


EFFECTIVENESS OF AUTHENTIC PERFORMANCE METHODS FOR THE DEVELOPMENT OF MUSICAL INTERPRETATION IN MUSIC STUDENTS

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SUMMARY. Authentic music contributes to the revival of cultural traditions, which requires the selection of the most favourable approaches to its reproduction. The aim of the work is to determine the effectiveness of authentic performance methods for the development of musical interpretation in music students. The research employed the following methods: observation, efficiency ratio, sampling ratio, and correlation index. The authors developed teaching methods that involved working with an authentic musical repertoire, developing the performance technique of music students. It was also planned to build the skills of performing authentic melodies with the use of various musical instruments. Digital applications Music Theory Companion, goodEar Pro were also used for training. The original performance of European authentic melodies was

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achieved at the highest level (7.5), which is related to the observance of the sequence of sounds. Achieving a higher level of performance of authentic Ukrainian melodies is associated with the creation of own variations (8.0), which contributed to emotional performance. It was established that the musical process had an impact on the of students' musical thinking, independence skills, musical and rhythmic skills, understanding of cultural values, and development of intonation. Personal (0.93) and professional (0.90) skills were also developed during the educational process. The practical significance of the research is the identified most favourable approaches to the authentic reproduction of melodies. Research prospects may involve studying the quality of authentic melodies as a result of using different musical instruments.

Keywords: interpretation of melodies; folklore compositions; cultural values; auditory perception; performance technique; interactive technologies.

Introduction

The musical interpretation of authentic melodies is a common phenomenon today, as it contributes not only to the dissemination of traditional music, but also influences the search for new mechanisms for the interpretation of melodies. The interpretation of authentic compositions affects the possibility of independent understanding of the unique traditions of a certain musical culture, its artistic signs, symbolis⁶. Therefore, there is a need to provide high-quality training of instrumental musicians, which determines the relevance of the chosen topic.

Authentic music performance is a process of accurate reproduction of ethnic music, its originality, and historical features. The performance of folk music should be related to the understanding of aspects of a particular musical culture that distinguish one music from another⁷. It is necessary to take into account the emotionality of reproduction during musical interpretation, which is connected with the developed skills of instrumental interpretation of the musician. Emotionality can be achieved on the basis of understanding the peculiarities of the ornamentation of the musical text. An instrumentalist

⁶ Puguh, Dhanang Respati, Utama, Mahendra Pudji, Mufidah, Rafngi. Acceptance of Javanese Karawitan in Japan: Appreciation of traditional culture and community activities. *Cogent Arts and Humanities*, 10, No. 1, 2023, pp. 2217586. <https://doi.org/10.1080/23311983.2023.2217586>

⁷ Maksimyuk, V. À., Sushchenko, À. À., Fetisov, I. B. Technique of Strain-Gauge Measurement of the Dynamic Characteristics of Percussion Music. *International Applied Mechanics*, 56, No. 2, 2020, pp. 186-191. <https://doi.org/10.1007/s10778-020-01012-y>

musician must control the power of the sound, use artistic expression techniques^{8,9}. Folk music is characterized by brightness, a harmonious combination of melody and text. Authentic melodies combine the uniqueness and philosophy of the particular people. Emphasis should also be placed on the meaningful understanding of music, which reflects the people's worldview, authentic methods of playing¹⁰. Understanding of sound structures will allow to provide a high-quality interpretation of melodies, which helps to take into account the traditions of intonation of a musical work. The performance of authentic music should be related to the transmission of sound ideas, acoustic conditions of a particular historical period¹¹.

Common techniques for authentic performance are the use of not only folk, but also modern musical instruments. It is necessary to take into account the accuracy of the interpretation of musical images during training based on the intellectual perception of the text^{12,13}. A musician should have a variety of musical skills, which is related to spiritual, emotional, intellectual, musical capabilities. Interpretation of compositions depends on their content, context, rhythmic figures. Using the acquired knowledge, students can edit musical scores, which provides a modified sound of compositions. Quality editing can provide a change in the rhythmic pattern, the melodic line, which affects the creation of musical contrast¹⁴. During the educational process, future musicians should focus on finding the most favourable options for interpreting compositions. This will preserve the uniqueness of a separate

⁸ Huang, Qian. Application of VR Technology in the Construction of MOOC Resources. *Journal of Physics: Conference Series*, 1992, No. 4, 2021a, pp. 042032.

⁹ Palubinskienė, Vida. Some aspects of schoolchild's and students' ethnic identity development through ethnic instrumental music. *Pedagogika*, 117, No. 1, 2015, pp. 98-109. <https://doi.org/10.15823/p.2015.070>

¹⁰ Sbitnieva, Lyudmyla M., Sbitnieva, Olena F. The Development of Ukrainian Singing Culture During the Middle Ages. *Anastasis*, 9, No. 2, 2022, pp. 56-69. <https://doi.org/10.35218/armca.2022.2.04>

¹¹ Magnusson, Thor. The migration of musical instruments: On the socio-technological conditions of musical evolution. *Journal of New Music Research*, 50, No. 2, 2021, pp. 175-183. <https://doi.org/10.1080/09298215.2021.1907420>

¹² Hardiyana, Bella, Hasegawa, Shinobu. Design of Angklung Music Scoring System Based on Remote Training. *Journal of Advanced Research in Applied Sciences and Engineering Technology*, 31, No. 1, 2023, pp. 355-364. <https://doi.org/10.37934/araset.31.1.355364>

¹³ Vaizman, Tal. Teaching musical instruments during COVID-19: teachers assess struggles, relations with students, and leveraging. *Music Education Research*, 24, No. 2, 2022, pp. 152-165. <https://doi.org/10.1080/14613808.2022.2053512>

¹⁴ Kayali, Fares, Klein, Paul-Reza, Hödl, Oliver, Luckner, Naemi. Digital musical instruments, making and learning. In: Mateus-Berr, Ruth, Jochum, Richard, Eds., *Teaching Artistic Research: Conversations Across Cultures*. Berlin, Boston: De Gruyter, 2020, pp. 179-186. <https://doi.org/10.1515/9783110665215-017>

historical period. Students should understand the intrinsic connections of music to a particular historical period¹⁵. The interpretation of an authentic piece of music should consist in a more creative reinterpretation of the musical text, which also depends on the level of the musical skills of an individual musician¹⁶. In the educational process, it is necessary to take into account the possibility of original reproduction of compositions, as well as one's own version of a musical work. One's own version of performance depends on the depth of the musician's immersion in the musical text, which contributes to the high-quality sound realization of the musical text¹⁷.

The study of the peculiarities of the education of music students revealed the need to use various artistic means in authentic performance and the development of individual musical abilities. Research gaps are associated with the lack of clear learning mechanisms for instrumental interpretation of musical works. The aim of the research is to study the effectiveness of authentic performance methods for the development of musical interpretation in music students.

The aim involved the fulfilment of the following research objectives:

- Develop educational approaches to the instrumental playing of musicians with the use of authentic compositions;
- Conduct a diagnostics of students' musical and performing skills based on efficiency ratio calculations;
- Determine the level of students' musical skills as a result of using authentic repertoire;
- Measure the level of students' personal and professional capabilities taking into account the calculations of the sampling ratio.

Literature Review

It is possible to improve the quality of instrumental interpretation of melodies due to the use of dynamic interactive models. The advantage of interactive instruments is related to the improvement of sound, which contributes to the improvement of instrumental skills. The quality of the instrumental performance of compositions depends on revealing of their cultural and

¹⁵ Hurtado, Enrique, Magnusson, Thor, Rekalde, Josu. Digitizing the txalaparta: Computer-based study of a traditional practice. *Computer Music Journal*, 43, No. 2-3, 2020, pp. 125-141. https://doi.org/10.1162/comj_a_00522

¹⁶ Johnson, David, Damian, Daniela, Tzanetakis, George. Evaluating the effectiveness of mixed reality music instrument learning with the theremin. *Virtual Reality*, 24, No. 2, 2020, pp. 303-317. <https://doi.org/10.1007/s10055-019-00388-8>

¹⁷ Wang, Yanfang. Research on Handwritten Note Recognition in Digital Music Classroom Based on Deep Learning. *Journal of Internet Technology*, 22, No. 6, 2021, pp. 1443-1455.

social significance and the technological innovations used¹⁸. The use of traditional musical instruments contributes to the revival of traditional music, which allows to convey the uniqueness of the musical structure and rhythm. The training provided for the use of digital programmes Playground Sessions, Soundation Studio, which contributed to the motivation of students in expanding the instrumental playing styles. The emphasis in teaching should be placed on expressiveness of sound, timbre, pitch control, and the use of musical melismes¹⁹. The system of training movements while playing musical instruments can be implemented with the help of visual feedback. Students were able to show high results while playing the traditional musical instrument — samisen. A back-and-forth approach to learning improves the performance of traditional melodies²⁰.

The use of traditional musical instruments in the educational process is not a common approach, which is due to the widespread use of musical instruments of Western origin. The use of interactive 3D tools in the educational process allows learning the mechanisms of playing musical instruments. This facilitates the easy creation of sounds, the understanding of pitch-changing approaches for the ability to transfer traditional music²¹. Online music courses are more effective than traditional learning because they not only help to develop the necessary skills, but also provide continuous feedback. They also promote personalized learning, which enables working on musical skills individually, focusing on the obtained results²². Focusing on ethnic music in the educational process contributes to the improvement of the quality of education and the spread of cultural heritage. However, teachers and students in the educational process prefer modern music, which is connected with its aesthetic and artistic component. Ethnic music can be spread when

¹⁸ Ma, Yidi, Chen, Yan. Exploring the Model of Contemporary Chinese Ethnic Musical Instrument Improvement Mechanisms: Based on Grounded Theory. *SAGE Open*, 14, No. 1, 2024. <https://doi.org/10.1177/21582440241235018>

¹⁹ Han, Wei. Music in the Sonata form for the saxophone: learning to play the Saxophone in online educational courses: online platforms vs. traditional education in a conservatory. *Education and Information Technologies*, 28, No. 11, 2023a, pp. 14767-14781. <https://doi.org/10.1007/s10639-023-11821-6>

²⁰ Shibata, Takeshi, Tanaka, Misa. Development of a forearm motion learning-assist system for playing the Japanese shamisen instrument. *Entertainment Computing*, 46, 2023, pp. 100564. <https://doi.org/10.1016/j.entcom.2023.100564>

²¹ Matsunobu, Koji. Reinventing folk instruments as educational tools: The case of the Shakuhachi. *Research Studies in Music Education*, 45, No. 1, 2023, pp. 77-93. <https://doi.org/10.1177/1321103X221123272>

²² Keast, Dan A. Teaching reflections on two decades of online music courses. In Johnson, Carol, Lamothe, Virginia Christy, Eds., *Pedagogy Development for Teaching Online Music*. IGI Global, 2018, pp. 227-243. <https://doi.org/10.4018/978-1-5225-5109-6.ch011>

the emphasis is placed on emotional music, which will motivate students to study and develop musical and aesthetic abilities. Focus on ethnic music enables determining melodic styles, the manner of interpretation, emotional saturation, which influences the development of students' potential²³.

The process of learning to play the piano in China is widespread, as it promotes the interpretation of traditional melodies while maintaining their uniqueness and emotionality. Innovative technologies can be used to create piano adaptations. Philosophical concepts must be included in the educational process, which will contribute to the development of students' musical expression skills. Such an approach affects the improvement of technical skills, which affects the depth of students' knowledge²⁴. Focusing on traditional music in the educational process enables expanding musical skills. It was established that students first of all perceive the speed of music, its pitch in the process of learning. This affects the understanding of cultural parameters, which makes it possible to separate one music from another²⁵. The preservation of traditional Isan music affects the transfer of artistic and cultural traditions. Innovative tools can be used to build a sound library that contributes to the understanding of the uniqueness of traditional sounds. The Logic Pro X application can be used in the learning process, which helps to take into account the nuances of flexibility and dynamics. Understanding the authentic timbre affects the quality of instrumental playing, ensuring its artistic expression, preservation of originality²⁶.

The studied articles give grounds to establish the need to study authentic music for the spread of cultural heritage. Research gaps are related to the lack of a deeper impact of authentic music on the development of students' musical skills. The limitations are related to the development of effective mechanisms for ensuring the educational process.

²³ Bing, Zhao, Ismail, Md Jais, Sile, Huang, Wong, Wei Lun. Harmony Amidst Change: Revitalizing Guangxi's Intangible Cultural Heritage Music in Higher Education. *International Journal of Religion*, 5, No. 4, 2024, pp. 213-223. <https://doi.org/10.61707/5fat0w79>

²⁴ Ning, X., Suttachitt, N., Charoensloong, T., Daoruang, K. Exploring Philosophy in Piano Teaching: Taking Piano Adaptations of Northern Shaanxi Folk Songs as an Example. *Cultura: International Journal of Philosophy of Culture and Axiology*, 21, No. 1, 2024, pp. 49-66.

²⁵ Treider, John Melvin, Kunst, Jonas R., Vuoskoski, Jonna K. The influence of musical parameters and subjective musical ratings on perceptions of culture. *Scientific Reports*, 13, No. 1, 2023, pp. 20682. <https://doi.org/10.1038/s41598-023-45805-w>

²⁶ Seekhunlio, Weerayut, Chuangprakhon, Sayam, Phiwpuy, Kittichai. The preservation of Isan folk music with digital sound technology. *Multidisciplinary Science Journal*, 6, No. 4, 2024, pp. e2024058. <https://10.31893/multiscience.2024058>

Methodology

Research Design

The first stage of the research involved the creation of educational approaches for the possibility of using an authentic repertoire in education. The educational approaches were designed for instrumental musicians and involved the use of digital technologies. The second stage of the research provided for diagnosing the performance skills acquired by the students. The research was conducted as a result of focusing on Ukrainian and European authentic melodies, which involved original and transformed performance. The third stage of the research was aimed at determining the level of students' musical skills and the impact of training on the formation of students' personalities and their professionalism.

Sampling

Conducting research became possible as a result of the involvement of 200 students who were learning to play musical instruments. Students who had the skills to play traditional musical instruments (kobza, bandura, trembita, etc.) and piano were involved in the study. These requirements are related to the programme of study, which involves mastery of various musical instruments. Restrictions were also associated with the initial level of mastery of playing musical instruments. The students' level had to be above medium, which is connected with the need to perform complicated tasks during training. Before the study, the authors planned to involve 270 students. But 70 students had a primary level of playing musical instruments, which required the development of an additional curriculum. This could have affected the validity of the obtained results, as the performance test would have involved the use of different training approaches.

Methods

The development of educational approaches was aimed at using a general theoretical method of analysis. The process involves exploring different approaches not only for instrumental learning, but also the possibility of using authentic music. The study analysed digital applications to be used in the educational process (Music Theory Companion, goodEar Pro). The choice of applications depended on the implementation of learning approaches. The training was conducted for 16 weeks.

The students' musical and performing abilities were diagnosed in the last week of training, which involved the use of the method of observing students. The students performed Ukrainian and European melodies of their own choice and in accordance with the assigned tasks. They had to demonstrate an original

performance and offer their own variations. Based on the results of the observation, the efficiency ratio was calculated, which was developed by the authors:

$$r = \frac{(|p^a + t^i| - 1)^2}{e^p + h^c}, \quad (1)$$

p^a – a score for preserving the authentic style of performing the composition;

t^i – a score for the instrumental interpretation technique;

e^p – a score for the emotionality of performance;

h^c – a score for a harmonious combination of musical elements.

The level of acquired skills among students was also determined on the basis of observation. The results were obtained among all students based on their capabilities, which involved the calculation of the sampling ratio, which was developed by the authors:

$$d = \frac{m^l}{h^l}, \quad (2)$$

m^l – a score for the level of mastery of a particular skill when performing authentic melodies;

h^l – the highest level of development of a particular skill;

Determining the level of developed personal and professional skills involved taking into account certain criteria. Personal skills provided students with a general understanding of the specifics of musical culture in different historical periods, the development of emotional skills, innovation, creativity, etc. Professional skills were related to the understanding of the techniques of creating musical scores, the quality of instrumental interpretation, sense of order, musical orientation, etc. The calculations were obtained by analogy with the determination of musical skills acquired by students based on the sampling ratio.

Data Analysis

The analysis of the results involved the calculation of the correlation index²⁷. The statistical values of the correlation index were aimed at comparing students' skills and comparing personal and professional development. Statistical calculations are aimed at determining aggregates of indicators that

²⁷ Yanko, Matthew, Taylor, Jessica, Gouzouasis, Peter. Music Making, Empathy, Prosocial Behavior, and Happiness in Young Learners: An Autoethnography on Bullying Intervention. Springer International Handbooks of Education, F2322, 2024, pp. 277-293.
https://doi.org/10.1007/978-3-031-21155-3_35

have deviations in the process of comparison. They allow for logical substantiation of the results.

$$J_r = \sqrt{1 - \frac{(y_i - \hat{y}_i)^2}{(y_i - \bar{y}_i)^2}}, \quad (3)$$

y_i – dynamic values;

\hat{y}_i – the average statistical value;

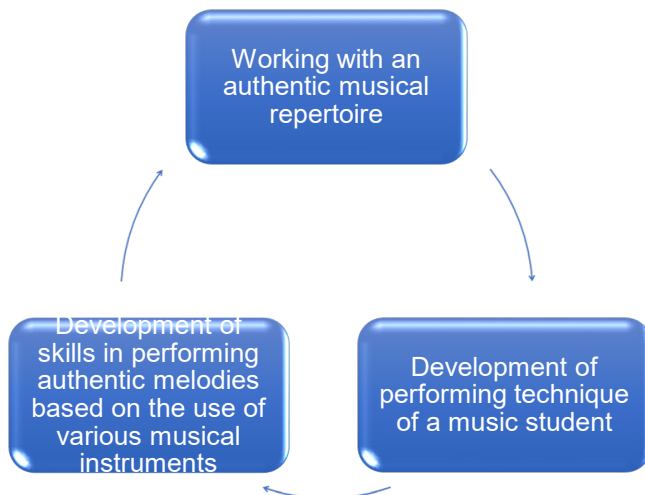
\bar{y}_i – a theoretically determined estimate of the most influential indicators.

Results

Understanding the techniques of authentic interpretation of melodies contributed to the development of teaching methods. The teaching methodology was aimed at the possibility of using different repertoire and digital technologies (Figure 1).

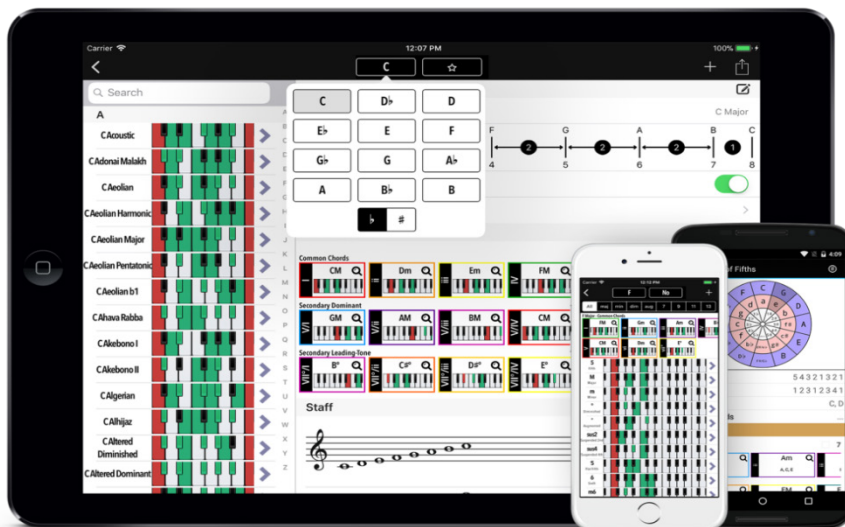
In order to understand the ways of interpreting authentic compositions in the educational process, it was planned to conduct their analysis. The analysis provided for determining the historical features of the creation of a certain composition, which contributed to the understanding of the melody sentiments. The analysis of compositions involved understanding the technique of performing a particular composition, focusing on its expressive elements, musical decorations, change of tempo, etc. Students also analysed the possibility of musical performance of the composition with various musical instruments. Ukrainian and European compositions were chosen as an authentic musical repertoire, which contributed to the expanded perception of cultural values. The analysis of musical compositions was also carried out by using the interactive application Music Theory Companion (Figure 2). Based on the established results, the students interpreted authentic melodies in their original performance. Reproduction of the original melody promotes practicing various skills, complex techniques, preservation of the tempo, the performance tonal plan of the original compositions.

Fig. 1



Learning techniques for using authentic music while playing musical instruments

Fig. 2



The Music Theory Companion application that facilitates working with authentic music repertoire

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The development of the performing technique of music students was connected with the perception of musical compositions by ear. This mechanism was aimed at mastering the skills of adapting one's own abilities to a piece of music. This contributes to the memorization of its artistic content, emotional elements, sequence of sounds, assimilation of interpretation methods. Performing the musical imitation techniques can be used for building the skills of interpreting music of various styles and cultural origins. Perceiving a melody by ear contributes to a reinterpreted understanding of the melody, which forms musical thinking and helps to take into account possible nuances. Based on these skills, students can diversify the learning process, which affects the quality of intonation reproduction, rhythm improvement. rethinking the performance technique and expanding the idea of the sound palette. The students become more confident in instrumental interpretation of melodies, as it eliminates possible shortcomings in performance due to the perception of other compositions. Auditory perception of melodies affects the development of sound, timbre, and dynamic features of their performance, which contributes to the preservation of the unique style of authentic melodies.

The development of the skills of performing authentic melodies with the use of various musical instruments contributes to the search for the performance individuality. The process is related to the selection of different scales, sounds, musical techniques for performance on a separate musical instrument. These skills were developed through the use of the goodEar Pro application (Figure 3). The application contributed to the performance of various exercises for working with a musical composition, which ensured the emotionality and expressiveness of its performance. The learning mechanism contributed to the development of creative activity, focusing on the most favourable methods of performance. Students had to focus on the specifics of authentic compositions, while preserving the basic uniqueness. The students had to work on developing the skills of metrorhythmic clarity, phrasing, stroke skills, and provide sound build-up. The interpretation of the musical composition involved preserving the manner of intonation and stylistic preferences. This learning approach is aimed at acquiring professional musical knowledge.

The diagnostics of students' musical and performing skills was carried out at the second stage of the study. The results are obtained on the basis of the performance of authentic Ukrainian and European compositions, taking into account the level of original performance on traditional musical instruments. The level of performance of melodies using a piano was also taken into account in view of one's own interpretation capabilities (Table 1).

Fig. 3



The goodEar Pro application, which promotes the development of skills in performing authentic melodies with the use of various musical instruments

Table 1

The level of possible knowledge	Ukrainian authentic melodies			European authentic melodies		
	Original performance	Own variations	J_r	Original performance	Own variations	J_r
High	7.4 (85%)	8.0 (83%)	0.072	7.5 (86%)	7.2 (80%)	0.084
Medium	5.6 (15%)	5.3 (17%)	0.083	5.4 (14%)	5.6 (20%)	0.086
Low	-	-	-	-	-	-

Diagnostics of musical and performing skills of instrumentalist music students

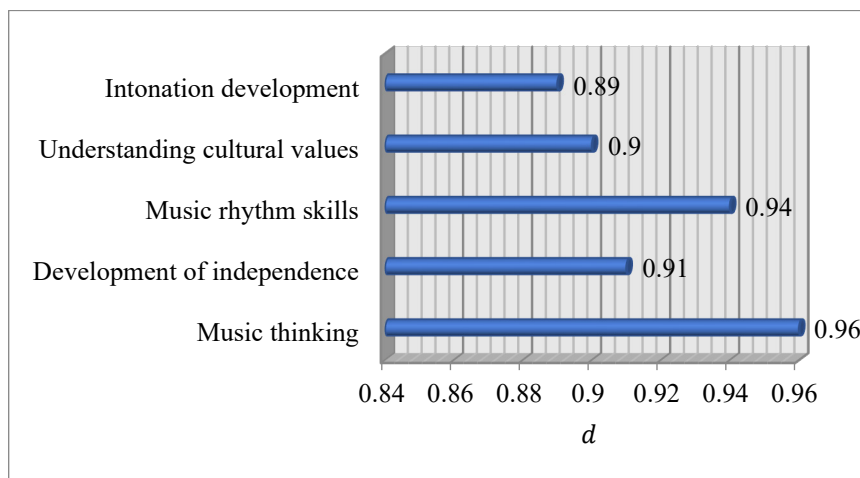
After training, students achieved high results in performing authentic compositions. This is determined by their primary processing, the use of interactive technologies that enhance students' learning motivation. Creating own variations of authentic Ukrainian melodies showed higher results than original reproduction

of authentic melodies. This is related to a better understanding of the culture of the Ukrainian people, their spirituality, philosophy, which affects the greater possibility of using various melodic instruments. The quality of providing one's own variation of the composition is related to the preservation of poetic features, imagery of the language, which strengthen the emotionality of the performance. The students were able to preserve the complexity of the melody, in which they harmoniously combined the used techniques. The compositions were characterized by completeness of sound, harmonic repetition. Performing one's own variations of authentic European melodies with the help of the piano was associated with the homogeneity of the sound, insufficient understanding of the culture of other countries. However, piano interpretations were characterized by texture saturation, which affected the perception of melodies. The melodiousness and rhythmicity of the musical text was emphasized with the help of repetitions, which contributed to the overall expressiveness of the performance.

The original performance of authentic European melodies was characterized by a higher level, which is connected with the provision of an aesthetic sound. The students achieved high results through artistic interpretation of music, taking into account symbolic metaphors, preservation of timbre techniques. Unique motifs and plots were preserved in the performance of European compositions. Students could perform typical European melodies better than transformed ones. The original performance of authentic Ukrainian melodies was characterized by a high level of expressiveness, which is related to the contrast of the sound. But the intonation was not always clearly followed, which affected the formation of the purity and expressiveness of the sound. However, the students were able to convey the depth of sound, the harmony of vibrational oscillations.

It was determined how the authenticity of the performance affected the development of the students' musical skills (Figure 4).

Fig. 4



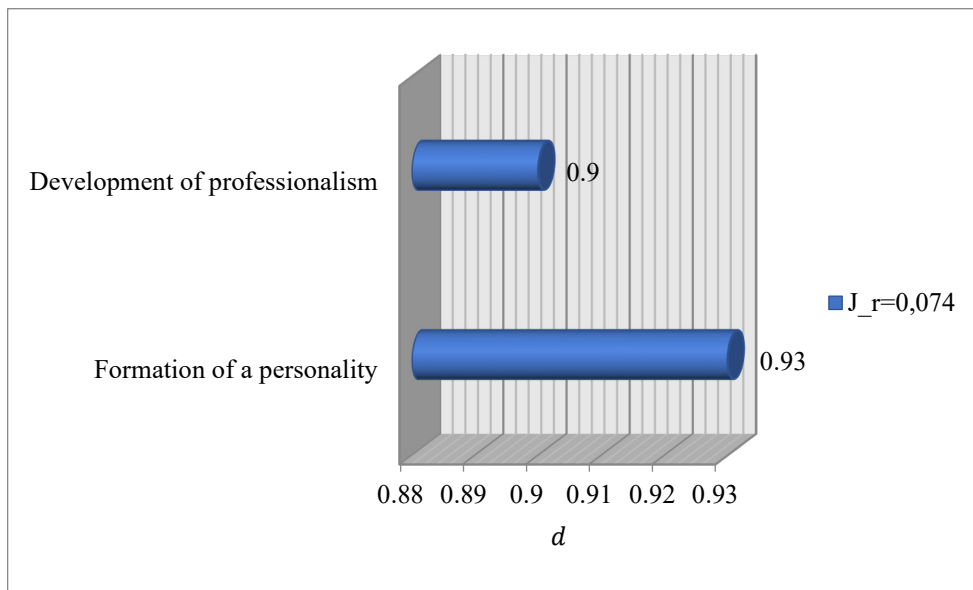
Students' skills that were developed during the instrumental performance of authentic melodies

During the study, the students built musical thinking skills, which affects the quality of interpretation of authentic compositions. Musical thinking is related to understanding the patterns of interpretation of musical compositions, taking into account the patterns of their creation and interpretation. Due to the developed musical thinking, the performance of the compositions was characterized by the expressiveness of the interpretation, taking into account the creativity of the sound. The development of independence is connected with the creative search for methods of performing compositions and the possibility of using digital applications. Independence made it possible to influence the possibility of finding the most favourable approaches to the performance of melodies. The development of musical hearing enabled students to vary expressive means, which affected the quality of musical interpretation. Developed musical and rhythmic skills influenced the provision of harmonious interpretation, maintaining the sequence of sounds. This ensured the consistency of musical sounds and the brightness of their performance. The skills contributed to the creation of musical variations. The understanding of cultural values is related to the understanding of the peculiarities of the interpretation of various melodies, which was reflected in the accuracy of their reproduction. The intonation development contributed to the expressive performance of melodies, which ensured a more complicated interpretation. This makes it possible to focus on individual fragments of a musical work.

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Based on the skills acquired by the students, it was established how it affected the formation of personality and professionalism (Figure 5).

Fig. 5



**Determining the level of professional skills and personality
of future instrumental musicians**

It was established that the use of authentic melodies in education contributed to the development of the personality in the first place, which is connected with the outlook development. Personal skills were formed as a result of studying the specifics of the compositions of different countries. This was related to the study of the relationship between cultural characteristics and parts of a musical work. Perception and reproduction of various compositions affects the enrichment of students' cultural knowledge. Professional skills were also developed at a high level, which is connected with the qualitative perception of educational information. The use of interactive approaches made it possible to improve work with authentic compositions, which was reflected in the quality of their performance. Active perception of materials influenced the expansion of professional skills.

Discussion

In the educational process, students should maintain a positive attitude, which contributes to a better perception of information. Folk music helps to reduce stress and anxiety. Interpretation of music enables eliminating negative emotions and provide emotional interpretation. Folk music makes it possible to convey the beauty of a particular culture, which affects spiritual development²⁸. In the educational process, folk music can be used in a variation with modern music, which ensures its distribution. Innovative technologies help combine traditional notes with a Western musical score. Triple Note digital software provides the ability to change music to make it sound better. It affects the possibility of developing students' musical skills, which influences the perception of music. The results of the study showed that the average level of knowledge among 20 students was 4.76 out of 5²⁹. Studying approaches to the interpretation of melodies on musical instruments should be based on a coordinated process. Special attention should be paid to the development of musical coordination skills. The Dalcroze method helps to improve the melody interpretation skills and consists in the development of rhythmic skills with the help of additional body movements. During training, it is necessary to take into account the combination of music, movements and words, which contributes to a better understanding of it. This approach influenced the improvement of student results and contributed to the achievement of a high level of musical coordination³⁰. The presented works indicate that in order to ensure the educational process, it is necessary to pay attention to the musical coordination of movements. Our research involves a more complex approach, which is related to the work on the musical authentic repertoire. It also includes the development of the music students' performance technique of the development of the skills of performing authentic melodies with the use of various musical instruments. The educational process was provided on the basis of the use of digital technologies (Music Theory Companion, goodEar Pro).

²⁸ Granot, Roni, Spitz, Daniel H., Cherki, Boaz R., Loui, Psyche, Timmers, Renee, Schaefer, Rebecca S. ... Israel, Salomon. "Help! I Need Somebody": Music as a Global Resource for Obtaining Wellbeing Goals in Times of Crisis. *Frontiers in Psychology*, 12, 2021, pp. 648013. <https://doi.org/10.3389/fpsyg.2021.648013>

²⁹ Seeyo, Warakorn, Seekhunlio, Weerayut, Chuangprakhon, Sayam. Bridging Thai music notation to Western music scores through innovative conversion and evaluation. *Multidisciplinary Science Journal*, 6, No. 5, 2024, pp. e2024073. <https://10.31893/multiscience.2024073>

³⁰ Ismail, Md Jais, Chiat, Loo Fung, Ying, Loo Fung. An Active Learning Study: Mastering Music Coordination Skills through Kompang and Dalcroze Eurhythmics among Primary Students. *International Journal of Instruction*, 16, No. 1, 2023, pp. 191-204. <https://doi.org/10.29333/iji.2023.16111a>

The development of skills of authentic performance of compositions can be implemented with the help of a multicultural approach, which contributes to the development of ethnic identity. Teaching should be based on a culturally sensitive approach that facilitates the selection of an appropriate musical repertoire. Collective learning contributes to a better perception of music, which affects the quality of its interpretation³¹. The modern system of music education focuses on technical possibilities, which contributes to the transformation of existing methods. The combination of different technologies provides better instrumental learning. The Muzquturie application can help to develop technical skills; Avid Cloud Collaboration – work on the artistic repertoire; Pibox Music – development of instrumental improvisation skills. Development of melody performance skills, including authentic music, on the saxophone with the help of digital technologies contributed to the achievement of high results³². Traditional musical instruments (plectrum, baglama) make it possible to ensure the performance of authentic melodies. This ensures the transfer of the local melody, its rhythmic structure, the creation of parallelism and harmony techniques. When performing authentic music, it is necessary to preserve the manner of performance. The creation of learning templates enables diversification of learning approaches, which is related to conceptual expressiveness and affects the ability to preserve the basic structure of melodies³³. The presented works focus on the multicultural approach to education and the use of various repertoires. Our article also reflects the possibilities of using different repertoire. But the emphasis is on the possibility of original and modified performance through the use of traditional and modern musical instruments.

Focusing on authentic music contributes to the formation of cultural identity and public consciousness. Education should be aimed at personality development, expansion of the student's horizons, and music skills. Therefore, the use of authentic melodies contributes to better learning. The use of digital technologies ensures the creation of favourable conditions for the development of musical culture³⁴. Digital instruments are an auxiliary tool in the educational

³¹ Guan, Tao, Luo, Ning, Matsunobu, Koji. Nurturing student ethnic identity through culturally responsive music teaching in China. *International Journal of Music Education*, 41, No. 4, 2023, pp. 598-615. <https://doi.org/10.1177/02557614221132550>

³² Han, Wei. The use of digital technologies in teaching the saxophone in a Chinese conservatory: learning based on the experience of saxophonists Du Yinjiao and Liu Yuan. *Interactive Learning Environments*, 2023b, pp. 1-12. <https://doi.org/10.1080/10494820.2023.2207391>

³³ Benli, Yusuf. Systematic of Tezene [Plectrum] patterns and the determination of their technical and conceptual forms in baglama teaching and performance. *Rast Müzikoloji Dergisi*, 11, No. 3, 2023, pp. 363-394.

³⁴ Minenok, Antonina, Zinkiv, Iryna, Konovalova, Iryna, Polska, Iryna, Karapinka, Marta. Art education as a means of forming cultural identity and civic consciousness. *Multidisciplinary Reviews*, 6, 2023, pp. e2023spe008. <https://10.31893/multirev.2023spe008>

process, which contributes to the development of musical skills. Digital technologies during solfeggio classes contribute to the development of students' hearing. A comparison of students' initial and acquired knowledge showed a high level of achievement of 60% of students³⁵.

The review of academic articles established that when studying authentic music, it is necessary to convey the uniqueness of its sound. But the combination of learning mechanisms based on instrumental music is considered limited. Our article reflects the possibility of using authentic music in the training of instrumental musicians. Emphasis is placed on the possibility of variation in the repertoire and the use of digital technologies. The work also determines the skills developed by students during their studies.

Limitations

The research limitations are related to determining students' effectiveness due to orientation towards European and Ukrainian authentic musical material. The work does not consider the effectiveness of students' musical skills due to the use of specific melodies and their performance. However, the study presents learning mechanisms, which can be used to further detail the research.

Recommendations

The inclusion of authentic melodies in the educational process has a positive meaning for the understanding of the musical culture of a certain region. Based on the study of authentic melodies, it is possible to use original musical elements during interpretation, which are the basis of various musical genres. Expanding the students' horizons affects the quality of instrumental playing, the transfer of expressiveness, emotionality.

Conclusions

The authors developed training methods in order to determine the effectiveness of the methods of authentic performance of melodies on musical instruments. It was established that working with authentic musical material contributes to a better understanding of its historical features. Additional use of Music Theory Companion enables preserving the original performance of compositions. The development of the performing technique of a music student was connected with its perception by ear. The development of the skills of performing authentic melodies based on the use of various musical instruments affects the individuality of musical performance, which became possible to

³⁵ Huang, Qian. Design and Implementation of Solfeggio and Ear Training Learning Assistant System Based on Computer Cat Technology. *Journal of Physics: Conference Series*, 1881, No. 2, 2021b, pp. 022034. <https://doi.org/10.1088/1742-6596/1881/2/022034>.

realize through the goodEar Pro application.

The presented learning mechanisms showed a high level of developed musical knowledge as a result of the diagnosis of musical and performing skills. It was established that creating own variations of authentic Ukrainian melodies using the piano allowed students to achieve high results (8.0). The results are related to the understanding of the peculiarities of Ukrainian culture, which ensures the selection of the most favourable musical instruments for musical variations. The original performance of Ukrainian melodies (7.4) was associated with slightly lower results, which is explained by a change in intonation. Original performance of European authentic melodies scored higher (7.5) than creating own variations (7.2). The results are related to the observance of standard mechanisms for the performance of melodies, focusing more on the technical component, rather than on free and emotional performance.

The educational process with the use of authentic melodies also had a positive effect on the development of students' various skills. The most pronounced was musical thinking (0.96), which is associated with observing musical patterns. Independence skills (0.91), musical and rhythmic skills (0.94), understanding of cultural values (0.90), understanding of intonation (0.89) were also developed. It was established that training had a positive effect on the formation of the students' personality (0.93) and professionalism (0.90).

The practical significance of the work is the search for mechanisms that can be adapted in the educational process for studying the techniques of instrumental interpretation of authentic music. The research prospects are related to the expansion of groups of respondents depending on age (schoolchildren and students), which takes into account the effectiveness of one teaching method.

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