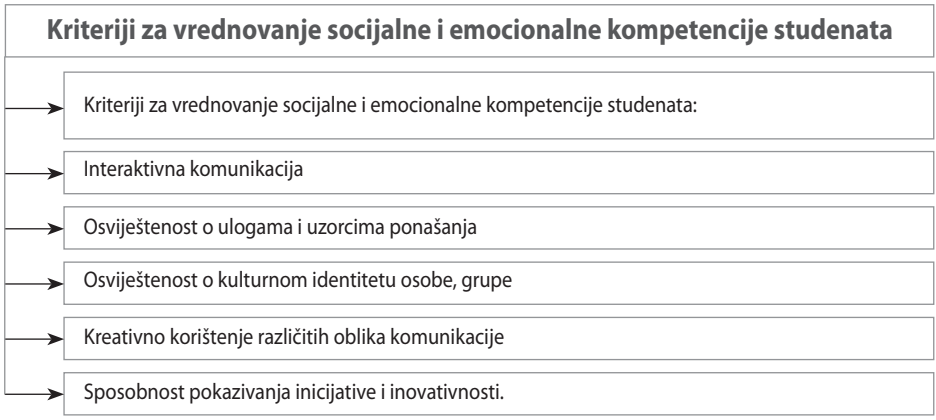
Za procjenu učinkovitosti predloženoga integracijskoga modela profesionalnoga osposobljavanja učitelja glazbene umjetnosti pomoću inovativnih tehnologija, 2021. godine provedena je anketa među studentima sljedećih visokoobrazovnih ustanova: New England Glazbeni konzervatorij, Curtis Institut za glazbu, Kraljevska glazbena

akademija, Kraljevski glazbeni fakultet, Kijevsko nacionalno kazalište, kino i televizija - Ivan Karpenko-Kary (Ukrajina). Većina je studenata napomenula da integracijski model ima pozitivan učinak na pružanje profesionalnoga osposobljavanja učitelja glazbene umjetnosti pomoću inovativnih tehnologija (47,5 %); drugi dio vjeruje da je integracijski model bolji od drugih modela primijenjenih u nastavnom procesu (44,3 %); međutim, manji broj studenata (6 %) nije bio siguran u kvalitetu integracijskoga modela, a ostatak studenata (2,2 %) napomenuo je da integracijski model ima određene nedostatke (vidi Sliku 4).

Slika 4.

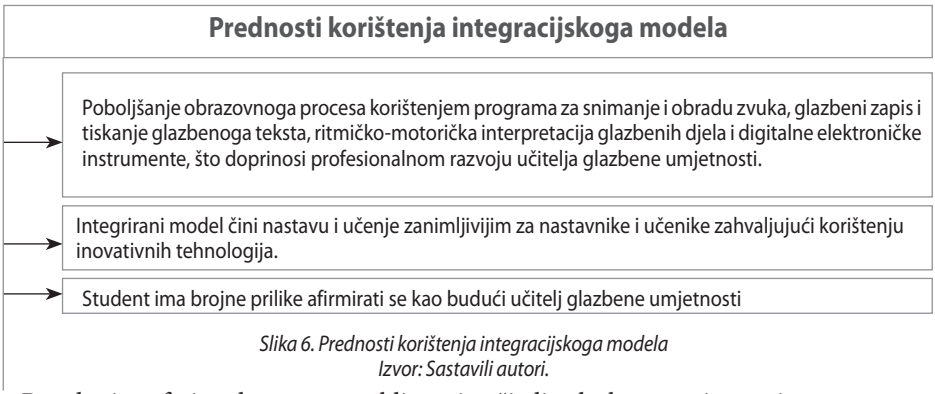
Dakle, svrha primjene predloženoga integracijskoga modela profesionalnoga osposobljavanja učitelja glazbene umjetnosti pomoću inovativnih tehnologija temelji se na studentovom otkrivanju razumijevanja i usvajanja teme istraživanja. Na temelju dobivenih zaključaka treba napomenuti da su studenti pokazali puno razumijevanje teme istraživanja na višim razinama kognitivnih procesa. Kada studenti mogu obrazložiti zaključak, tada su u stanju demonstrirati svoje razumijevanje ne samo na činjeničnoj razini već i na konceptualnoj razini.

U svrhu mjerenja rezultata eksperimentalnoga istraživanja o implementaciji integracijskoga modela profesionalnoga osposobljavanja učitelja glazbene umjetnosti, razvijeni su kriteriji za procjenu socijalne i emocionalne kompetencije studenata (vidi Sliku 5):



Slika 5. Kriteriji za vrednovanje socijalne i emocionalne kompetencije studenata
Izvor: Sastavili autori na osnovi službenih podataka Davidova (2020).

Prelazak na nastavni proces zasnovan na primjeni integracijskoga modela profesionalnoga osposobljavanja učitelja glazbene umjetnosti donosi koristi i studentima i učiteljima (vidi Sliku 6).



Slika 6. Prednosti korištenja integracijskoga modela
Izvor: Sastavili autori.

Rezultati profesionalnoga osposobljavanja učitelja glazbene umjetnosti zasnovanoga na integracijskom modelu uključuju globalne vještine i kompetencije jer one pomažu pružiti znanje, vještine, razumijevanje i kontekstualizaciju za profesionalni i osobni život tijekom studiranja i nakon diplomiranja na visokoškolskoj ustanovi. Drugo područje rezultata odnosi se na znanje vezano uz ključne profesionalne kompetencije - informacije identificirane kao osnova znanja i vještina koje se smatraju korisnima za buduću karijeru učitelja glazbene umjetnosti (vidi Tablicu 1).

Tablica 1
Rezultati profesionalnoga osposobljavanja učitelja glazbene umjetnosti

Ovladavanje programima za snimanje i obradu zvuka, notnim zapisima i tiskanjem glazbenoga teksta, ritmičko-motoričkom interpretacijom glazbenih djela i digitalnim električnim instrumentima poput MIDI programa „Techno Maker", „Magix Music Maker", audiokonstruktora „Dance eJaj", „Music shake", kao i programima za vokalne efekte „Karaoke GALAXY", „Kar Maker" i „Vocal Jam".	
Sposobnost primjene stečenoga praktičnog znanja u nastavi glazbene umjetnosti.	
Razvijanje vještina za svladavanje izvođačkih sposobnosti.	
Sposobnost slobodne analize glazbenih djela pomoću inovativnih tehnologija.	
Sposobnost korištenja računalnih i inovativnih tehnologija, razvoj praktičnih vještina budućih učitelja glazbene umjetnosti u stvaranju inovativnih pedagoških tehnologija, razvijanje vještina njihove primjene u glazbenim i pedagoškim aktivnostima s učenicima te poticanje aktivnih i ciljanih intelektualnih i kreativnih aktivnosti pomoću računala.	
Rezultati profesionalnoga osposobljavanja učitelja glazbene umjetnosti	
Globalni	Specifični
Promišljanje, čitanje, pisanje i učinkovito podupiranje komunikacijskoga procesa.	Razumijevanje temelja strukture nastave glazbene umjetnosti zasnovane na korištenju inovativnih tehnologija
Pristupiti, analizirati, evaluirati, sintetizirati i predstaviti informacije	Shvaćanje osnova razvoja suvremene glazbe i inovativnih tehnologija
Samostalno ili u timu raditi s izazovima	Ovladavanje suvremenim softverom za primjenu u obrazovnom procesu

Source: Compiled by the authors.

Rasprava

Upravo su pandemijski uvjeti negativno utjecali na učinkovitost integracijskoga modela profesionalnoga osposobljavanja učitelja glazbene umjetnosti zbog prijelaza na samostalniji način nastave sa studentima. Stoga se, radi poboljšanja situacije, preporuča implementacija integracijskoga modela profesionalnoga osposobljavanja učitelja glazbene umjetnosti pomoću inovativnih tehnologija (Canhoto i Murphy, 2016). Ova praksa široko se primjenjuje u školama Hong Konga, gdje se nastavnici glazbene kulture koriste kreativnim integracijskim modelima, a imaju i pravo na fleksibilnost i neovisnost u obrazovnom procesu (Lau i Grieshaber, 2018).

Integracijski modeli profesionalnoga osposobljavanja učitelja glazbene umjetnosti zasnovani na umjetničkim i pedagoškim tehnologijama loše su integrirani u sveučilišnu nastavnu praksu, što za posljedicu ima njihovo oskudno korištenje u obrazovnom procesu. Učestalost upotrebe umjetničkih i integracijskih inovativnih sredstava u umjetničkim i pedagoškim tehnologijama smanjuje se zbog prevladavanja samostalnoga rada nastavnika glazbene umjetnosti. Posebno je ograničena primjena nastavnih pomagala poput igranja uloga, *brainstorminga* i rada u parovima, odnosno malim skupinama. Međutim, dominiraju interaktivne tehnologije poput diskusije i rada u malim skupinama. Integracijski modeli zasnovani na umjetnosti i pedagoškim tehnologijama uključuju tehnologiju za modeliranje situacije.

Akbarova, Dyganova, Shirieva i Adamyan (2018) tvrde da bi „budući učitelji glazbene umjetnosti trebali biti opremljeni inovativnim tehnologijama znanstvene kreativnosti zasnovanim na samostalnim istraživačkim aktivnostima» (str. 138). Ovaj proces može se implementirati ako se studentima omogući pristup inovativnim tehnologijama za samostalni razvoj vokalnih i zborskih kompozicija. Profesionalni učitelj glazbene umjetnosti je kvalificirani glazbenik sa stručnim pedagoškim vještinama (Ballantyne i sur., 2012). Za pružanje mogućnosti profesionalnoga razvoja, potrebno je povezati više teorijskih pedagoških kolegija s disciplinama koje razvijaju glazbene vještine (Aróstegui i Kyakuwa, 2021).

Integracija teorije i prakse važna je komponenta procesa učenja (Angelo i sur., 2021). Kod učitelja glazbene umjetnosti na prvom su mjestu temeljito znanje i glazbene vještine, poput tehničkoga poznavanja instrumenta i poznavanja standardnoga repertoara. Pedagoška i glazbena kompetencija za poučavanje glazbenih žanrova, uključujući teorijske i praktične aspekte, formira se u procesu interakcije između nastavnika i studenata kroz individualnu vježbu.

Glazbena umjetnost temelj je za osposobljavanje učitelja glazbene umjetnosti u svim zemljama. Primjena integracijskoga modela pretpostavlja da će nastavnik razviti i profesionalne glazbene vještine i pedagoške sposobnosti, što osigurava razvoj integrirane profesionalne osposobljenosti učitelja glazbene umjetnosti. Glavni nedostatak profesionalne osposobljenosti učitelja glazbene umjetnosti je pretežno korištenje zapadnoeuropske klasične glazbe kao ključnoga žanra u obrazovnom procesu, a s time su povezane pedagoške tehnologije i nastavne prakse (Karlsen i

Nielsen, 2021.). Ova je praksa tipična i za Ukrajinu, gdje učitelji održavaju praktičnu nastavu na primjerima klasičnih glazbenih djela, dok se popularni glazbeni žanrovi i stilovi suvremene glazbene kulture ne koriste.

Iz toga slijedi da će se izrađeni integracijski model profesionalnoga osposobljavanja učitelja glazbene umjetnosti pomoću inovativnih tehnologija suočiti s novim izazovima, u skladu s promjenom zahtjeva obrazovnih institucija prema formiranju integrirane profesionalne osposobljenosti učitelja glazbene umjetnosti. Daljnja istraživanja doprinijet će većoj pozornosti unaprjeđenju integracijskoga modela profesionalnoga osposobljavanja učitelja glazbene umjetnosti korištenjem inovativnih tehnologija.

Zaključak

Rezultatom analize predloženoga integracijskoga modela profesionalnoga osposobljavanja učitelja glazbene umjetnosti korištenjem inovativnih tehnologija, utvrđeno je da obrazovne institucije trebaju pružiti integralnu osnovu i praktičnu orijentaciju istraživanja. Formiranje integracijskoga modela izravno ovisi o uključivanju studenata u korištenje multimedijskoga okružja, multimedijskih alata i modernih sredstava inovativnih tehnologija. U procesu razumijevanja kategorije profesionalne osposobljenosti učitelja glazbene umjetnosti pomoću inovativnih tehnologija kao kompleksne i integrativne kvalitete profesionalne i pedagoške strukture ličnosti, sadržaj određene pedagoške tehnologije uključuje razvijen i prikazan integracijski model uzimajući u obzir učinkovite metode, alate i oblike učenja.

Provedeno je istraživanje pokazalo da integracijski model može utjecati na kvalitetu osposobljenosti učitelja glazbene umjetnosti. Ispitanici su izvijestili da je integracijski model bolji od drugih modela i da ima pozitivan učinak na osposobljavanje učitelja glazbene umjetnosti pomoću inovativnih tehnologija. Međutim, mali broj studenata bio je neodlučan u pogledu kvalitete integracijskoga modela i napomenuo je da integracijski model ima i neke nedostatke. Predloženi se integracijski model može primijeniti u obrazovnim ustanovama kako bi se osnažile pedagoške vještine studenata. Uz to, model mogu koristiti i aktivni nastavnici zainteresirani za profesionalni razvoj kao i institucije koje organiziraju stručno osposobljavanje učitelja glazbene umjetnosti.

Praktična vrijednost provedenoga istraživanja jest u činjenici da se zaključci i preporuke koje je autor razvio i predložio u akademskom radu mogu koristiti za osposobljavanje učitelja glazbene umjetnosti pomoću inovativnih tehnologija zasnovanih na integracijskom modelu.

Daljnja znanstvena istraživanja treba usmjeriti na potvrđivanje učinkovitosti uvođenja integracijskoga modela profesionalnoga osposobljavanja učitelja glazbene umjetnosti pomoću inovativnih tehnologija u obrazovni proces radi formiranja inovativnoga identiteta budućih nastavnika.