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**POLYPHONY: INTERDISCIPLINARY DIMENSION
or WHY DOES A CHOREOGRAPHER NEED POLYPHONY?**

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**ПОЛІФОНІЯ: МІЖДИСЦИПЛІНАРНИЙ ВИМІР,
або НАВІЩО ХОРЕОГРАФУ ПОЛІФОНІЯ?**

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In the process of searching for an answer to the question posed in the title "Why does a choreographer need polyphony?" the article: 1) the essence of polyphony is outlined on the basis of the use of optics of various scientific disciplines and branches of knowledge: philosophy, social sciences, art history, in particular, musicology, choreology, as well as methodological disciplines within the educational programmes for training future choreographers, among other things, for choreographic activity. Today polyphony is a universal methodological principle that implies the coexistence of many opinions and a variety of voices, the equal status of these voices, their joint parity in creating a polyphonic fabric of either an artistic work or a democratic society; 2) the place of polyphony in the professional training of future choreographers, in particular, for choreographic activity, is characterized. It was found that students should get acquainted with the phenomenon of polyphony in music and polyphony as a choreographic technique in the process of broad interdisciplinary humanitarian training; 3) it was found that the universal principle of polyphony can be successfully implemented, for example, within the framework of the implementation of a didactic-democratic model of professional training of future choreographers (J. Butterworth) to ensure democratic principles and humanization of the educational process; stimulating cooperation and co-creation of teacher and student; activation of professional socialization of the future choreographer in the creative process based on polyphonic group dynamics (M. Chen, I. Pulinkala, and K. Robinson); 4) involving students in project activities to create collective choreographic productions, in particular with the use of choreographic polyphony techniques and on the basis of polyphonic group dynamics, will contribute not only to the formation of special competencies in future choreographers, but also to the development of general (social) competencies, soft skills, and professionally significant personal qualities; 5) the assumption is made that acquaintance with the phenomenon of polyphony in music and choreography, in particular in the works of famous contemporary choreographers (J. Neumeier, etc.), as well as the concept of polyphonic group dynamics, should lay the foundations for a broader interpretation of the phenomenon under study and understanding its essence as the basis for building a democratic society with humanistic European values in Ukraine, a society where diversity is an important resource and basis for social dialogue.

Keywords: future choreographers, choreographic education, training, choreographic activity, polyphony, voice, melody, theme, interdisciplinary integration, didactic-democratic model, polyphonic group dynamics, humanization, democratization

У процесі пошуку відповіді на поставлене у заголовку питання «Навіщо хореографу поліфонія?» у статті: 1) окреслено суть поліфонії на основі застосування оптики різних наукових дисциплін і галузей знань: філософії, суспільних наук, мистецтвознавства, зокрема, музикології, хореології, а також методичних дисциплін у межах освітніх програм підготовки майбутніх хореографів, з-поміж іншого, до балетмейстерської діяльності. З'ясовано, що сьогодні поліфонія є універсальним методологічним принципом, що передбачає співіснування багатьох думок і різноманіття голосів, рівноправний статус цих голосів, їхню спільну паритетну участь у створенні багатоголосної тканини чи то мистецького твору, чи то демократичного суспільства; 2) схарактеризовано місце поліфонії у професійній підготовці майбутніх хореографів, зокрема, до балетмейстерської діяльності. Виявлено, що студенти мають знайомитися з феноменом поліфонії в музиці та поліфонією як балетмейстерським прийомом у процесі широкої міждисциплінарної гуманітарної підготовки; 3) виявлено, що універсальний принцип поліфонії може бути з успіхом реалізований, наприклад, у межах упровадження дидактико-демократичної моделі професійної підготовки майбутніх хореографів (J. Butterworth) для забезпечення демократичних засад і гуманізації освітнього процесу; стимулювання співпраці та співтворчості викладача та студента; активізації професійної соціалізації майбутнього хореографа у творчому процесі на основі поліфонічної групової динаміки (M. Chen, I. Pulinkala, та K. Robinson); 4) залучення студентів до проєктної діяльності зі створення колективних балетмейстерських постановок, зокрема із застосуванням прийомів хореографічної поліфонії та на основі поліфонічної групової динаміки, сприятиме не лише формуванню в майбутніх хореографів спеціальних компетентностей, але й розвитку загальних (соціальних) компетентностей, soft skills, професійно значущих особистісних якостей; 5) сформульовано припущення, що ознайомлення з явищем поліфонії в музиці та хореографії, зокрема у творчості відомих сучасних балетмейстерів (J. Neumeier та ін.), а також з поняттям поліфонічної групової динаміки має закладати основи ширшого трактування досліджуваного феномена й розуміння його суті як основи розбудови в Україні демократичного суспільства з гуманістичними європейськими цінностями, суспільства, де різноманіття є важливим ресурсом і базою для суспільного діалогу.

Ключові слова: майбутні хореографи, хореографічна освіта, підготовка, балетмейстерська діяльність, поліфонія, голос, мелодія, тема, міждисциплінарна інтеграція, дидактико-демократична модель, поліфонічна групова динаміка, гуманізація, демократизація.

General statement of the problem and its connection with important scientific or practical tasks. At this stage of the higher education development, in particular, choreographic education in Ukraine, there are following trends:

1) intensive integration into the European and global educational and scientific space. This trend is not new, but it has become particularly relevant at a time of full-scale military aggression by the Russian Federation, when Ukraine is fighting for its right to exist as an integral part of European civilization and an independent democratic state with European civilizational values.

2) humanization of the content, humanisation and democratization of the process of professional training. In recent decades, the trend has been more pronounced in the process of humanizing the content of education and has somewhat less affected the humanization and democratization of the process of obtaining it. However, it should be noted that the full implementation of the new mechanism of accreditation of educational programs has radically changed the picture and launched a broad and, most

importantly, effective humanization and democratization of relations between the subjects of the educational process on the principles of openness and transparency;

3) broad interdisciplinary integration at all levels, from the content of a particular class, discipline, or educational program to the development of a new integrative interdisciplinary philosophy and methodology of education in a broader context. This trend affects the conceptual foundation of modern higher education – its methodology. We are currently attempting to outline ways to implement broad interdisciplinary integration on a rather narrow local example of professional training for future choreographers.

The analysis of the recent research and publications that has addressed this issue. An analysis of the standards of the first (bachelor's) and second (master's) levels of higher education in the speciality 024 Choreography (Ministry of Education and Science of Ukraine (hereinafter MES), 2020a; 2020b) shows that their compilers distinguish four functions in the field of professional choreographic activity: performing, teaching, choreographic organisational (MES, 2020b, SC04). Undoubtedly, professional training for all these functions provides ample opportunities for implementing an integrated interdisciplinary approach. However, we will focus on training future choreographers for choreographic activity as, in our deep conviction, the most universal and requiring integrated knowledge, skills, and complex professionally significant personal qualities.

Thus, in the standard of the first (bachelor's) level of higher education in specialty 024 (MES, 2020b), the programme learning outcomes (hereinafter PLOs) necessary for the performance of choreographic activities are outlined in PLO07 and PLO14; the achievement of these PLOs, in turn, is ensured by the formation of specialized competences (hereinafter SCs) SC02 and SC09, respectively (see Table 1).

In the standard of the second (master's) level of higher education (MES, 2020a), the preparation for choreographic activity is already outlined by three pairs of special competences and program learning outcomes (see Table 1).

Table 1

Content of training future choreographers for choreographic activities in the higher education standards in speciality 024 Choreography

<i>Specialized competences (SC)</i>		<i>Programme learning outcomes (PLOs)</i>
First (bachelor's) level of higher education (MES, 2020b)		
SC02 – ability to analyze the main stages, identify patterns of historical development of the arts, stylistic features, types and genres, basic principles of coordination of historical and stylistic periods of world artistic culture	→	PO07– to know and understand the history of art at the level necessary to apply expressive and pictorial means in accordance with the style, type, and genre of the choreographic project
SC09 – the ability to collect, process, analyse, synthesize and interpret artistic information to create a choreographic composition	→	PLO 14 – master the principles of creating a choreographic work, implementing the practical implementation of the creative idea in accordance with the personal qualities of the author

Continuation of Table 1

Second (master's) level of higher education (MES, 2020a)		
SC9 – ability to choreograph and perform choreographic works	→	PLO14 – develop and implement choreographic works, creatively approach the choice of genre, form, and expressive means in accordance with the theme and idea
SC10 – awareness of the synthetic nature of the art of choreography and the diversity of its possible connections with other arts in choreographic work	→	PLO15 – implement creative ideas considering the synthetic nature of choreographic art and the multivariate nature of its combination with various arts
SC17 – the ability to develop and implement an author’s choreographic works of various forms, genres, and expressive means, using traditional and modern techniques of their creation	→	PLO2 – implement the full cycle of a multi-part choreographic work - from creative idea to stage performance, considering the experience, available requirements and resources, and other conditions

Of course, the development of conceptual foundations and directions for the development of choreographic education began even before the approval of the standards of the first (bachelor's) and second (master's) levels in 2020, for example, in the works of L. Androshchuk (2019), T. Blahova (2018; 2021), and continued in the works of E. Maneliuk (2023) and others.

Currently, the traditions and current state of choreographic education in foreign countries are being actively studied: Great Britain – D. Bidyuk (2022); USA – L. Salo (2020); Germany – I. Tkachenko (2016); People’s Republic of China – A. Maksimenko (2014), Chang Zhen (2022); Republic of Kazakhstan – Yu. Efimenko (2014); Republic of Poland – T. Powalii (2015), etc.

The competence-based principles of training choreographers were developed by T. Medvid (2018). Over the years, researchers have substantiated the importance of forming different types of competencies in future choreographers: pedagogical (Yang Zhuang, 2020); interpretive – S. Tverdokhlib (2018); intercultural – O. Tishchenko (2018); socio-cultural – L. Prusova (2020), and soft skills – T. Medvid and N. Tereshenko (2021); professional culture and competence in general – O. Kovalenko and Zhang Xiao (2021), and others.

However, in our opinion, the professional competence of a [future] choreographer/choreography teacher has been most actively studied until recently. Various approaches to identifying its essence, structure, content, and methods of formation have been proposed by T. Blahova (2018), L. Hekaliuk (b.d.), O. Lymanska and O. Barabash (2018), O. Martynenko (2015), I. Spinul (2011), I. Stepaniuk (2022), T. Furmanova (2016), and others.

I. Spinul (2011) considers the phenomenon under study as "integrated education in the holistic professional structure of the student’s personality [*future choreography teacher, K. Yu., O. L., O. T., O. B.*], which is one of the manifestations of their professional development and professional and pedagogical culture, an indicator of the formation of professionally necessary qualities and characteristics based on the system of psychological, pedagogical and professional knowledge, skills, experience of

emotional and value attitude to the phenomena of choreographic art in accordance with social requirements and values that determine the necessary level of readiness for choreographic and pedagogical activities, provide a high level of self-organisation and professional self-realisation (Spinul, 2011, p. 275). The author also emphasizes the need for future choreography teachers to have a basic knowledge of music theory (Spinul, 2011, p. 276).

O. Martynenko (2015) considers the professional competence of a choreography teacher as "a personality trait that manifests itself in the ability to teach, perform and **choreograph** [emphasis added, K. Yu., O. L., O. T., O. B.], theoretical and practical readiness of a choreography teacher to teach choreography in the system of school and out-of-school education, the ability to act effectively, to solve standard and problematic situations that arise in practical pedagogical activity" (Martynenko, 2015, p. 167).

Yang Zhuang (2020) refers to the content of the pedagogical competence of a future choreographer teacher as "various general, artistic knowledge, choreographic skills, abilities and individual and personal characteristics" (Yang Zhuang, 2020, p. 174). It is noteworthy that the researcher separately emphasizes the importance of a choreographer teacher being able to create choreographic texts, which we can interpret as the ability to choreograph. The author speaks primarily about the ability of a teacher-choreographer to create original artistically and socially significant performances: to structure the composition of the dance in various choreographic forms – a number, suite, one-act ballet, etc.; to competently build a choreographic composition, build the spatial and temporal arrangement of performers on stage, and convey the idea and meaning of the work to the audience through the means of the choreographic text (Yang Zhuang, 2020, p. 175).

It should be noted that most researchers pay special attention to the ability of choreographers and choreography teachers to work competently with musical material in the process of their choreographic activity.

For example, T. Medvid (2018) identifies music and information competence as the basic competence for a specialist in the field of choreographic art: "possession of knowledge of music theory and history necessary to work in a choreographic class", as well as "the ability to independently search for musical material on the Internet, textbooks, teaching aids; the ability to compose it for a particular choreographic composition, dance" (Medvid, 2018, p. 237), which should be based on a wide artistic erudition, sufficiently deep knowledge of the history of music, and the work of contemporary domestic and foreign composers.

S. Tverdokhlib (2018) reveals the choreographic skills of a choreography teacher and identifies, among other things, the ability to "focus on the musical and dramatic component of the work's content, building a single and holistic image of the stage action" and "use the choreographic vocabulary of productions at a professional level, revealing the figurative content of each movement" (Tverdokhlib, 2018, p. 219). O. Kovalenko & Zhang Xiao (2021) consider it fundamentally important for a choreographer to know the methodology of selecting a musical repertoire for choreographic activity.

The interaction, the synthesis of music and choreography in choreographic activity is directly addressed in the works of such authors as I. Hertz (2018); V. Duzhych-Nikolaichuk (2018); O. Yemelianova (2017); R. Kundys, I. Nikorovych, N. Kiptilova, and Ju. Buhryn (2021); Lee Zhi (2023); D. Yunyk and I. Khmelevska (2022), and others.

The multiartistic nature of choreography, particularly its close connection with music, is too broad a topic. Therefore, we will focus on only one extremely multidimensional phenomenon – polyphony – and consider it through the lens of various scientific and artistic disciplines.

The purpose of this article is to answer the question posed in the title "Why does a choreographer need polyphony?" 1) to outline the essence of polyphony in the interdisciplinary dimension; 2) to characterize the place of polyphony in the professional training of future choreographers, particularly for choreographic activity.

The presentation of the main material. Today we have a consensus in society that national (but if we look closely, not only national) education is in crisis. This crisis was not caused by martial law or quarantine restrictions during the COVID-19 pandemic, which immediately preceded the full-scale military aggression of the Russian Federation against Ukraine. It can be said that crisis phenomena in education have been growing in recent decades around the world, at least since the turn of the 20th and 21st centuries.

The crisis is manifested in the loss of key educational benchmarks, as it turned out that we, teachers and adults in general, have no idea what the life we want to prepare the younger generation for will look like.

The nature of the current crisis in education has been succinctly and accurately described by philosopher N. Pryschak (2017). The author connects the crisis phenomena with the change in dominant educational paradigms, sees their roots in changes in sociopolitical formations, and traces several such turning points in sociopolitical history. According to him, the era of industrial civilization gave rise to the rationalist philosophy of the Modern, which, in turn, was the basis of the classical (traditional) paradigm of education with its need for mass training of personnel for industrial, later assembly-line production. N. Pryschak notes that the key principle of the classical educational paradigm was the search for the "only right, true" system of education (Pryshchak, 2017). We would like to add: a system of education that is unified and unifying, built on the patterns of industrial machine production and designed to produce, "stamp out" personnel for the industry in a "conveyor belt" way.

The transition of humanity in the second half of the twentieth century to a post-industrial, information civilization was accompanied by the emergence and spread of concepts and ideas that, according to N. Pryschak's apt description, rejected "narrative-totalitarian tendencies" in science, philosophy and education and absolutised pluralistic, relativistic, nihilistic approaches (existentialism, postmodernism, etc.) (Pryschak, 2017). However, as the researcher emphasizes "any absolutisation of the principles of pluralism, relativism, relativity in philosophy, ethics, education (pedagogy) also leads to negative consequences, especially in the field of values and morality" (Pryschak, 2017).

Thus, today, the classical educational paradigm with its hypertrophied rationalism, imperativeness, and totalitarianism has completely ceased to meet the requirements of the times. At the same time, the extreme skepticism anarchism, and nihilism of postmodern ideas and concepts have also proved fruitless in creating a new educational paradigm.

N. Pryschak sees a way out of the crisis through consensus, communication, and dialog: "The post-nonclassical philosophy of education is based on 1) the rejection of absolute truths; 2) like the non-classical paradigm, it is based on the pluralism of ideas, worldviews, values, methodological principles, but it focuses on the dialogue of these ideas, worldviews, values, and the development through dialogue of a minimum of common ideas, norms that will be normative, regulatory, imperative, while leaving the main field for freedom, creativity, choice, and individual activity" (Pryschak, 2017).

O. Horban adds that the postnonclassical paradigm of education, "on the one hand, restores the classical approach to systemic knowledge, and on the other hand, combines it with fundamentally new worldview trends" (Horban, 2020, p. 2). The ideas of the abovementioned researchers can be concretised in the context of our scientific search by the conclusions of Yu. Shabanova (2007), who is convinced that the conceptual foundations of the post-nonclassical educational paradigm should be practically implemented in subject-subject, creative-integrative, and synergistic approaches to education (Shabanova, 2007, p. 117).

The reference to philosophy in general and the philosophy of education in particular at the beginning of the article is, of course, not accidental and at the same time is not a tribute to the "templates" of presenting a scientific text. Philosophy proved to be a bridge to the phenomenon of polyphony. Our attention was drawn to an idea developed at the dawn of the independence of the Ukrainian state in 1991 by a team of authors comprising I. Bychko, V. Tabachkovskyi and G. Gorak (1991). At that time, Ukrainian philosophers defined the specificity of philosophical knowledge in general, which, in their opinion, lies in its "pluralistic ("polyphonic"), dialogical, and at the same time tolerant character toward other (different) points of view character" (Bychko, Tabachkovskyi, Gorak, 1991, p. 16). We believe that such pluralistic foundations of philosophical knowledge, which are designed to develop the worldview foundation of public consciousness, have become a kind of inoculation that has prevented the revenge of authoritarianism or even totalitarianism in Ukraine, which occurred in some post-Soviet countries. We are impressed by the position of Ukrainian philosophers who argue that philosophy is always a polyphony, a polyphony of voices. In it, "some 'voices' may be monologic, but in the end it is always polyphony, a plurality of positions and points of view" (Bychko, Tabachkovskyi, Gorak, 1991, p. 16).

It is time to turn to the key concept of our article – polyphony.

The Google search engine returns approximately 93900 results in a fraction of a second for the query *polyphony*. Of course, not all of them are unique, original, or even correct. However, the very fact that the concept of polyphony is so widely represented on the World Wide Web is impressive.

The term *polyphony* is familiar to anyone who ever has received a musical education, even in children's music school. The term itself comes from the Greek

words *poly* (means many), and *phone* (means sound), and, as it becomes clear, means polyphony. In a broad sense any polyphony can be called polyphony. However, a consensus has long been established in academic music circles that all ways of organizing musical fabric, that is, all musical textures, are divided into monodic (single-voiced) and polyphonic. Similarly, polyphony can be 1) homophonicharmonic, when one voice is the leading, main one – the melody, and other voices play the role of harmonic accompaniment to the main melody, and 2) polyphonic. The authors of the article on polyphony in the Ukrainian Music Encyclopedia compare polyphony with homophonic harmony and among the main differences name "fluidity, continuity of movement caused by non-synchronous cadence of voices, erasure of caesurae, imperceptible transitions from one musical structure to another" (Horbunova & Pyaskovskyi, 2018, p. 305).

In the context of our study, the main characteristics of polyphonic music highlighted by the authors of the encyclopedic article on polyphony are important:

1) equality (parity) of all voices when the leading function is not assigned to one voice but passes from one to another for example, the alternate conducting of the fugue theme;

2) melodic development, the independence of all voices, which can be greater or lesser (sometimes a voice is more prominent than the others);

3) mutual melodic and rhythmic contrast of voices, which is necessary in all cases (Gorbunova & Piaskovskyi, 2018, p. 305).

N. Suprun-Yaremenko (2014) considers the characteristic feature of polyphony that distinguishes it from other types of polyphony to be the absence of parallelisms and the presence of opposite intonation movements, which form the basis of polyphony esthetics.

O. Pavlov (2021) has extremely well illustrated the above characteristic features of polyphony. Let us use examples of fragments of the score (Fig. 1) and recordings of individual voices (Figs. 2-4) of one of J. S. Bach's most famous works, the Chorale Prelude in F minor, given by the author. Such a visualization allows even a person far from music to determine the peculiarities of the polyphonic texture of a musical work. Many people know this piece because it is featured in the film "Solaris" by A. Tarkovsky.

The image shows a musical score for a piece titled "Andante". The score is written for piano and consists of two staves: a treble staff and a bass staff. The key signature is F minor (three flats) and the time signature is 3/4. The tempo is marked "Andante". The treble staff has the instruction "Molto espressivo e tenuto il canto" and the bass staff has "sotto voce e legato" and "Il basso dolce e sostenuto". The music features a complex polyphonic texture with multiple voices. There are triplets in the treble staff. The score is a fragment of a larger work.

Fig. 1. Fragment of the musicalscore

The upper voice (Fig. 2) forms the actual calm melody of the Chorale:



Fig. 2. Fragment of the musical notation of the upper voice

The middle voice (Fig. 3), although it looks like an accompaniment element, is actually an independent expressive melody:



Fig. 3. Fragment of middle voice notation

The lower voice (Fig. 4) not only performs the function of harmonic accompaniment, like the middle voice, but also has an independent melodic value and independent melodic development:



Fig. 4. Fragment of the musical score of the lower voice

The musical work is formed by the interweaving and interaction of all three functionally independent voices.

The history of music knows many varieties of polyphony, which I. Gorbunova and I. Piaskovskiy unites into three groups with a very high degree of generalization:

1. Sub-voice polyphony, when several voices simultaneously perform different variants of the same melody: melodic turns of other voices – sub-voices – branch off from the melody of the main voice; sub-voices developed, varied, and melodically enriched the main melody and may even periodically merge with it in unison. Sub-voice polyphony is found in the folklore of some peoples, for example, in Ukrainian songs, as M. Lysenko wrote in 1896 in a letter to F. Colessa: "Each voice here is a completely independent melodic course, a completely independent song: it is really a variant of that original song, which sometimes departs from its main motif, then merges with it for a short time to separate again. Each such voice in group singing is an independent counterpoint. From this you can see that you cannot imagine better counterpoint players than our singing people, and surprisingly, all this without

conservatories, without textbooks on harmony of the most elaborate kind" (Kaufman, 1964, p. 271).

2. Imitative polyphony, when different voices take turns imitating one identical melody (theme).

3. Contrastive polyphony, when the musical fabric of a work combines different melodies performed by different voices (Gorbunova & Piaskovskyi, 2018, p. 306). An example of contrasting polyphony is J. S. Bach's Chorale Prelude in F minor, which was discussed above.

For a brief description of the two most widely known genres of polyphonic music – the canon and the fugue –we use the work of the American physicist and computer scientist D. R. Hofstadter "*Gödel, Escher, Bach: An Eternal Golden Braid*" (Hofstadter, 1979), for which the author received the 1980 Pulitzer Prize in the non-fiction category.

D. Hofstadter explains the peculiarities of the two polyphonic genres in an extremely simple and accessible manner. According to him, the essence of the canon is the performance of the same theme against the background of itself in repetition by several voices. The simplest type of canon is circular, when the second voice starts performing the theme after a certain period of time after the first and performs a copy of the theme. With a time delay, these two voices can be joined by third and other voices. In this case, each sound of the musical fabric is not only a part of the melody but also acts as a part of the harmonization of the same theme.

At the next level of complexity are canons, where the conducting of the theme by different voices is distant from each other not only in time but also in key. There are canons in which the voices perform the melody at different tempos. Even more complicated canons are based on the reversal of the theme: when the melody's imprint turns all ascending movements into descending ones or vice versa, but retains the same intervals.

To a certain extent, a fugue is similar to a canon because the main theme and its imitations are played by different voices in different keys, at different tempos, or in reversal. After the first voice has carried the theme to the end, the second voice enters a different key. At the same time, the first voice sings an additional theme designed to provide a rhythmic, harmonic, or melodic contrast to the main theme – a counterpoint. Gradually, other voices join in turn, extending the theme and decorating the entire fugue.

According to Hofstadter himself, "*Gödel, Escher, Bach: An Eternal Golden Braid*" is not a book about mathematics, fine arts, or music, but about much more general things – about the emergence of human cognition and self-awareness based on neural mechanisms. Nevertheless, it is significant for us that the author refers to the idea of polyphony to illustrate deeply human phenomena.

Although the roots of polyphonic music are lost in the depths of centuries (Koenig, 2016), it continues to develop in accordance with the trends of each era. Studying twentieth-century polyphony, contemporary researcher Zhou Xinyu sees it not only as a type of musical writing but also as a way of thinking. As an achievement of the twentieth century, the author identifies new directions in the development of

polyphony: rhythmic polyphony, polyphony of timbres, micropolyphony, and super polyphony (Zhou Xinyu, 2019).

Drawing a parallel with polyphony in music, O. Enska, A. Maksymenko, and I. Tkachenko (2020) characterized choreographic polyphony and emphasized that its essence is the development of several independent dance and plastic parts (in musical terminology, voices), compositional structures that should be organically combined and subordinated to the main image line.

Choreographers-teachers, by analogy with polyphony in music, distinguish several types of choreographic polyphony: imitative polyphony, developed imitation, sub-voice polyphony, increasing – decreasing, extension – compression, repetition – roll-call, basso ostinato, sequence, wave, counterpoint, canon, variation development, delay, etc.

Types of choreographic polyphony are the following:

- *imitative polyphony* is a repetition technique of long, choreographic phrases and themes. For example: the formation of a plastic pause by the first "voice" – the first performer or group of performers (G_1), while the second group (G_2) repeats, imitates the dance phrase, the theme that G_1 has just performed. Instead of a plastic pause, G_1 can perform a movement or combination, which, however, should not interrupt the imitation movements of G_2 ;

- *developed imitation* is a technique of variant (developed) repetition for long choreographic phrases and themes. This may include mirror imitation as a variant repetition (i.e. the combination is repeated in a mirror image, from the last movement or pose to the first);

- *sub-voice polyphony* is the simultaneous performance of one choreographic phrase or theme in several variants. For example: an intense solo dance (or duet, trio, quartet) as the main theme with an accompaniment formed by its variants – subvoices in the corps de ballet. In this case, the accompaniment of the subvoices repeats only the details of the poses and movements of the solo dance;

- *increasing – decreasing*. During *increasing*, the stage space is gradually filled with dancers, from one performer to any number of them. Their dance may be a repetition of the dance of the performers (movements, poses or short combinations) who have previously appeared on stage, i.e., repetitions may be both literal and variant. At the end of the increase technique, all dancers usually perform a certain combination, movement, or pose in unison. *Decreasing* – the gradual releasing the stage space;

- *extension – compression*. During *extension*, two, three, or more dancers simultaneously perform a certain joint dance combination, but the tempo of the performance is different for each performer. For example, the first dancer or G_1 performs the combination slowly, during eight tacts, the second dancer or G_2 performs it twice at the same time, i.e., at medium tempo, and the third dancer or G_3 performs it at fast tempo, four repetitions in 8 tacts. After a certain time specified by the choreographer, the dancers "exchange" their tempi: the one who has been performing slowly begins to perform at fast or at medium tempo, and vice versa;

• *repetition – roll-call* – a technique for individual positions, movements, and and short combinations (1-2 tacts). Literal roll-call: the first voice (performer, group) performs the combination and fixes the last position, and each subsequent voice repeats exactly the combination that has just been performed; variant – repetition with certain changes; mirror – repetition of the previous combination in reverse order);

• *basso ostinato* – a technique of plastic accompaniment. It is continuous repetition of the same movement or short combination. Most often, it involves a long solo choreographic "melody" (part), which is accompanied by basso ostinato in the corps de ballet. The solo part can be performed by several voices (duet, trio, and quartet);

• *sequence* is a technique similar to the repetition – roll-call technique, which uses a plastic pause at the moment of the repetition of a movement or pose by other voices. It is used for individual poses, movements, or short combinations. The repetition is performed in turn by different voices or a group of voices after a certain time at least three times (more is possible);

• *wave* is a technique similar to sequence. Wave is a fast sequence performed in multiple repetitions. Only the basso ostinato elements can be retained as a persistent repetition of the choreographic pattern. Also the wave has a short performance interval;

• *counterpoint* – this technique is a simultaneous dance expression of one mood performed by two, three, or more voices (Hertz, 2018). A certain number of voices engage in a dramaturgically based dance dialog with different (with variations) statements from each voice, but with the same general character of the statements;

• *canon* is a technique for long choreographic phrases and themes that make up a dance melody. It involves at least two voices (performers, groups): G_1 performs a certain dance melody, and G_2 starts a literal repetition of the same dance melody when G_1 reaches the middle of the combination. In this case, the first half of the combination performed by G_2 overlaps with the second half performed by G_1 , and then the second half of G_2 overlaps with the first half performed by G_3 or repeated by G_1 (see Fig. 5). For the polyphonic effect to occur, repeat the canon several times.

G_1	C o m b i n a t i o n		C o m b i n a t i o n
G_2		C o m b i n a t i o n	C o m b i
G_3	C o m b i n a t i o n		

Fig. 5. Scheme of canon performance

• *variation developmentis* a technique of variation sequence for long choreographic phrases. Similar to the sequence, variation development should involve at least three voices (with alternate repetition of the combination) or at least three groups of performers who dance their variants of the first choreographic phrase in turn. There may be or not a plastic pause when the phrase is performed by another voice(s), at the choreographer's discretion;

•*delay* is a technique for individual movements, poses, and short dance combinations. It is similar to a repetition-roll-call, but organized differently: a literal repetition in the performance of G_2 begins immediately or a few seconds before the end of G_1 , G_3 – after G_2 , and so on. In this case, each subsequent repetition partly overlaps the previous one. This creates the effect of a blurred dance motif.

The most common types of polyphony in choreographic practice are canon and repetition – roll-call, although the technique of counterpoint is better implemented in fugal music.

Consider an example of a choreographic fugue performed by the Argentine duo Lombard Twins (2012) to the music of A. Piazzolla “Chant et fugue”. This composition cannot be called a fugue in its purest form, but an analysis reveals interesting results. The main choreographic theme of the fugue is quite long; in the video, it is the interval from 0:29 to 0:58 performed by G_1 . From 0:59, G_2 begins to play the theme, while G_1 performs a counterpoint – an independent composition-theme that to some extent opposes the main theme performed by G_2 and at the same time forms a kind of choreographic accompaniment for it. At the end of the second performance of the theme by G_2 , the choreographic polyphony itself comes to an end, although polyphonic development in the instrumental music continues. The dancers continue to perform mostly "unison" – synchronous compositions.

It is also interesting to compare the abovementioned video clip with a recording of a live concert performance (Lombard Twins, 2016). Here, special attention should be paid to the musical accompaniment of the instrumental ensemble. Again, A. Piazzolla music is not a fugue in its purest form, although it retains the main characteristics of this musical genre. The first performance of the fugue theme is played by the bandoneon, a type of harmonica, the second performance is played by the guitar, and the third performance, when the dancers come together "in unison", is played by the violin and then by the piano. After the main theme of the fugue is played, each instrument that had previously been soloing continues to play counterpoint. The gradual layering of these independent and equal melodies forms the actual polyphonic musical theme, the birth of which we can observe with our own eyes.

Currently, at H. S. Skovoroda Kharkiv National Pedagogical University, future choreographers are introduced to the phenomenon of polyphony mainly during their choreographic training. Students training for choreographic functions is provided by a set of educational components, such as: "Fundamentals of Dance Composition and Staging", "The Art of the Choreographer", "Preparation of Concert Performances", "Choreographic Workshop", offered by the educational programs in speciality 024 "Choreography". In the educational process, future choreographers will master polyphony mainly as a production technique.

In our teaching practice, we actively involve students in project activities to create choreographic compositions (Lymanska & Barabash, 2018). The experience of the collective staging of choreographic performances is also revealed by L. Hukaliuk (b.d.). Instead, the algorithm for independent modeling of a choreographic work in the process of choreographic activity of a future choreography teacher was developed by O. Parkhomenko (2018; 2019), and the researcher also studied the problems of creating

individual choreographic projects in the process of choreographic activity of masterstudents (Parkhomenko, 2021).

Staging a choreographic composition is undoubtedly a complex multi-stage process that requires a lot of professional knowledge, skills, creativity, outstanding creative abilities, and organizational and pedagogical skills from the choreographer-director. It also requires the integration of general artistic knowledge and specific choreographic, and performing skills acquired during professional training (Lymanska & Barabash, 2018).

For future choreographers to successfully perform production projects using polyphonic techniques, we propose following a certain algorithm: at the first stage, carefully study the features of the musical accompaniment, analyse it using repeated listening to the work as a whole and in fragments; at the second stage, a specific type of choreographic polyphony should be chosen for further modelling, carefully study the experience of choreographers, watch videos of performances, individual works, recordings of trainings, master classes, etc.

We suggest that at the beginning of mastering polyphonic episodes, you choose less complicated variants: imitative polyphony, repetition – roll-call, extension – compression, sequence, basso ostinato, and wave.

The following options have proven themselves in practice:

Compression for 8 tacts dance combination: G_1 performs the combination of 8 tacts, G_2 – 1 tact pause and 7 tacts of the combination; G_3 – 2 tacts pause and 6 tacts of the combination; G_4 – 3 tacts pause and 5 tacts of the combination. They finish together (Fig. 6).

	Tact 1	Tact 2	Tact 3	Tact 4	Tact 5	Tact 6	Tact 7	Tact 8
G_1	C	o	m	b	i	n	a	t i o n
G_2		C	o	m	b	i	n	a t i o n
G_3			C	o	m	b	i	n a t i o n
G_4				C	o	m	b	i n a t i o n

Fig. 6. Compression scheme

A variant of the *extension* for 8 tact combination. All voices start singing together and one voice finishes: G_1 – 5 tacts of the combination and 3 tacts of pause; G_2 – 6 tacts of the combination and 2 tacts of pause; G_3 – 7 tacts of the combination, 1 tacts of pause; G_4 – 8 tacts of the combination (Fig. 7).

	Tact 1	Tact 2	Tact 3	Tact 4	Tact 5	Tact 6	Tact 7	Tact 8			
G ₁	C	o	m	b	i	n	a	t	i	o	n
G ₂	C	o	m	b	i	n	a	t	i	o	n
G ₃	C	o	m	b	i	n	a	t	i	o	n
G ₄	C	o	m	b	i	n	a	t	i	o	n

Fig. 7. Extension scheme

As an example of the unique use of the potential of choreographic polyphony, we suggest watching the choreographic performance by John Neumeier to the music of J. S. Bach "Christmas Oratorio (CMajorEntertainment, 2015) and "Saint Matthew Passion" (Hamburg Ballet – John Neumeier, 2016).

In "Saint Matthew Passion", J. Neumeier gives the dancers the functions of not only performers of the choreographer's intention but also actors and witnesses to what is happening on stage and in the music. Their personal, deeply personal emotions and associations are embodied in the dance movements. The choreographer conceived the performance as open to improvization with each dancer becoming a co-creator with the director, composer, and all other performers. The deeply individual emotions, associations, experiences, and thoughts of the choreographer and each dancer are embedded in the integral context of the stage work as co-creation.

It is significant that theater educators M. Chen, I. Pulinkala, and K. Robinson proposed the term "polyphonic dynamics" in 2010, promoting the idea of co-creation and equality of all subjects of the staging process, the equivalence and equivalence of their individual contributions – "voices" – for the creative stage result (Chen, Pulinkala, Robinson, 2010, p. 113).

At the same time, at the beginning of the XXI century, British choreographer and teacher J. Butterworth (2004) proposed a new model of choreographic training called didactic-democratic. According to the researcher, the formation of future choreographers should occur in stages, and each stage has unique specific roles for both the teacher and the student. For example, the role of the teacher is gradually transformed from a choreographer-expert to choreographer-author, choreographer-pilot, and choreographer-facilitator to a choreographer-mentor. The student, on the other hand, evolves from a dancer-instrument to a dancer-translator, dancer-assistant, and dancer-creator to a dancer-partner (Butterworth, 2004; Bidyuk, 2022).

A careful look at the didactic-democratic educational model proposed by J. Butterworth shows that the key ideas are as follows: 1) humanization of the educational process; 2) stimulation and construction of relationships of cooperation and co-creation between the teacher and the student –future choreographer; 3) professional formation and professional socialization of the future choreographer during the communication process with the teacher in the creative process.

At the same time, the set of roles that both the choreographer and the dancer go through during the educational process shows to the deeply rooted practice of creative

dialog cooperation, and co-creation of two independent individuals with their unique worldviews, thoughts, beliefs, and feelings. Here we see the idea of polyphony clearly expressed.

It is worth quoting a post on the Facebook page of the NGO Insha Osvita: "Polyphony is a set of voices in which separate independent melodies and voices are harmoniously combined. Polyphony in society is diversity that is perceived as a chance and used as a resource for development. In order not to be abused to artificially divide society; this diversity must be within the framework of democratic rules of the game. To prevent polyphony from becoming cacophonous, effective communication formats are needed for such several voices. In polyphony, each voice performs the main theme from time to time, while others create a harmonious background for it. This requires trust – trust in diversity, in each other, and in the process" (Insha Osvita, 2016, 27 May).

Conclusions. In the process of finding an answer to the question posed in the title "Why does a choreographer need polyphony?" we have found the following:

1) outlined the essence of polyphony was outlined by applying the optics of various academic disciplines and fields of knowledge: philosophy, social sciences, art history, in particular, musicology, and choreology, as well as methodological disciplines within the educational programs for training future choreographers, including choreography. Today, polyphony is a universal methodological principle that implies the coexistence of many opinions and a diversity of voices, the equal status of these voices, and their joint equal participation in creating a multi-voiced of either an artistic work or a democratic society;

2) characterized the place of polyphony in the professional training of future choreographers, particularly for choreographic activity. It was determined that students should become acquainted with the phenomenon of polyphony in music and polyphony as a choreographic technique in the process of broad interdisciplinary humanitarian training;

3) highlighted that the universal principle of polyphony can be successfully implemented, for example, within the framework of the implementation of a didactic-democratic model of professional training of future choreographers (J. Butterworth) to ensure democratic principles and humanisation of the educational process; stimulate cooperation and co-creation of teacher and student; and activate the professional socialisation of the future choreographer in the creative process based on polyphonic group dynamics (M. Chen, I. Pulinkala, and K. Robinson);

4) involving students in project activities to create collective choreographic productions, particularly with the use of choreographic polyphony techniques and on the basis of polyphonic group dynamics, will contribute not only to the formation of special competencies in future choreographers but also to the development of general (social) competencies, soft skills, and professionally significant personal qualities;

5) the assumption is formulated that acquaintance with the phenomenon of polyphony in music and choreography, particularly in the works of famous contemporary choreographers (J. Neumeier and others), and with the concept of polyphonic group dynamics, should lay the foundations for a broader interpretation of

the phenomenon under study and an understanding of its essence as the basis for building a democratic society with humanistic European values in Ukraine, a society where diversity is an important resource and basis for social dialog.

Thus, acquaintance with the phenomenon of polyphony, firstly, fully corresponds to the modern trends in the development of national higher education mentioned at the beginning of the article – integration into the European and world educational and scientific space, humanisation of content and humanisation and democratisation of the process of professional training, broad interdisciplinary integration; secondly, it contributes not only to the professional but also to the personal development of future choreographers as citizens of a democratic European state.

Prospects for further research are related to the development of content and methodological approaches for introducing future choreographers to the phenomenon of polyphony on the basis of broad interdisciplinary integration.

REFERENCES

- Androshchuk, L. (2019). Conceptual framework and areas for choreographic and pedagogical education development in Ukraine. *Problems of Modern Teacher Training*, 2(20), 13–21 <https://doi.org/10.31499/2307-4914.20.2019.174107>
- Bidyuk, D. (2022). Didactic-democratic paradigm of teaching choreography: the UK experience. *Comparative professional pedagogy*, 12(2), 64–73. [https://doi.org/10.31891/2308-4081/2022-12\(2\)-7](https://doi.org/10.31891/2308-4081/2022-12(2)-7)
- Blagova, T. O. (2018). Formation of the choreographer-teacher's professional competence in the structure of higher choreographic education: the theoretical aspect. *Zhytomyr Ivan Franko State University Journal. Pedagogical Sciences*, 3(94), 21–26. [https://doi.org/10.35433/pedagogy.3\(94\).2018.21-26](https://doi.org/10.35433/pedagogy.3(94).2018.21-26)
- Blahova, T. O. (2021). Choreographic education development in Ukraine in the structure of culture and art educational institutions. *UNESCO chair journal "Lifelong professional education in the XXI century"*, 3, 58–65. [https://doi.org/10.35387/ucj.1\(3\).2021.58-65](https://doi.org/10.35387/ucj.1(3).2021.58-65)
- Butterworth, J. (2004). Teaching choreography in higher education: a process continuum model. *Research in Dance Education*, 5(1), 45–67. <https://doi.org/10.1080/1464789042000190870>
- Bychko, I. V., Tabachkovskiy, V. G. & Gorak, G. (1991). *Filosofia. Kurs lektsii [Philosophy. Course of lectures]*. Kyiv. <http://www.philsci.univ.kiev.ua/biblio/buchko/Philosophy.html>
- Chang, Zhen. (2022). Features of the training of future specialists of choreographic art in the educational process of institutions of higher education of the PRC. *Education. Innovation. Practice*, 10(7), 50–53. <https://doi.org/10.31110/2616-650X-vol10i7-008>
- Chen, M., Pulinkala, I., & Robinson, K. (2010). Polyphonic dynamics as educational practice. *Theatre Topics*, 20(2), 113–131. <http://dx.doi.org/10.1353/tt.2010.0094>
- CMajorEntertainment. (October 6, 2015). *Bach: Christmas Oratorio – A Ballet by John Neumeier* [Video]. https://www.youtube.com/watch?v=likxOj6_Tjg
- Duzhych-Nikolaichuk, V. I. (2018). Muzyka v kompozytsii horeografichnogo tvorcu [Music in the composition of a choreographic work]. In *ΑΙΟΓΟΣ. Aktualni pytannia siogodennia: materialy Mizhnarodnoii nauково-praktychnoii konferencii 20 bereznia 2018 roku u m. Vinnitsia*, 2, 116–118. Drukaryk, Obukhiv. <https://evnuir.vnu.edu.ua/bitstream/123456789/15504/3/duzhych.pdf>
- Efimenko, Yu. (2014). Choreographic and pedagogical education in the Republic of Kazakhstan: current state and development prospects. *Current issues of art education*, (1–2), 96–105. <https://repository.sspu.edu.ua/bitstream/123456789/4208/1/Yefimenko.pdf>
- Enska, O. Yu., Maksymenko, A. I. & Tkachenko, I. O. (2020). *Kompozytsiia tantsiu ta mystetstvo baletmeistera* [Dance composition and the art of the choreographer]. IE Tsioma S.P., Sumy. <https://repository.sspu.edu.ua/handle/123456789/9456>
- Furmanova, T. (2016). Forming of the professional competence of future teachers of choreography. *Visnik Chernigivskogo natsionalnogo pedagogichnogo universitetu. Seriya: Pedagogichni nauky*, 135, 139–143. http://nbuv.gov.ua/UJRN/VchdpuP_2016_135_37
- Gorbunova, I., & Piaskovskiy, I. (2018). Polifoniia [Polyphony]. In *Ukrainska muzychna entsyklopediia: T. 5. PAVANA — "POLIKARP"*, 305–317. Institut mistetstvoznavstva, folklorystyky ta etnologii imeni M. T. Rylskogo NAN Ukrainy. <https://bit.ly/3ZZezro>
- Hamburg Ballett – John Neumeier. (2016, 15 June). *Saint Matthew Passion – Ballet by John Neumeier* [Video]. YouTube. <https://www.youtube.com/watch?v=um9ZIEgXZII>
- Hekaliuk, L. Yu. (b. d.). Formuvannia profesiinoi kompetentnosti maibutnikh uchyteliv horeografii zasobami tvorchoi proektnoi diialnosti [Formation of professional competence of future

Yuryeva K., Lymanska O., Tishenko O., Barabash O. Polyphony: interdisciplinary dimension or Why does a choreographer need polyphony?

- choreography teachers by means of creative project activity]. *Naukovo-metodichna robota*. <https://bit.ly/3QwgOO2>
- Hertz, I. (2018). Musical-choreographic synthesis in ballet by Uwe Scholz "The Great Mass". *National Academy of Managerial Staff of Culture and Arts Herald*, 1, 160–163. <https://doi.org/10.32461/2226-3209.1.2018.160325>
- Hofstadter, D. R. (1979). *Gödel, Escher, Bach: An Eternal Golden Braid*. Basic Books, New York.
- Horban, O. V. (2020). Philosophical paradigm of modern education in a postindustrial society. *Scientific notes of V. I. Vernadsky Taurida National University. Series: Public administration*, 31(70) 1, 1–5. <https://doi.org/10.32838/2709-2933/2020.1/01>
- Insha Osvita (May, 27, 2016). *Polifoniia – tse bagatogolossia, v jakomu garmoniino poednani okremi samostiini melodii ta golosy* [Polyphony is a polyphony in which separate independent melodies and voices are harmoniously combined]. <https://www.facebook.com/inshaosvita/posts/1752172885059858>
- Kaufman, L. (Ed.). (1964). *M. V. Lysenko. Lysty* [M. V. Lysenko. Letters] (O. Lysenko, uporiad.). Mystetstvo. https://shron1.chtyvo.org.ua/Lysenko_Mykola/Lysty.pdf
- Koenig, K. (2016). *Polyphony: History, Performance, and Use in Jazz*. Basinstreet.com. <http://basinstreet.com/wp-content/uploads/2016/09/polycp.pdf>
- Kovalenko, O. V., & Zhang, Xiao (2021). Osoblyvosti profesiinoii kultury ta kompetentnist fahivtsia-horeografa [Features of professional culture and competence of a choreographer]. In *The World of Science and innovation: abstracts of the 7th International scientific and practical conference*, 562–564. Cognum Publishing House, London. <https://sci-conf.com.ua/wp-content/uploads/2021/02/THE-WORLD-OF-SCIENCE-AND-INNOVATION-10-12.02.21.pdf>
- Kundys R., Nykorovych I., Kiptilova N. & Buhryn Ju. (2021). Interdependence of music and choreographic art in stage activities of choreographers. *Young Scientist*, (12(100)), 140–144 <https://doi.org/10.32839/2304-5809/2021-12-100-31>
- Lee, Z. (2023). Dance and music: a synthesis of two arts. *Sloboda Art Studies*, (1), 28–30. <https://doi.org/10.32782/art/2023.1.6>
- Lombard Twins. (2012, January 11). *Astor Piazzolla. Chant et fugue* [Video]. YouTube. <https://www.youtube.com/watch?v=5nBzk1Kr3ls>
- Lombard Twins. (2016, June 14). *Piazzolla. Chant Et Fugue. Live* [Video]. YouTube. <https://www.youtube.com/watch?v=6PzoPdCU7ss>
- Lymanska, O. V., & Barabash, O. V. (2018). Реалізація творчих проєктів як складова професійної компетентності майбутнього вчителя хореографії. *Academic Commentaries. Series: Pedagogical Sciences*, (163), 106–110. http://nbuv.gov.ua/UJRN/Nz_p_2018_163_24
- Maksimenko, A. (2014). Choreographic education in china: traditions and modernity. *Aktualni pytannia mystetskoi osvity ta vyhovannia* [Topical issues of art education and upbringing], (1–2), 105–113. <http://repository.sspu.sumy.ua/handle/123456789/4209>
- Maneliuk, E. (2023). Teaching of choreographic disciplines in higher education institutions and today's conditions. *Academic Visions*, 15. <http://dx.doi.org/10.5281/zenodo.7567693>
- Martynenko, O. V. (2015). Formuvannia profesiinoii kompetentnosti maibutnikh uchiteliv horeografii v umovakh vyshchogo navchalnogo zakladu [Formation of professional competence of future choreography teachers in a higher educational institution]. *Problems of modern teacher training*, 12(2), 165–174. [http://nbuv.gov.ua/UJRN/ppsv_2015_12\(2\)_25](http://nbuv.gov.ua/UJRN/ppsv_2015_12(2)_25).
- Medvid, T. (2018). Competent principles of future choreographers' professional training in classical university. *National Academy of Managerial Staff of Culture and Arts Herald*, 2, 234–237. <https://doi.org/10.32461/2226-3209.2.2018.162712>

- Medvid, T. & Tereshenko, N. (2021). Building soft skills in the process of future choreographers' professional training. *Collection of Scientific Papers of Uman State Pedagogical University*, 4, 165–178. <https://doi.org/10.31499/2307-4906.4.2021.250233>
- Ministry of Education and Science of Ukraine. (2020a). *Standart vyshchoii osvity. Drugyi (magisterskyi) riven vyshchoii osvity. Stupin "magistr". Galuz znan 02 Kultura ta mistetstvo, specialnist: 024 Horeografii*. [The standard of higher education. The second (master's) level of higher education. Master's degree. Field of knowledge 02 culture and art, specialty: 024 Choreography]. <https://mon.gov.ua/storage/app/media/vishcha-osvita/zatverdzeni%20standarty/2020/03/024-choreografia-M.pdf>
- Ministry of Education and Science of Ukraine. (2020b). *Standart vyshchoii osvity. Pershyi (bakalavrskyi riven) vyshchoii osvity. Stupin bakalavr. Galuz znan 02 Kultura ta mistetstvo, specialnist: 024 Horeografii* [The standard of higher education. The first (bachelor's) level of higher education. Bachelor's degree. Field of knowledge 02 Culture and Arts, specialty: 024 Choreography]. <https://mon.gov.ua/storage/app/media/vishcha-osvita/zatverdzeni%20standarty/2021/07/28/024-Khoreografiya-bakalavr.28.07.pdf>
- Parkhomenko, O. M. (2019). Osnovni aspekty modeliuvannia horeografichnogo tvorv v protsesi baletmeisterskoi dij'nosti majbutn'ogo vchitelja horeografii [The main aspects of modeling a choreographic work in the process of choreographic activity of a future choreography teacher]. *Teoriia i metodyka mistetskoii osvity*, 3, 118–124. <http://lib.ndu.edu.ua/dspace/handle/123456789/1999>
- Parkhomenko, O. (2018). To the problem of ballet-master preparation of future teachers of choreography in the system of higher artistic education. *Research Notes. Series "Psychology and Pedagogy Research" (Nizhyn Mykola Gogol State University)*, 1, 33–38. <https://doi.org/10.31654/2663-4902-2018-PP-1-38-42>
- Parkhomenko, O. (2021). To the problem of crafting a choreographic project in the process of ballet master activity of master's students. *Research Notes. Series "Psychology and Pedagogy Research" (Nizhyn Mykola Gogol State University)*, (2), 97–101. <https://doi.org/10.31654/2663-4902-2021-PP-2-97-101>
- Pavlov, O. (2021). Polifonichna symbolika muzyky J. S. Bakha v konteksti transformacii svitospriiniattia ta evoliutsiinykh protsesiv mystetskoi dumky uprodovzh drugoi polovyny XIX – pershoii polovyny XX stolittia. Tsyfrova polifoniia. *Shcho tse take?* [Polyphonic symbolism of J. S. Bach's music in the context of the transformation of worldview and evolutionary processes of artistic thought in the second half of the XIX and first half of the XX centuries. Digital polyphony. What is it]. <https://intermuzika.com.ua/tsifrovaya-polifoniya.-chto-eto-takoe/>
- Powalii, T. L. (2015). *Modernizatsiia horeografichnoii osvity v Polshchi (kinets XX – pochatok XXI stolittia)* [Modernization of choreographic education in Poland (late XX – early XXI century)]. Monograph. Sumy, Publishng house "Mriia". <https://repository.sspu.edu.ua/bitstream/123456789/747/1/Monohrafiia.pdf>
- Prusova, L. (2020). Socio-cultural competence in the professional training of choreography specialists. *Aesthetics and ethics of pedagogical action*, (22), 131–139. <https://doi.org/10.33989/2226-4051.2020.22.222009>
- Pryschak, N. D. (2017). Pro deiaki aspekty stanovlennia paradygmy osvity Ukrainy [On some aspects of the formation of the Ukrainian education paradigm]. In *Naukovi problemy derzhavotvorennia Ukrainy: Materialy Mizhnarodnoi naukovo-praktychnoi konferencii, November 7–8, Vinnytsia National Technical University, Vinnytsia*. <https://conferences.vntu.edu.ua/index.php/e-democracy/e-democracy2017/paper/viewFile/3425/2870>

Yuryeva K., Lymanska O., Tishenko O., Barabash O. Polyphony: interdisciplinary dimension or Why does a choreographer need polyphony?

- Salo, L. B. (2020). Development of higher dance education in the USA – from physical education to art. In O. Zabolotna, D. Skalski, I. Grydus, B. Kindzer, A. Sushchenko (eds.), *Kultura fizyczna, pedagogika, zdrowie i fizjoterapia* (s. 57–72). Pomorska Szkoła Wyższa w Starogardzie Gdańskim. <https://doi.org/10.5281/zenodo.4086115>
- Shabanova, Yu. O. (2007). Suchasna paradigma osvity [The modern paradigm of education]. *Visnyk of Dnipropetrovsk university. Series Philosophy Sociology Political sciences*, 15, 117–121.
- Spinul I. V. (2011). Teoretychni pidhody do interpretacii profesiinoii kompetentnosti maibutnogo vchytelia horeografii [Theoretical approaches to the interpretation of the professional competence of the future teacher of choreography]. *Academic notes [Volodymyr Vynnychenko Central Ukrainian State Pedagogical University. Series: Pedagogical Sciences*, 101, 271–278. http://nbuv.gov.ua/UJRN/Nz_p_2011_101_39
- Stepaniuk, I.V. (2022). Contents of the professional competence of s teacher of choreographic disciplines in higher education institution. *Academic Studies. Series “Pedagogy”*, (4), 45–49. <https://doi.org/10.52726/as.pedagogy/2022.4.7>
- Suprun-Yaremenko, N. O. (2014). *Polifoniia. Posibnik dlia studentiv vyshchyykh navchalnykh muzychnykh zakladiv* [Polyphony. A textbook for students of higher music education institutions]. Nova Knyga.
- Tishchenko, O. M. (2018). Pedagogical conditions of intercultural competence formation in future choreography teachers at educational environment of pedagogical university. *Zasobi navčal'noj ta naukovo-doslidnoi roboti*, (50), 57–71. <https://doi.org/10.34142/2312-1548.2018.50.04>
- Tkachenko, I. O. (2016). The peculiarities of professional training of the future choreographers in germane (the second half of the XX century). *The scientific heritage*, 6, 50–54.
- Tverdokhlib, S. S. (2018). Kognityvnyi komponent u konteksti formuvannia interpretatsiinoi kompetentnosti maibutnih uchiteliv horeografii [The Cognitive Component in the Context of Forming the Interpretive Competence of Future Choreography Teachers]. *Academic notes [Volodymyr Vynnychenko Central Ukrainian State Pedagogical University]. Series: Pedagogical Sciences*, 167, 216–221. http://www.irbis-nbuv.gov.ua/UJRN/Nz_p_2018_167_53
- Yang, Zhuang (2020). Essence and main points of the pedagogical competence of a choreography teacher-to-be. *Bulletin of the T. H. Shevchenko National University "Chernihiv Colehium"*, 7(163), 173–177. <https://doi.org/10.5281/zenodo.3759120>
- Yemelianova, O. (2017). Vzaemodiia muzyky ta horeografii u baletmeisterskyi tvorchosti [Interaction of music and choreography in choreographer's creativity]. In *Pidgotovka maibutnykh pedagogiv u konteksti standartyzatsii pochatkovoii osvity: materialy Vseukrainskoi naukovo-praktychnoi onlain-konferentsii (Berdiansk)*. <https://bit.ly/3YixpIS>
- Yunyk, D. & Khmelevska, I. (2022). The phenomenon of polyphony and its polyartistic potential: a choreographic and artistic projection. *Muzychna ta horeografichna osvita v konteksti kulturnogo rozvytku suspilstva. Materialy i tezy VIII Mizhnarodnoi konferencii molodykh uchenykh ta studentiv (Odesa, October 14–15, 2022)*, (1, pp. 44–49). <http://dspace.pdpu.edu.ua/bitstream/123456789/16152/1/The%20phenomenon%20of%20polyphony%202022.pdf>
- Zhou, Xinyu. (2019). Polyphonic music form of XX century as a type of composing and a way of thinking. *Scientific journal of National Pedagogical Dragomanov University. Series 14. Theory and Methodology of Arts Education*, 27, 136–142. <https://doi.org/10.31392/NPU-nc.series14.2019.27.22>

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