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ART

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THE CREATIVE PATH OF THE VIENNA STRAUSS FESTIVAL ORCHESTRA

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ТВОРЧЕСКИЙ ПУТЬ ВЕНСКОГО ФЕСТИВАЛЬНОГО ОРКЕСТРА ШТРАУСА

Abstract.

The Vienna Strauss Festival Orchestra is one of the world's leading and most prestigious orchestral ensembles. Until the 1840s, there was no special concert orchestra in Vienna. In 1833, the German composer and conductor Franz Paul Lachner created the first concert orchestra composed of members of the Vienna Opera Orchestra and organized four concerts. In 1860, German conductor Eckert Karl Anton, head of the palace opera collective, organized the first big concert with these performers, and these concerts were held regularly.

Until 1933, the Vienna Philharmonic Orchestra had no artistic director and no long-term contracts were signed with conductors. Every year, a conductor was appointed by voting. However, some conductors were elected to lead the orchestra for several years in a row. Thus, during the years 1860-1875, the leader and conductor of the orchestra was Otto Dessof. In 1875, the flourishing period of the orchestra begun with the arrival of the talented opera-symphonic conductor Hans Richter. According to musicians, under Richter's leadership, the orchestra experienced its golden age. Until 1898, Hans Richter led the orchestra. From 1898 to 1901, Gustav Mahler was appointed conductor. Mahler continued Richter's traditions, paying special attention to the ensemble sound and conducting rehearsals himself. In 1906, with the arrival of the German composer and conductor Richard Strauss, the orchestra was revived, and rehearsals began on more complex works. The repertoire included the sophisticated compositions of Y. Haydn, W. Mozart, L. Beethoven, F. Schubert, R. Schumann, I. Brahms, and G. Mahler. In 1978, at the initiative of Peter Gutt, the orchestra officially began operating as the Vienna Strauss Festival Orchestra. Today, the Vienna Strauss Festival Orchestra continues to lead globally, maintaining its prominent status nearly two centuries since its inception.

Аннотация.

Симфонический оркестр прошел длительный путь развития. Термин оркестр происходит от греческого слова оркестра, обозначающего в греческом театре X века до нашей эры круглую площадку с жертвенником посередине-место для выступления хора. Конец XVII-начало XVIII веков были временем бурного развития и широкого распространения оркестровой культуры. Первый концерт Венского филармонического оркестра состоялся 28 марта 1842 под управлением О. Николаи. В состав Венского филармонического оркестра вошли музыканты оркестра Венской оперы. Венский филармонический оркестр занял видное место в музыкальной жизни страны. С 1860 оркестр, как правило, выступал под управлением своих постоянных руководителей-О. Дессофа, Х. Рихтера, Г. Малера. Рихтер и Малер значительно расширили репертуар, включив произведения композиторов разных стран: А. Дворжак, Б. Сметана, З. Фибих, П. Чайковский, К. Сен-Санс и др. Во главе с Рихтером Венский филармонический оркестр впервые выехал на гастроли в Зальцбург. С 1917 года Венский филармонический оркестр-официальный оркестр Зальцбургских фестивалей. Начиная со своего основания в 1978 году, Венский Штраус-Фестиваль Оркестр завоевал международное признание, выступая в именитых концертных залах с оригинальной интерпретацией венской музыки.

Keywords: orchestra, Richard Strauss, Vienna, symphonic, opera music, symphony, collective, musical instruments, Peter Gutt, conducting, violinist.

Ключевые слова: оркестр, Рихард Штраус, Вена, симфонический, оперная музыка, симфония, коллектив, музыкальные инструменты, Петер Гутт, дирижирование, скрипач.

The Vienna Strauss Festival Orchestra is one of the world's leading and most prestigious orchestral ensembles. To present his creative path, let's first consider the history of the symphony orchestra and its influence on the creation of the Vienna Strauss Festival Orchestra:

In the second half of the 18th century, the first symphonic orchestra was created by Joseph Haydn. At first, the composition of the orchestra was relatively limited, the group of brass instruments included horns and trumpets, and the group of percussion instruments included only timpani.

This collective, which consisted of twelve members, was known as a small symphony orchestra. Orchestra comes from the Greek word "orchestra". In ancient Greece, the front part of the stage, closer to the audience, was called "orchestra". [M. Umudov, 2015, p. 80]

During the performance, the choir sang and danced here. Later, a group of musicians began to sit here. Gradually, that group was given the name of orchestra. Later, this term began to represent not only a group of musicians, but also instrumental music collectives.

The composition of both the opera orchestra and the later called "symphonic" orchestra was not fully established until the last years of the 16th century. Thus, the composition of the orchestra was exposed to a number of influences during its existence and changed frequently. The composition of the orchestra changed depending on the requirements of the performance in the opera theater and one or another group of musicians in the concert hall.

The composition of the orchestra was updated based on the opinion of both the composer and the orchestra director. The first orchestras were completely different from modern symphony orchestras.

Until the beginning of the 17th century, there was no full-fledged orchestra, which included a violin (7-8 players), a viola (3-4 players), a lyre, a harp, a flute, a piccolo flute, a lute, a trombone (2 players), a gabyo (2 performer), organ and harpsichord were included. Strings, wind and percussion instruments had difficulty in harmonizing with each other.

The famous Italian composer Claudio Monteverdi was the first to understand the duties and artistic possibilities of each instrument in the orchestra. In his operas, he divided the orchestra into strings, wind instruments and instruments that accompanied the melody or play the main theme. These reforms showed that K. Monteverdi was a great innovator. He said: "As a result of the new reforms, it is possible to achieve a fuller sound in the orchestra" [Rosenschild K. 1973, p. 209]

In the following years, the head of the Naples school, Alessandro Scarlatti, further transformed the orchestra. He included two horns in the orchestra, separated the duties of strings and wind instruments, and placed the strings in the front row as the leading instruments of the orchestra.

In the first half of the 18th century, the development of the orchestra was mainly improved by the work of three genius composers: Jean-Philippe Rameau, Johann Sebastian Bach and Georg Friedrich Handel. With the development of musical art and the creation of the first important operas, composers began to compose works for various ensembles and orchestras. To achieve a uniform tempo in the collective performance of the works, it was necessary to control the orchestras.

At the end of the 18th century, the orchestra entered a new stage of development, and the composition of the orchestra was established with the appropriate musical instruments. The orchestra expanded to include two clarinets, flutes, three trombones, drums, cymbals, and a triangle, in addition to the flute, gabyo, and bassoons.

The lute, theorb, and crwth instruments that were previously used left the orchestra, and the harp was for special occasions. The crota was a five-stringed instrument widespread in Europe in the 8th century. M. Chulaki writes: "In the 8th century, the crwth instrument played with five strings and a bow was very widespread in Europe. The Crotta instrument was a fretless instrument. Stringed instruments with frets began to spread from the 14th century, and one of the first representatives of stringed instruments was the lute. Crotta and lute performed in all orchestras operating in this period" [Chulaki M. 1972, p. 3]

Orchestra management required more complex methods, a conductor was needed. Thus, more experienced and competent musicians, such as harpsichord players and first violinists, began to perform the function of conductor, playing together with the orchestra members

Sometimes the first violinist would stand and give instructions to the orchestra through the bow, so that the players could clearly understand him. This method proved itself in opera concerts, and finally several methods contrasted with modern conducting art emerged.

All the changes in the orchestra in the opera are closely related to the name of composer Willibald Gluck, and in symphonic music, Franz Joseph Haydn and Wolfgang Amadeus Mozart. The orchestra they created laid the foundation of the classical symphony orchestra.

At the beginning of the 19th century, Ludwig Van Beethoven greatly expanded the orchestra, adding several idiophones and membranophones to its composition. The initiative to enrich the orchestra with new instruments was successfully continued. He gave a special place to expressive sound in the orchestra, emphasizing that the orchestra is the most valuable and necessary tool for expressing beautiful music, saying: "The beautiful music played by the symphony orchestra should penetrate the inner world of people and awaken their inner world. In this way, the orchestra should help us" [I. Prikhorova. Moscow, 1973, p. 65]

The role of the German composer and conductor Richard Wagner in the formation of the symphony orchestra should be emphasized. He brought innovations to the art of conducting and the orchestra. For the first time, Richard Wagner conducted by facing the orchestra, and this innovation quickly spread to other countries. [Wagner R. Moscow, 1974, 199 p.]. This initiative gave impetus to the development of the symphony orchestra, as performers could see the conductor's gestures more clearly, positively affecting the sound timbre.

Since the 1950s, the American arrangement has been applied to the symphony orchestra. In this arrangement, violins are placed on the left side of the stage, violas in the center, cellos and double basses on the right, woodwind and brass instruments in the center, and percussion at the back. This arrangement ensures that the orchestra's performance sounds more harmonious.

The Gewandhaus Orchestra (Germany), London Philharmonic Orchestra (England), Boston, Philadelphia Symphony Orchestra (USA), Russian Grand Symphony Orchestra and Vienna Philharmonic Orchestra (Austria) are considered the most famous orchestras in the world. Their activities have been significant achievements in world music culture [Bilkent University Faculty of Music and Performing Arts. 2010. 18 p.].

Now let's take a look at the history of the Vienna Strauss Festival Orchestra:

Until the 1840s, there was no special concert orchestra in Vienna. In 1833, the German composer and conductor Franz Paul Lachner created the first concert orchestra composed of members of the Vienna Opera Orchestra and organized four concerts. However, the orchestra's activity did not last long because this idea was not supported. Ten years later, Karl Otto Nikolai managed to implement this idea. On March 28, 1842, Nikolai organized the first concert orchestra consisting of members of the Vienna State Opera Orchestra in the Hofburg Palace. Until 1860, the composition and repertoire of the orchestra were not fully established, so the number of concerts held was quite small.

In 1860, German conductor Eckert Karl Anton, head of the palace opera collective, organized the first big concert with these performers, and these concerts were held regularly.

Until 1933, the Vienna Philharmonic Orchestra had no artistic director and no long-term contracts were signed with conductors. Every year, a conductor was appointed by voting. However, some conductors were elected to lead the orchestra for several years in a row. Thus, during the years 1860-1875, the leader and conductor of the orchestra was Otto Dessof. In 1875, the flourishing period of the orchestra begun with the arrival of the talented opera-symphonic conductor Hans Richter. According to musicians, under Richter's leadership, the orchestra experienced its golden age.

H. Richter expanded the composition of the orchestra and enriched the repertoire: works by R. Wagner, A. Bruckner, I. Brahms, F. Liszt were included and performed. The orchestra often gives concerts and was highly appreciated by the residents and guests of the capital. H. Richter included Brahms' Second and Third symphonies, Bruckner's Eighth symphony, and Tchaikovsky's violin concerto in the repertoire, holding their premieres. These concerts were sold out, and the audience enjoyed listening to these works performed by the orchestra. As a result of Richter's high-level communication with the orchestra's soloist-violinist Adolf Brodsky, Tchaikovsky's violin concerto was interpreted with great virtuosity. Richter paid special attention to the ensemble sound in the orchestra, seeing success in its clean and expressive sound.

The musicians of the orchestra agreed with his ideas and worked on themselves to reveal the character of the works, dynamism, and metrorhythmic accuracy. Richter also paid special attention to discipline, not allowing performers to avoid rehearsals without valid reasons. Thus, strict rules of discipline were formed, and the orchestra developed day by day. During Richter's leadership, the orchestra's first concert tours began.

In 1877, the orchestra's first concert in Salzburg was held with great success.

Until 1898, Hans Richter led the orchestra. From 1898 to 1901, Gustav Mahler was appointed conductor. Mahler continued Richter's traditions, paying special attention to the ensemble sound and conducting rehearsals himself. In 1900, under Mahler's leadership, the orchestra performed for the first time at the World Exhibition in Paris, winning the approval of the entire musical community. Although Mahler led the orchestra, Richter regularly supervised the repertoire, intonation, and interpretation issues. The orchestra's performance in Paris was under Richter's supervision, and the musical works sounded even more colorful and enriched with different timbres.

Hans Richter and Gustav Mahler managed to expand the repertoire by including the works of various national composers: A. Dvorak, B. Smetana, Z. Fibix, P. Tchaikovsky, K. Saint-Saëns.

Until 1927, Felix Weingartner led the orchestra without significant progress. Other conductors and composer-conductors such as Brahms, Wagner, Bruckner, and Verdi worked with the orchestra at certain times. Since 1927, the orchestra has been led by Wilhelm Furtwängler. However, musicians such as Franz Schalk, Artur Nikisch, Erich Kleiber, Bruno Walter, Arturo Toscanini, Carl Schuricht, Hans Knappertsbusch, Victor de Sabata, Clemens Krauss, and Karl Böhm also worked with the orchestra.

The development of the art of music and the creation of new works required the orchestra's composition and repertoire to be renewed.

In 1906, with the arrival of the German composer and conductor Richard Strauss, the orchestra was revived, and rehearsals began on more complex works. The repertoire included the sophisticated compositions of Y. Haydn, W. Mozart, L. Beethoven, F. Schubert, R. Schumann, I. Brahms, and G. Mahler.

Richard Strauss succeeded in further expanding the orchestra, enriching the repertoire with new works, and extending concert tours to foreign countries. He took significant steps in the formation of the orchestra, inviting experienced musicians from the Vienna Opera House. By adding horns, trumpets, and German clarinets to the woodwinds and brass sections, the number of performers increased to 120. Notable violinists included Willy Boskovski, Arnold Rose, and Fris Zedlak; viola players were Bachrich Sigismund and Ernst Moraves; cellists were Friedrich Buxbaum, Reinhold Hummer, and Franz Schmidt; horn players were Gottfried von Freiber and Karl Stiegler; clarinetists were Alfred Boskovski, Leopold Vlach, and Thomas Jobstl; trombonists were Bousfield Yen and Vladimir Orloff; tuba player was Walter Hilgers; and bassoonist was Karl Elberger. Each musician understood the intricacies of classical music and aimed to touch the hearts and tastes of the audience.

Since 1917, the Vienna Philharmonic Orchestra has been the official orchestra of the Salzburg Festival, a success achieved under Strauss's leadership. The orchestra, performing vibrant works annually at the Salzburg Festival, soon became the world's leading orchestra. Concurrently, the orchestra was actively involved

in staging operas in Vienna and Salzburg, further expanding its tour arena.

R. Strauss led the orchestra until 1944 and achieved greater recognition for the ensemble worldwide. Richard Strauss served as both conductor and advisor to the musicians. He assisted orchestra members whenever necessary, treating them with special care and fostering a friendly atmosphere within the team. As a result, the orchestra held Strauss in high regard, faithfully executing his ideas as conductor and leader. In honor of his contributions, the orchestra was later named after him.

One unique feature of the orchestra historically was its all-male composition, which persisted until the 20th century when female performers began to join.

In 1978, at the initiative of Peter Gutt, the orchestra officially began operating as the Vienna Strauss Festival Orchestra. Gutt, a graduate of the University of Vienna in instrumental performance and a student of David Oistrakh at the Moscow State Conservatory, gained international acclaim as a violinist with the Viennese trio, winning first place in a Munich competition.

Gutt later pursued a career as both a violinist and conductor, performing with renowned orchestras such as the London Royal Philharmonic, Tokyo Symphony Orchestra, and San Francisco Symphony Orchestra. Devoting much of his life to the Vienna Strauss Festival Orchestra, Gutt led performances worldwide, including in Asia, Europe, Russia, China, South Korea, and Japan.

He performed at prestigious venues such as the Cologne Philharmonic, Munich's Hercules Hall, Tokyo's Santori Hall, Seoul Art Center, Moscow Music House, and others. Gutt expanded the orchestra's repertoire to include works like Y. Heidi's Symphony No. 44 in E minor and V. Mozart's Concerto No. 2 for flute and orchestra in D major.

The Vienna Strauss Festival Orchestra, under Peter Gutt's direction, embarks on annual concert tours worldwide, captivating millions of listeners and enriching their artistic tastes.

Gutt introduced innovations in modern conducting, applying techniques such as dancing with female vocal soloists during performances, facing the audience while conducting, entertaining with clapping, and incorporating dance elements. He even conducted with a bow while playing the violin, revolutionizing the art form.

Peter Gutt aimed for a freer, more creative approach to conducting, believing in methods that engage and entertain listeners. In his interviews, he stated, "We

aim to interpret as Strauss did in his time. Strauss conquered the world with this orchestra." [8]

On November 20, 2013, the Vienna Strauss Festival Orchestra gained global acclaim with a high-level performance at the PI Tchaikovsky Concert Hall in Moscow, performing all symphonies by Ludwig Van Beethoven in four concerts supported by the "Music Olympia" Foundation. [4].

The orchestra has performed numerous times in various countries, including Azerbaijan, where it garnered great affection from the people. At a concert in the Heydar Aliyev Center on April 28, 2022, conductor Peter Gutt impressed audiences with memorable interpretations. [3].

The program featured works by Johann Strauss, known as the "King of the Waltz," and other renowned composers. The Vienna Strauss Festival Orchestra is eagerly anticipated annually in Azerbaijan, having become beloved by the Azerbaijani people.

The orchestra regularly participates in the Strauss Festival in Europe and opens the prestigious Vienna Ball Festival each January 1st. Its concert schedule is planned years in advance. Annually on New Year's Eve, the orchestra inaugurates the concert season at Vienna's Musikverein Golden Hall, an event watched by 70 TV channels, 300 radio stations, and 50 million people. In summer, the orchestra performs in Schönbrunn Palace Park, delighting Vienna's residents.

Today, the Vienna Strauss Festival Orchestra continues to lead globally, maintaining its prominent status nearly two centuries since its inception.

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MODERN VIEWS ON THE CLASSIFICATION OF BONE TISSUE ARCHITECTURE FOR IMPROVING THE METHODS OF PROSTHETICS OF LOST TEETHS (literature review)

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СУЧАСНІ ПОГЛЯДИ НА КЛАСИФІКАЦІЮ АРХІТЕКТОНІКИ КІСТКОВОЇ ТКАНИНИ ДЛЯ ПОКРАЩЕННЯ МЕТОДІВ ПРОТЕЗУВАННЯ ВТРАЧЕНИХ ЗУБІВ (огляд літератури)

Abstract.

For a considerable period of time, the primary classification of tooth loss was the classification proposed in 1928 by Kennedy. As dentistry progressed, it became evident that a more nuanced approach was necessary to classify dental defects beyond their mere localisation.

Consequently, none of the classifications provides comprehensive information and does not encompass all the clinical features of partial tooth loss. It is therefore evident that a rational treatment plan can be formulated on the basis of morphological and functional classification features, including the relative position of the retained teeth and edentulous areas, conditions for the perception and distribution of the chewing load, in particular the degree and type of atrophy of the collar ridge, as well as the number of occlusal support zones in the areas of premolars and molars. A review of the scientific literature and the authors' current views on the treatment of partial tooth loss in dental care reveals a significant need for qualified orthopedic treatment in Ukraine, in accordance with modern requirements, in particular the use of prosthetic restorations. The intimate connection between oral health and other aspects of patients' quality of life underscores the necessity for novel interdisciplinary collaboration and presents a compelling rationale for enhancing the clinical and laboratory aspects of dental rehabilitation, thereby ensuring predictable outcomes.

Анотація.

Тривалий час основною класифікацією втрати зубів була класифікація запропонована у 1928 р. Kennedi J. З подальшим розвитком стоматології, виявилось недостатнім класифікувати дефекти зубного ряду тільки за їхньою локалізацією.

Таким чином, жодна з класифікацій не містить вичерпної інформації та не враховує усі клінічні особливості часткової втрати зубів. Саме тому, урахування таких морфо-функціональних класифікаційних ознак як взаємне розташування збережених зубів і беззубих ділянок, умови для сприйняття та розподілу жувального навантаження, зокрема – ступінь і тип атрофії коміркового відростка, а також кількість оклюзійних опорних зон у ділянках премолярів і молярів дає усі підстави для обґрунтування раціонального плану лікування. Аналізуючи дані наукової літератури, сучасні погляди авторів на способи вирішення проблем, зумовлених частковою втратою зубів у структурі надання стоматологічної допомоги, слід підкреслити значну потребу населення України у кваліфікованому ортопедичному лікуванні згідно сучасних вимог, зокрема з використанням покривних протезів. Тісний взаємозв'язок стоматологічного здоров'я з іншими показниками якості життя пацієнтів вимагає нових підходів у міждисциплінарній співпраці і надає усі можливості для удосконалення клінічної та лабораторної складових для забезпечення прогнозованих результатів стоматологічної реабілітації.

Keywords: *stomatology, classification of tooth loss, partial tooth loss, classification of dentition defects, treatment methods.*

Ключові слова: *стоматологія, класифікація втрати зубів, часткова втрати зубів, класифікація дефектів зубного ряду, методи лікування.*

For a considerable period of time, the primary classification of tooth loss was the classification proposed in 1928 by Kennedy J. [1-4]. As dentistry progressed, it became evident that a more nuanced approach was necessary to classify dental defects beyond their mere localisation. The advent of novel therapeutic modalities necessitated the differentiation of the nature and extent of jawbone damage in the event of tooth loss, as well as the determination of the characteristics of subsequent prosthetics. Nevertheless, the most common classification in the field of prosthetic dentistry is the Kennedy J. classification of partial tooth loss, which is supplemented by the Applegate O.C. classification.

In 1954, Fiset J. published a paper on the subject. The Kennedy-Applegate-Fiset classification is a visual, practice-oriented classification based on the ratio of retained teeth to edentulous areas. It is used to determine the rational design of partial dentures and, accordingly, certain physiological and mechanical principles of their functioning. It is also important to note that in certain cases, additional studies may be required to assess the complexity of the clinical situation. This is in accordance with the findings of studies. [5, 6] This classification was developed further by Misch K.E. and Judi K.W. [7], with a particular focus on dental implantation. Each class is further subdivided into subgroups A, B, C and D. The classification is based on the determination of three main parameters of the bone: height, width and mediolateral length of its body. According to this classification, there are four classes of partial tooth loss, which are further subdivided into four groups (A, B, C and D). In the event of complete loss of the lower jaw teeth, a fifth group is formed.

Classes 1 and 2, subgroup A comprise patients with natural teeth in the anterior areas of the dentition. These patients have sufficient bone volume to accommodate dental bridges in the event of included or terminal defects of the dentition. It is possible to place bridges with either tooth or implant support, or on a single implant. The number of implants required is dependent on the number of missing teeth and the number of opposing teeth.

Class 2. Subgroup B: In patients of this group, the quantity of bone is slightly diminished, yet it remains sufficient for the placement of small screw and cylindrical implants. In certain instances, the placement of multiple implants may be necessary to distribute the load. Additionally, flat implants may be utilized in instances where smaller bone volumes are present. Subgroup C: In patients in this category, the quantity of bone is insufficient for the placement of cylindrical and screw implants. Subgroup D: Atrophy of the bone is observed at a depth. In cases where conventional removable dentures are indicated, augmentation of the cellular part of the lower jaw with bone substitutes is recommended in the event of a risk of fracture.

Classes 3 and 4. Subgroup A: patients present with missing teeth or groups of teeth, yet the bone volume is adequate for the placement of screw, cylindrical, and flat implants. The number of implants required is contingent upon the length of the edentulous area and the type of prosthesis planned. The prosthesis may be sup-

ported by implants alone or by teeth and implants. Subgroup B: patients present with extensive edentulous areas, yet the bone volume remains sufficient to accommodate implant-supported fixed bridges. Subgroup C: patients have extensive edentulous areas. The bone volume is insufficient for the placement of endosseous implants. In certain instances, a sinus lift or mandibular nerve relocation may be employed. It is advisable to exercise caution when using short screw and cylindrical implants in class 4 situations. Subgroup D: The severe atrophy of the bone precludes the placement of intraosseous implants. The use of partial removable dentures is indicated in such cases. In the event of a risk of fracture of the lower jaw, the cellular part of the denture is augmented with biomaterials.

At present, there are multiple classifications of jaw bone structure that have been adapted for the purposes of dental implantology. In accordance with the well-known classification of jaw bone architecture proposed by Lekholm and Zarb [8-10], there are four classes: Class 1: The jaw bone tissue is represented by an almost completely homogeneous compact layer.

Class 2: A thick compact layer surrounds, in a ratio of 1:1, a well-developed spongy layer.

Class 3: A thin compact layer, in a ratio of 1:3, surrounds a well-developed spongy layer. The developed network of muddy trabeculae of the spongy layer has no clear orientation.

Grade 4: A thin (1-2 mm) compact layer, 1:4, surrounds a spongy layer with low trabecular bone density.

In terms of architectural classification, jaw bone tissue can be divided into three distinct categories.

Type 1 - bone is characterized by a high-density spongy layer with powerful trabeculae, with a ratio of compact and spongy layers of 2:1.

Type 2 - bone is medium-density bone, with a well-developed network of strong trabeculae in the spongy layer, surrounded by a compact layer of bone 2-3 mm thick.

Type - 3 bone is characterized by a few thin trabeculae in the spongy layer, surrounded by a compact layer of up to 1 mm. The ratio of the compact and spongy layers is 0.5:1.0.

For each type of bone density, the author has developed a distinct set of surgical protocols, implant designs, treatment plans, and subsequent loading times [11, 12]. The author proposes that the use of different types of implants and prosthetic tactics should be considered on a case-by-case basis, depending on the specific characteristics of the bone in question. The frequency of bone types in different parts of the jaws is described in detail by Misch SE (1999) according to the classification he used [13-17].

With regard to the quality of bone tissue, the classification proposed by Misch C. distinguishes four types of bone:

D1: Flat compact bone devoid of a spongy layer.

D2: Cortical layer of varying density on the exterior, spongy bone on the interior.

D3: Thin cortical layer on the exterior, spongy bone on the interior.

D4: Absence of cortical layer, cellular cancellous bone within.

The most prevalent type of D1 bone is found in the lower jaw in approximately 9 % of cases, with a higher prevalence in the anterior region compared to the lateral region. Bone of D2 quality is most typical for the lower jaw, with a prevalence of 50 % in the distal parts. It is somewhat more frequently observed in the anterior region, with a prevalence of 66 %. D2 density is also observed in 25 % of cases in the anterior part of the upper jaw and in 10 % of cases in its lateral parts. Bone type D3 is more typical for the upper jaw (65 % and 50 % in the anterior and posterior regions, respectively), although it occurs in less than half of the cases in the distal regions of the lower jaw and even less often (25 % in the anterior region). Bone quality D4 is exceedingly rare in the lower jaw, occurring in approximately 4 % of cases.

In terms of the ability to osseointegrate, there are three types of bone quality:

1. Bone with normal healing potential (BHP-1)
2. Bone with an average healing potential (BHP-2)
3. Bone with a low healing potential (BHP-3)

This latter category is found in the anterior region (10 %) and even more often in the posterior region of the upper jaw (40 %).

The principal disadvantage of the previous classifications is that they are two-dimensional representations, which fail to reflect the three-dimensionality of the anatomical structures. This is evidenced by the findings of studies such as those by [11, 14, 18-20].

Currently, a doctor can combine a three-dimensional assessment of the maxillofacial vascular system and image-guided surgery with the help of CRT. Software for diagnostic and planning purposes is available to assist in the creation of diagnostic and implant positioners (e.g. Virtual Implant Plan (VIP), Implant Logic Systems (ILS), Cedarhurst, USA; Simplant, Materialize, Belgium; Easy Guide, Keystone Dental, USA. [21, 22])

The authors (Juodzbalys Y, et al., 2004) proposed a classification (eJDS) of jawbone anatomy for implantation based on anatomical, clinical and radiological assessment of the jaw [23]. However, this classification does not allow for variations in mandibular anatomy and the risk of damage to the LJ nerve. The advent of cone beam computed tomography has led to a significant enhancement in radiographic technology, thereby facilitating more accurate diagnostic capabilities, particularly in the context of the assessment of the LJ canal.

American researchers Misch KE and Judy KW [7] classified the available bone into four sections: abundant; barely adequate; compromised; and deficient (AD). Bone classified as abundant does not require augmentation and is more than 5 mm wide, 10-13 mm high and 7 mm long. Barely adequate bone is defined as being between 2.5 and 5 mm wide, greater than 10 to 13 mm in height and greater than 12 mm in length. This bone can be modified with osteoplasty or hard or soft tissue augmentation, depending on the nature of the defect. Bone deficits necessitate substantial hard tissue restoration from extraoral sources and are typically incompatible with implant rehabilitation.

American researchers Misch K and Judy K [7] have identified four categories of partial tooth loss based on the degree of atrophy and the potential for prosthetic restoration.

Group A: The quantity of bone is sufficient to permit the placement of implants in the lower and upper jaws. Nevertheless, even under such favorable conditions, the lower jaw is subject to limitations due to its anatomical features. In such cases, the recommended treatment is the provision of a removable or distal cantilever bridge.

Group B: the bone volume is less substantial. Screw and cylindrical implants can be placed on both the lower and upper jaws, although they are smaller in size. However, the prognosis may be less favorable, depending on the quality of the bone.

Group C: The existing lower jaw bone allows for the placement of short screw and cylindrical implants in the area between the natural chin canals. In certain instances, it may be necessary to relocate the inferior cervical nerve, which may necessitate cervical ridge augmentation or sinus lift.

Group D: The cellular component and areas of the basal bone of the mandible are atrophied.

In any case, the placement of intraosseous dental implants is contraindicated. Implant prosthetics is possible only after mandibular plastic surgery and bone augmentation.

A Ukrainian scientist (Ugryn M.M.) proposed a definition of four levels of implant intervention in different methods of rehabilitation of patients with complete absence of teeth using implants in accordance with the characteristics of the four levels of implant rooting tactics, depending on the time from the moment of tooth loss to implantation and prosthetics [25].

Misch CE presented five options for prosthetics using dental implants [4, 7, 11, 12, 14, 15]. The first three types of prostheses are fixed, fully or partially restore the dentition, and are fixed with cement or screws. The last two types of prostheses are removable, but their use is limited not by the form of the prosthesis but by the number of implants [18].

Conclusion. Consequently, none of the classifications provides comprehensive information and does not encompass all the clinical features of partial tooth loss. It is therefore evident that a rational treatment plan can be formulated on the basis of morphological and functional classification features, including the relative position of the retained teeth and edentulous areas, conditions for the perception and distribution of the chewing load, in particular the degree and type of atrophy of the collar ridge, as well as the number of occlusal support zones in the areas of premolars and molars. A review of the scientific literature and the authors' current views on the treatment of partial tooth loss in dental care reveals a significant need for qualified orthopedic treatment in Ukraine, in accordance with modern requirements, in particular the use of prosthetic restorations. The intimate connection between oral health and other aspects of patients' quality of life underscores the necessity for novel interdisciplinary collaboration and

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Медицины ГОУ «ТГМУ им. Абуали ибни Сино»*<https://doi.org/10.5281/zenodo.12800464>**ПРОТИВОСПАЛИТЕЛЬНЫЕ СВОЙСТВА КАРВИОЛОВОЙ МАЗИ НА ФОНЕ
ЭКСПЕРИМЕНТАЛЬНОГО АРТРИТА НА БЕЛЫХ КРЫСАХ****Borajabova N.B.***State Research Institute of Nutrition, Ministry of Industry and Technologies of the Republic of Tajikistan
Research Laboratory institute of Fundamental Medicine
State Educational Institution TSMU named after Abuali ibni Sino***ANTI- INFLAMMATORY PROPERTIES OF CARVIOL OINMENT ON THE BACKGROUD
EXPERIMENTAL ARTHRITIS IN WHITE RATS****Аннотация.**

Данная статья посвящена антифлогенным свойствам карвиоловой мази на фоне гистаминового и серотонинового артрита, на белых крысах. Экспериментальными исследованиями доказано, что 2%, 3%-й карвиоловый мазь на фоне гистаминового и серотонинового артрита оказывают заметный противовоспалительный эффект, что подтверждается достоверным уменьшением объема воспаленного голеностопного сустава по сравнению с контрольными животными. При сравнительном анализе установлено, что карвиоловый мазь по эффективности не уступает бутадиеновой мази и несколько уступает индометациновой мази.

Abstract.

This article is devoted to antiflogogenic properties of carviola ointments against the background of histamine and serotonin arthritis provide perceptible anti inflammatory effect, which is confirmed by a significant decrease in the volume of the inflamed ankle joint comparative analysis. It has been established that carviol ointment is effective superior to similar properties of 5% levomikol ointment.

Ключевые слова : воспаления, карвиол, гистамин, серотонин, артрит, левомикол.

Keywords: inflammation, carviol, histamine, serotonin, arthritis, levomikol.

Актуальность. В настоящее время для лечения различных ран и воспалительных процессов различного генеза широко используются в основном ранозаживляющие и противовоспалительные мази для наружного применения, обладающие антисептическими, антибактериальными, обезболивающими свойствами. [3,8,18]

Известно, что воспалительный процесс возникает в ответ на первичную альтернацию, то есть повреждение тканей, продолжающейся в виде вторичной альтернации. Которое в результате физико-химических изменений в зоне воспаления сопровождается повышением проницаемости сосудистых стенок, особенно посткапиллярных венул. Наряду с этим в процессе воспаления усиливаются влияние клеточных и плазменных медиаторов воспаления источник и влияние, которых описаны многими авторами и основной эффект которых наряду с другими аспектами является повышение проницаемости сосудов сопровождающимися процессами экссудации, и пролиферации в зоне воспалительного процесса.[4,6,7,11,20]

В настоящее время основными средствами используемые в лечение воспалительных процессов различного генеза, являются нестероидные противовоспалительные средства, которые на фоне длительного применения, оказывают различные побочные влияние на жизненно важные органы и систем организма.[8,15]

В связи с этим, особый интерес в лечении воспалительных процессов различного генеза, приобретают средства разработанные на основе природных веществ, лекарственных растений и эфирные масла обладающие низкой токсичностью и высокой фармакологической активностью [1,6,15,19]

Установлено, что эфирные масла обладают, выраженными противовоспалительными свойствами. Согласно литературными данными лекарственные средства эфиромасличного происхождения геранол, гераноретинол, розанол, лимонное, лавровое гвоздичное, фенхеловое, лавандовое можжевеловое, кориандровое и др. обладают противовоспалительными, мембраностабилизирующими, антиоксидантными и противомикробными свойствами [1.2.9,10,12,13.14,16,17].

В связи с этим было интересно изучить противовоспалительное свойства разработанного на основе кориандрового эфирного масла, карвиоловой мази на фоне гистаминового и серотонинового артрита.

Цель исследования. Изучение противовоспалительных свойств карвиоловой мази при экспериментальном артрите.

Материалы и методы исследования. Исследования проводились на базе НИЛ-ТГМУ им. Абуали ибн Сино на 60 белых беспородных крысах самцах массой 220-230 гт.

Содержание экспериментальных животных осуществлялось, по правилам лабораторной практики для приведения доклинических исследований по ГОСТ № 51000.3-96 - 51000.4-2008 и проводилось с соблюдением Международных рекомендаций Европейской конвенции по защите позвоночных животных, используемых при экспериментальных исследованиях.

Животные содержались в условиях вивария при стандартной температуре с естественным освещением и свободным доступом к воде и корму. Противовоспалительные свойства 2% и 3% карвиоловой мази изучали на модели гистаминового, серотонинового артрита.

Серотониновый и гистаминовый артриты вызывали инъекцией под апоневроз голеностопного сустава 0,1 мл и 0,05 мл 0,1%-ного раствора соответствующих медиаторов воспаления.

Животные были распределены следующим образом; 1 контрольные. 2. Животные леченные 2% -ой карвиоловой мазью. 3. Животные леченные 3%-ой карвиоловой мазью. 4-5, Животные леченные бутадиеновой и индометациновой мазью. По такой

же схеме были распределены животные на фоне серотонинового артрита.

Объем воспаленной стопы определяли онкометрическим методом [5] через 1,5, 3 и 4 ч. после введения флагогенных агентов. Карвиоловую мазь использовали методом наружного применения, а для сравнения использовали бутадиеновую и индометациновую мазь.

Результаты исследования. Установлено, что воспалительный процесс реализуется через комплекс сосудистых и клеточных реакций и регулируется двумя типами медиаторов, где первые инициируют воспаление и вторые снижают выраженность воспалительного процесса. Необходимо отметить, что медиаторы воспаления повышают проницаемость гистогематических барьеров, что способствует выходу форменных элементов крови белками, за пределы сосудов и в результате чего развивается вторая стадия воспаления стадия сосудисто-экссудативных изменений. [5]

Согласно полученным результатам 3% карвиоловой мази, оказывает выраженное тормозящее влияние на течение гистаминового и серотонинового артрита.

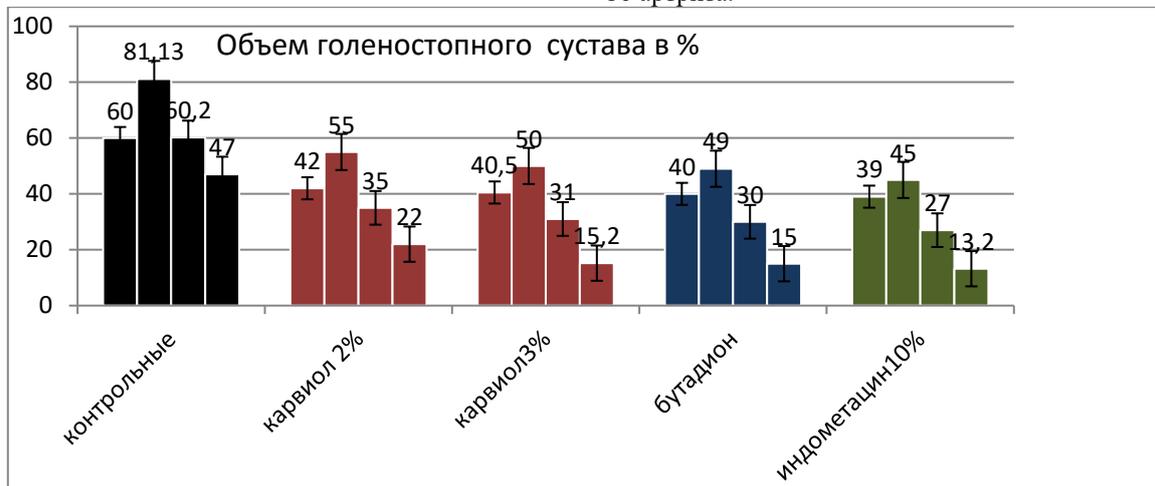


Рис.1 Влияние карвиоловой мази на течение гистаминового артрита у белых крыс.

Наблюдение за динамикой обратного развития воспаления показало, что через 3 ч. после введения гистамина, объем воспаленного голеностопного сустава у крыс, леченных 2% и 3%-ной карвиоловой мазью по сравнению с аналогичными показателями контрольных крыс, уменьшалось в среднем на 30% и 38,2% соответственно ($P < 0,001$). Через 4 часа объем воспаленного сустава у крыс, леченных 3% карвиоловой мазью по сравнению с контрольными уменьшалось 67,7%.

В сериях, леченных препаратами сравнения бутадиеновой и индометациновой мазями, величина голеностопного сустава через три и четыре часа от начала введения провоспалительного медиатора по сравнению с показателями контрольных крыс уменьшалась, соответственно на 40,2%, 46,2%, 68,0%, 71,9%.

Сравнительный анализ полученных результатов показал, что по противовоспалительным свойствам 3% карвиоловой мази, по эффективности не уступает аналогичным свойствам бутадиеновой мази, а по сравнению с индометациновой мазью, через 4 часа от начала введения флагогенного агента испытуемое средство оказалось на 4,2% слабее.

Согласно полученным результатам (рис 2.), при серотониновом артрите через три часа от начала введения медиатора воспаления, под влиянием 2% и 3%-й карвиоловой мази, величина отека голеностопного сустава по сравнению с показателями контрольных серий соответственно уменьшалась на 55,7%, 61,4%, 55,3%, 63,49%.

Полученные результаты показали, что по противовоспалительному эффекту карвиоловую мазь, оказывал аналогичные свойства с бутадиеновой мазью и не значительно уступал индометацину.

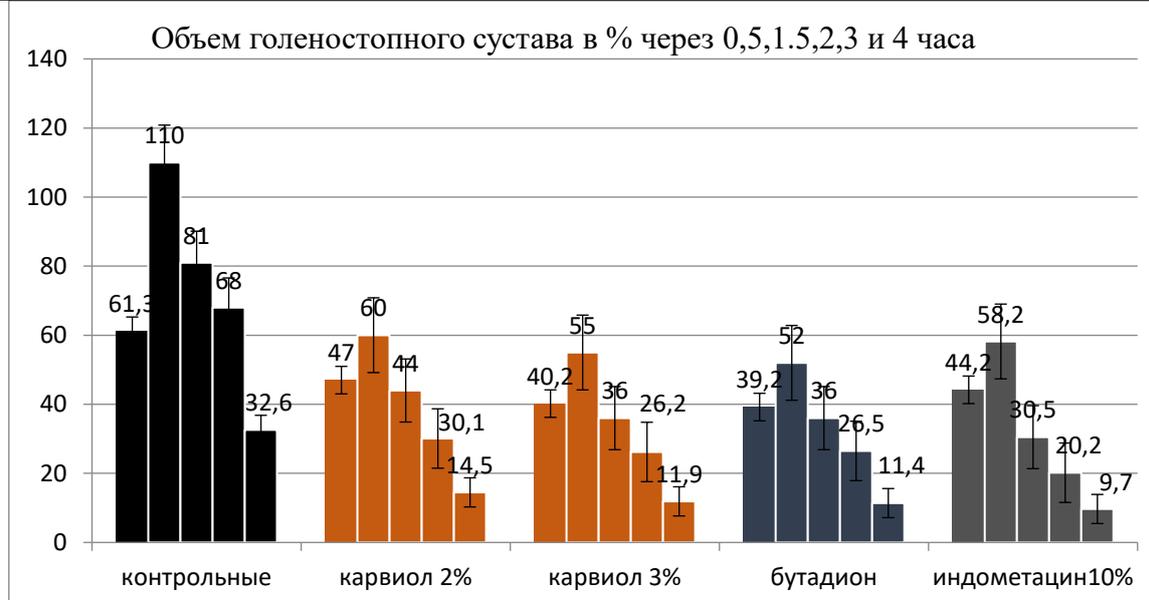


Рис.2 Влияние карвиоловой мази на течение серотонинового артрита у белых крыс.

Таким образом, полученные результаты свидетельствуют о том, что карвиоловая мазь, оказывает положительный терапевтический эффект на течение экссудативной фазы воспалительного процесса и по эффективности не уступая бутадиеновой мази, незначительно уступает индометациновой мази. Известно, что эфирные масла, являются малотоксичными средствами и обладают ангиопротекторными, мембраностабилизирующими, антиоксидантными и противовоспалительными свойствами и при длительном применении в сравнение с нестероидными противовоспалительными средствами, не оказывают побочных эффектов. Исходя из этого средства, разработанные на основе эфирных масел, в том числе использование карвиоловой мази при лечении воспалительных процессов различного генеза является весьма актуальной.

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THE USE OF COOPERATIVE LEARNING IN THE PROFESSIONAL TRAINING OF FUTURE DENTISTS

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ВИКОРИСТАННЯ МЕТОДУ КООПЕРАТИВНОГО НАВЧАННЯ ПРИ ПРОФЕСІЙНІЙ ПІДГОТОВЦІ МАЙБУТНІХ СТОМАТОЛОГІВ

Abstract.

Socio-economic changes that are taking place in the country today define the requirements for professional training of future health care professionals. The reform of higher education in Ukraine poses the problem of the quality of training of a new generation of professionals who have the latest information, are able to obtain it and use it effectively for efficient professional activity; have organisational skills, ability to manage people in extreme situations, be able to work in teams, solve complex professional problems and take responsibility for decision making. Professional training of future dentists cannot be limited only to the acquisition of professional competences, purposeful formation and development of professional and personal qualities that ensure the effectiveness of the activities. The holistic professional training requires the creation of effective educational conditions for the development of the personality of the future professionals. To ensure a high quality professional training to the future activity permits the use in the educational process of modern models, methods and forms of learning, among which a significant position is taken by the cooperative learning or training in collaboration.

Анотація.

Соціально-економічні зміни, що відбуваються сьогодні в країні, визначають суворі вимоги до професійної підготовки майбутніх фахівців охорони здоров'я. Реформування вищої освіти в Україні направлене на підвищення якості підготовки фахівців нового покоління, які вмело володіють новітньою інформацією, уміють її отримувати та ефективно використовувати для ефективної професійної діяльності; володіти організаторськими здібностями, вмінням керувати людьми в екстремальних ситуаціях, працювати у команді, вирішувати складні професійні проблеми та брати відповідальність за прийняття рішень. Професійна підготовка майбутніх лікарів-стоматологів не може обмежуватися лише набуттям професійних компетентностей, цілеспрямованим формуванням й розвитком професійних та особистісних якостей, що забезпечують ефективність діяльності. Цілісна професійна підготовка потребує створення ефективних освітніх умов для розвитку особистості майбутніх фахівців. Забезпечити високу якість професійної підготовки до майбутньої діяльності дозволяє використання в освітньому процесі сучасних моделей, методів та форм навчання, серед яких значне місце займає кооперативне навчання або навчання у співпраці.

Keywords: *method, training, competence, education, dentistry.*

Ключові слова: *метод, навчання, компетентність, освіта, стоматологія.*

Introduction. The processes of globalization, democratization and informatization that are currently taking place in society determine the requirements for the professional training of future health care professionals [1]. A teacher of higher education should not only master the system of scientific knowledge, but also be able to perceive and use in practice new progressive ideas, to master the skills of self-study, carry out professional tasks, take responsibility for taking effective solutions for non-standard occupational situations and be competitive in the labour market [2]. The medical education must provide high quality training of health care professionals, who must not only be proficient in their specialty, but also to master the necessary competencies to solve complex medical problems, to be able to adapt to new changes, to understand the basics of insurance, economics, law.

The research goal: studying the impact of cooperative education on the development of professional competence of the future professionals in the field of health care.

Materials and methods: theoretical-analysis of scientific literature to determine the status of the investigated problem; practical-testing, interviews, supervision, tests to determine the feasibility of using cooperative education for vocational training of future health care professionals.

Results obtained. Cooperative learning is aimed at optimising the educational process and democratising the relationship between the educator and the trainees. Among the basic principles of this training is the transition from monologic presentation of the material to a demonstration of the possibilities of obtaining the necessary data in the process of active cognitive activity from the available resources [3]. Creation of a comfortable learning environment where each educational participant feels psychologically satisfied with the learning process and acquiring the knowledge needed for their future professions; creation of a collaborative atmosphere; the transition to a dialogue-based cooperation between the instructor and future professors, and between them, which leads to the formation of communicative competences: the ability to assert your point of view, to listen actively to the co-worker, to find a common solution, etc. [4]. The experience of cooperative learning in the educational process of higher education institutions shows that education learners work with satisfaction in the cooperative mode, learning the educational material is easier and more effective. In cooperative learning, the students work in small groups,

sharing a common goal and solving the problem collectively, make decisions jointly and bear individual responsibility for each individual member, have different levels of capability to achieve individual success [5]. Among the main methods of cooperative learning are «team training», «small group work» and «pair work», where significant emphasis is placed on group goals and the success of the whole group or pair, which can only be achieved as a result of each team member (pair) working independently in constant interaction with other members of the same group on a certain topic, problem, or issue to be studied [6]. The job of each educator is not only to do something together, but also to learn something together, so that each member of the group (pair) acquired the necessary knowledge, skills and abilities, and at the same time, the whole group must know what each one has achieved separately.

Conclusion. Thus, using the cooperative teaching method in professional training of future dentists creates conditions for comprehensive development of students and formation of professionally important characteristics through continuous communication between all participants, the students are encouraged to be creative and collaborative, to participate actively in teamwork, and to be personally responsible for their decisions.

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USE OF PEDAGOGICAL TECHNOLOGIES IN THE PREPARATION OF FUTURE DENTISTS

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ЗАСТОСУВАННЯ ПЕДАГОГІЧНИХ ТЕХНОЛОГІЙ ПРИ ПІДГОТОВЦІ МАЙБУТНІХ СТОМАТОЛОГІВ

Abstract.

At the current stage of health care development, more and more attention is paid to patient safety, ethical issues, increasing the responsibility of health professionals, a high level of professional skills and the rapid evolution of procedures and methods. The above requires the adaptation of a study program and the use of all available educational tools and technologies in the training of future medical professionals. The aim of the study was to conduct a theoretical analysis of scientific psychological and pedagogical, methodological and medical publications, methodological work of the department on the use of pedagogical technologies in the training of future dentists. The use of modern pedagogical technologies, in particular stimulation learning technologies and case technologies, in the process of professional training of future dentists performs several important functions: control, as it reveals the knowledge, skills and abilities of students; educational, because it requires students to achieve a certain level of education; educational, as is the formation of personal qualities of future doctors. By effectively organizing independent and classroom activities of the student, the teacher promotes development of clinical thinking, which inevitably becomes the basis for qualified and successful doctor's formation. Simulation training and case technologies contribute to the formation of professional competence of future professionals, skills and abilities of their mental activity, personality development, ability for self-studying, changing the paradigm of thinking, the ability to process large amounts of information, as well as the development of quality requirements for a specialist who must respond adequately and professionally in different situations, to be systematic and effective. Simulation learning technologies allow you to repeatedly and accurately reproduce important clinical scenarios and provide an opportunity to adapt the learning situation for each student.

Анотація.

На сучасному етапі розвитку сфери охорони здоров'я все більше уваги приділяється безпеці пацієнтів, етичним питанням, збільшенню відповідальності медичних працівників, високому рівню необхідної професійної кваліфікації та швидкій еволюції процедур та методів. Вищезазначене вимагає адаптування навчальних програм та використання усіх наявних освітніх інструментів і технологій при професійній підготовці майбутніх медичних фахівців. Метою дослідження було провести теоретичний аналіз наукових психолого-педагогічних, методичних та медичних публікацій, методичної роботи кафедри щодо застосування педагогічних технологій в процесі професійної підготовки майбутніх стоматологів. Використання сучасних педагогічних технологій, зокрема технологій стимуляційного навчання та кейс-технологій, в процесі професійної підготовки майбутніх стоматологів виконує кілька важливих функцій: контролюючу, оскільки виявляє знання, уміння та навички студентів; навчальну, тому що вимагає досягнення студентами певного рівня навчання; виховну, оскільки відбувається формування особистісних якостей майбутніх лікарів. Ефективно організовуючи самостійну й аудиторну діяльність студента, викладач сприяє розвитку клінічного мислення, що неодмінно стає основою формування кваліфікованих та успішних лікарів. Симуляційне навчання та кейс-технології сприяють формуванню професійної компетентності майбутніх фахівців, вміння та навичок їхньої розумової діяльності, розвитку особистості, здатності до самонавчання, зміні парадигми мислення, вмінню переробляти значні об'єми інформації; а також розвитку вимог щодо якості фахівця, який повинен адекватно та професійно реагувати в різних ситуаціях, відрізнятися системністю та ефективністю дій. Технології симуляційного навчання дозволяють багаторазово та точно відтворити важливі клінічні сценарії та надають можливість адаптувати навчальну ситуацію для кожного студента.

Keywords: pedagogical technologies, training, teacher, student, dentistry.

Ключові слова: педагогічні технології, навчання, викладач, студент, стоматологія.

Introduction. At the current stage of health care development, more and more attention is paid to patient safety, ethical issues, increasing the responsibility of health professionals, a high level of professional skills and the rapid evolution of procedures and methods [1-3]. The above requires the adaptation of a study program and the use of all available educational tools and technologies in the training of future medical professionals. The aim of the study was to conduct a theoretical analysis of scientific psychological and pedagogical, methodological and medical publications, methodological work of the department on the use of pedagogical technologies in the training of future dentists [4].

Materials and methods of the study. Analysis of psychological and pedagogical, methodical literature, materials of educational and methodical conferences, methodical work of the department. Theoretical methods (analysis, synthesis, generalization, comparison, systematization, pedagogical modeling, theoretical forecasting) were used to achieve the goal and clarify the nature and features of the use of modern pedagogical technologies in the educational process.

Results obtained. The rapid decrease in the price of computing power and the elemental base of computers, the sharp growth of the market of mobile devices and applications contribute to the mass spread of virtual reality technologies and make it possible to sharply reduce the costs of educational materials. The use of virtual reality in the practice of professional training of future dentists radically transforms the principle of visual content of education, and fully corresponds to the global trend in teaching disciplines, which consists in supplementing traditional approaches with modern methods of information transmission: expanding the availability of electronic libraries, anatomical databases, the appearance of perfect simulators, which model the structures of the human body according to

the system and topographic principle with the possibility of building planar projections and three-dimensional three-dimensional body models. The virtual identity of real objects, their universality and multifunctionality can give the future doctor greater life experience in perception, in the implementation of actions. The high efficiency of implementation, the use of virtual reality as a full-fledged educational equipment that competes with traditional approaches, requires the presence of educational programs that have a script, a rigid algorithm of actions, which allows them to act as an educational technology. In their absence, only the teacher can transmit knowledge to the student. As a way of transferring and learning knowledge, the existing means of virtual reality make high demands on the teaching staff, whose active and competent position will allow the introduction of new technologies. The introduction of virtual reality tools expands the boundaries of the principles of visibility and accessibility. At the same time, the insufficient development of specialized content and the lack of established educational technologies can cause difficulties in the widespread implementation of these educational tools by teachers. Anticipatory work in this segment is combined with the creation of specialized educational programs for the professional training of teachers and should become an actual direction for the implementation of virtual reality technologies in the practice of teaching medical disciplines.

In order to form future doctors' clinical thinking in the educational process, case-study technologies are implemented in parallel with the improvement of traditional ones. The case method, or the method of situational exercises, is a teaching method that makes it possible to bring the learning process closer to the real practical activities of specialists. It promotes the development of ingenuity, the ability to solve problems, develops the ability to analyze and diagnose problems.

This pedagogical tool helps to deepen the understanding of the topic, develop imagination, practically test the theory, explore ideas, identify patterns, relationships, formulate hypotheses, increase motivation, encourage thinking and discussion, get additional information, deepen knowledge, confirm views, apply analytical thinking, ability to solve problems and draw rational conclusions, develop communication skills, combine theoretical knowledge with practical problem solving, turn abstract knowledge into skills and abilities. In the field of medical pedagogy, this technique allows developing clinical thinking based on the principles of evidence-based medicine, improving practical skills. This method is successfully used all over the world in teaching medical sciences. This pedagogical technology can be implemented in different ways. It can be a format of work in small groups, a business role-playing method, a discussion method, standardized patients, etc. [5]. However, one of the important ways of implementing the case study methodology is the use of information and educational web technologies, which makes the learning process interactive, effective and allows scaling educational materials to a large audience at the same time. With the help of information and educational web technologies, opportunities for a wider range of clinical cases, including rather rare ones, for qualitative visualization of additional research methods are revealed, which is impossible with the traditional training format. Access to interactive clinical cases is open and implemented using Internet access. An important advantage of the case method of learning is that this experience can be repeated if necessary and mastered according to an individual learning trajectory at a convenient pace with the help of Internet access. Interactive cases are widely presented on the websites of some medical educational institutions and in the Internet versions of medical journals, world societies of doctors of various specialties. Cases are illustrated materials that are shown to the user in a certain sequence. The user receives information about the patient using videos, graphic images, diagrams, etc., and after some time gets the opportunity to choose one or another action, assume a diagnosis, carry out a differential diagnosis, prescribe an examination, treatment. An interesting foreign project is the Open Labyrinth system, where the case method of learning is implemented using a special platform for creating and reviewing cases. In Ukraine, the study of the medical discipline using the case method began recently and needs to be developed and implemented in the practice of training modern specialists. Case technology is a complex and effective tool of innovative learning technology, which at the same time not only reflects a practical problem, but also actualizes a certain set of knowledge that must be mastered for its solution, and also successfully combines educational, analytical and educational activities, which increases effectiveness of modern educational tasks [6, 7]. The essence of case technology is that students are offered a real clinical situation, the description of which simultaneously reflects not only any practical problem, but also actualizes a certain set of knowledge that must be mastered in order to understand a specific task. Until now, there is no certain

standard for presenting cases from medical disciplines [8]. Usually, cases are presented in printed form or on electronic media, multimedia presentations, photos, diagrams, tables are included in the text, which makes them more visual for students. Case technology is an active problem-situational analysis based on learning by solving specific problems – situations (cases) – by a group of students. With joint efforts, it is necessary to analyze the symptoms, possible causes of its occurrence, find a practical solution, evaluate the proposed solutions and choose the most optimal one. Cases for independent work are more extensive and contain more information [9]. The use of case technology during the study of the academic discipline «Dentistry» helps students better remember complex topics, develop and train clinical thinking, master the skills of differential diagnosis of various pathologies, clearly and succinctly formulate their thoughts; develops the ability to listen, thereby stimulating interest in education. The organization of the educational process of professional training of future doctors with the use of cases makes it possible to prepare specialists as much as possible for taking the «KROK» exam.

Conclusions. The use of modern pedagogical technologies, in particular stimulation learning technologies and case technologies, in the process of professional training of future dentists performs several important functions: control, as it reveals the knowledge, skills and abilities of students; educational, because it requires students to achieve a certain level of education; educational, as is the formation of personal qualities of future doctors. By effectively organizing independent and classroom activities of the student, the teacher promotes development of clinical thinking, which inevitably becomes the basis for qualified and successful doctor's formation. Simulation training and case technologies contribute to the formation of professional competence of future professionals, skills and abilities of their mental activity, personality development, ability for self-studying, changing the paradigm of thinking, the ability to process large amounts of information, as well as the development of quality requirements for a specialist who must respond adequately and professionally in different situations, to be systematic and effective. Simulation learning technologies allow you to repeatedly and accurately reproduce important clinical scenarios and provide an opportunity to adapt the learning situation for each student.

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ЗАСТОСУВАННЯ ПЕДАГОГІЧНИХ ТЕХНОЛОГІЙ ПРИ ВИКЛАДАННІ СТУДЕНТАМ НАВЧАЛЬНОЇ ДИСЦИПЛІНИ «АНАТОМІЯ ЛЮДИНИ»

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APPLICATION OF PEDAGOGICAL TECHNOLOGIES IN TEACHING STUDENTS THE DISCIPLINE "HUMAN ANATOMY"

Анотація.

Складні соціально-економічні зміни, що відбуваються сьогодні в Україні, визначають суворі вимоги щодо професійної підготовки майбутніх фахівців охорони здоров'я. Реформування вищої освіти направлене саме на підвищення якості підготовки фахівців нового покоління, які зможуть вміло володіти новітньою інформацією, уміти її отримувати та ефективно використовувати для своєї ефективної професійної діяльності; будуть володіти організаторськими здібностями, умінням керувати людьми в екстремальних ситуаціях, працювати у команді, вирішувати складні професійні проблеми та брати відповідальність за прийняті рішення. Професійна підготовка майбутніх лікарів не може обмежуватися лише набуттям професійних компетентностей, цілеспрямованим формуванням й розвитком професійних та особистісних якостей, що забезпечують ефективність діяльності. Цілісна професійна підготовка потребує створення ефективних освітніх умов для розвитку особистості майбутніх фахівців. Забезпечити високу якість професійної підготовки до майбутньої діяльності дозволяє використання в освітньому процесі сучасних моделей, методів та форм навчання, серед яких значне місце займає метод симуляційного навчання та кейс-технології.

Abstract.

Complex socio-economic changes taking place in Ukraine today determine strict requirements for the professional training of future healthcare professionals. The reform of higher education is aimed specifically at improving the quality of training of new generation specialists who will be able to skillfully possess the latest information, be able to receive it and effectively use it for their effective professional activities; will have organizational skills, the ability to manage people in extreme situations, work in a team, solve complex professional problems and take responsibility for decisions made. The professional training of future doctors cannot be limited only to the acquisition of professional competences, purposeful formation and development of professional and personal qualities that ensure the effectiveness of activities. Comprehensive professional training requires the creation of effective educational conditions for the development of the personality of future specialists. The use in the educational process of modern models, methods and forms of education, among which a significant place is occupied by the method of simulation training and case technology, allows to ensure the high quality of professional training for future activities.

Keywords: method, training, competence, education, medicine.

Ключові слова: метод, навчання, компетентність, освіта, медицина.

Вступ. Аналіз отриманих результатів дослідження та особистий досвід педагогічної діяльності дозволили систематизувати інформацію та розробити методичні рекомендації для викладачів щодо застосування педагогічних технологій – технологій симуляційного навчання та кейс-технології під час викладання навчальної дисципліни «Анатомія людини» в процесі професійної підготовки майбутніх лікарів. Застосування технологій симуляційного навчання, кейс-технології під час викладання навчальної дисципліни «Анатомія людини» на практичних заняттях вимагає врахування деяких особливостей, в межах професійної підготовки лікарів симуляційне обладнання відіграє ведучу роль, але при цьому побудова заняття повинна спиратися, перш за все, на навчальні цілі, а не виходити лише із можливостей симуляторів [1].

Отримані результати. Практичні заняття із використанням симуляційного обладнання спрямовані на розвиток самостійності студентів, поглиблення, розширення, закріплення отриманих теоретичних знань та формування професійних та загальних компетенцій. Вони передбачають виконання здобувачами освіти під керівництвом викладача однієї або декількох конкретних задач та спрямовані на формування у майбутніх лікарів практичних умінь, розвиток навичок командної роботи, комунікативної компетентності, а також розуміння галузі застосування теоретичних знань в медичній практиці [2-3]. При формуванні змісту практичного заняття з використанням симуляційного обладнання слід керуватися переліком компетенцій, які повинні бути сформовані у фахівця після вивчення навчальної дисципліни.

Участь здобувачів освіти в практичному занятті-тренінгу включає:

- формування начально-аналітичних умінь (узагальнення та систематизація знань);
- формування вміння застосовувати професійно-значимі знання на практиці відповідно до профілю спеціальності;
- відпрацювання алгоритму виконання мануальних навичок;
- відпрацювання алгоритму прийняття клінічних рішень у стандартних та нестандартних ситуаціях;

- виконання самоаналізу своїх дій та розвиток критичного мислення.

Основні задачі практичного заняття:

- забезпечення активного залучення всіх учасників в процес навчання;
- досягнення розвитку необхідної навички.

Для створення оптимальних умов в залежності від контингенту та цілей заняття навчальна група може включати від 3 до 15 осіб [4]. Навчальні дисципліни та професійні модулі, за якими планується практичне заняття із використанням симуляційного обладнання, а також його об'єми визначаються робочими планами, а зміст – робочими програмами та календарно-тематичним планом з навчальної дисципліни та повинно відповідати теоретичному матеріалу того розділу, що вивчається. Структура та обладнання для проведення заняття можуть змінюватися у залежності від контингенту здобувачів освіти та рівня їхньої підготовки: чим вище базовий рівень володіння навичками, тим більше слід приділяти увагу деталям і тим більше високого рівня реалістичності вимагає обладнання для занять. Формування навичок командної взаємодії, відпрацювання алгоритмів дій та пошук рішень у реалістичному середовищі досягається за рахунок імітації робочого середовища лікаря, використання медичної техніки, інструментарію, документації. Розвиток клінічного мислення, комунікативних навичок досягається за рахунок мультидисциплінарного підходу. Є необхідною детальна переробка клінічного кейсу з формуванням історії хвороби, результатами огляду, лабораторних та інструментальних досліджень, а також максимально подібний інструктаж «пацієнта» [5].

Для успішного проведення практичного заняття необхідна готовність здобувачів освіти до виконання усвідомлених мануальних дій. Основа, на якій базується практичне заняття, є знання, тому його слід проводити після засвоєння теоретичного матеріалу на лекціях. Симуляційний тренінг являє собою практичне заняття з використанням симуляційних технологій, яке включає поглиблене вивчення теоретичного матеріалу на підготовчому етапі та виконання практичних завдань з подальшим зворотнім зв'язком, наприклад, розбором ре-

зультатів заняття самими студентами разом з викладачем на дебрифінгу [6]. З метою методичної структуризації варто поділяти практичне заняття на декілька послідовних етапів: вхідний контроль; брифінг; основний етап, сам тренінг; дебрифінг; зворотній зв'язок.

Вхідний контроль. Перед практичним заняттям студенти самостійно готуються по темі заняття, використовуючи рекомендовану літературу, мультимедійні матеріали, лекції та ін. Відповідно, наявність теоретичних знань є основою для відпрацювання практичних навичок. Вхідний контроль дозволяє визначити рівень знань групи у цілому, що дає можливість викладачу акцентувати увагу на найбільш проблемних моментах.

Викладач може самостійно обирати форму контролю. Як приклад, це можуть бути тестові завдання, які повинні бути максимально практико-орієнтовані, містити ключові питання та відповідати тематиці заняття. Також формою вхідного контролю можуть бути топографічні картки та німі малюнки. На топографічній картці цифрами позначені елементи та структури органів людини, їх необхідно поєднати із відповідними визначеннями. На німих малюнках серед запропонованого загалу позначень необхідно вибрати та позначити тільки ті, які заявлені в завданні.

Брифінг відрізняється від усіх форм надання теоретичного матеріалу переліком особливостей та включає:

- надання інформації про хід заняття та його компонентів: брифінг, тренінг, дебрифінг;
- викладення цілей та навчальних задач практичного заняття;
- обговорення теоретичних аспектів теми практичного заняття зі студентами (важливо зробити акцент на одній вузькій проблемі, вирішенню якої присвячене практичне заняття);
- пояснення основних принципів роботи та технічних можливостей симуляційного, медичного та іншого обладнання, яке використовується на даному занятті, знайомство з розміщенням расходних матеріалів, які можуть знадобитися в ході заняття;
- інструктаж з техніки безпеки при роботі з обладнанням;
- роз'яснення політики конфіденційності.

Основний етап, практичний тренінг. Сценарій та вид практичного тренінгу може бути різноманітним та залежить, в першу чергу, від дидактичних цілей та використаного обладнання. Так, обробка клінічних сценаріїв вимагає високо реалістичного симулятора. Командний тренінг спрямований на психологію колективної роботи, а індивідуальний тренінг на відпрацювання технічних навичок. Для кожного окремо взятого технічної навички існують спеціалізовані тренажери. Але яким би не був тренінг, його суть полягає в самостійному виконанні всіх маніпуляцій. Умовно, виходячи з навчальних цілей, тренінги можна поділити на наступні види: тренінг технічних навичок, клінічний сценарій, відпрацювання комунікативних навичок, командний тренінг, міждисциплінарний тренінг.

Дебрифінг є аналізом, розбором досвіду, якого набули здобувачі освіти в процесі виконання симуляційного сценарію. Існує два основних підходи до проведення дебрифінгу: розбір помилок учасників із участю викладача та розбір помилок викладачем за участю учасників. В ході дебрифінгу виконується ретроспективний аналіз дій за допомогою відеозапису проведеного практичного заняття. Викладач є учасником дискусії та спрямовує учасників за допомогою запитань, акцентуючи увагу на помилках та правильному виконанні дій в складних ситуаціях. По завершенню дебрифінгу підбивають підсумки роботи на викладач оцінює студентів. Для проведення об'єктивної оцінки за результатами тренінгу слід використовувати детальний оціночний лист. Це структурований перелік дій, які необхідно виконати студенту для досягнення поставлених задач. Він складається з трьох частин: інформації для студента, інформації для викладача та безпосередньо оціночний лист. Інформація для студента може бути у вигляді клінічної задачі, яка потребує виконання певного алгоритму дій, або містити безпосередньо завдання з поясненнями. Інформація для викладача містить завдання, яке надається студенту, додаткові дані, які можуть знадобитися при виконанні завдання. Оцінювальний лист являє собою пронумеровану таблицю з алгоритмом виконання завдання.

Зворотній зв'язок. Студенти і викладач повинні мати інформацію про результати проведеного практичного заняття. З цією метою студенти можуть заповнити анкету зворотнього зв'язку, яка на основі оцінки задоволення студентів, їхньої думки про ті чи інші аспекти проведеного заняття служить для вдосконалення та корекції навчального заняття.

Робота з *клінічними кейсами* передбачає аналіз клінічної ситуації та знаходження шляхів її вирішення. Метод кейсів являє собою техніку навчання, яка використовує опис реальних клінічних випадків. Здобувачі освіти повинні дослідити ситуацію, розібратися в суті проблеми, запропонувати можливі рішення та обрати кращі з них. Кейси ґрунтуються на реальному фактичному матеріалі або наближені до реальної ситуації [7].

Метод кейсів складається з двох фаз:

I фаза включає планування кейсу, створення кейсу, формулювання запитань для аналізу клінічної ситуації у кейсі, розробку методичного забезпечення студентів по аналізу кейсу і підготовці до обговорення, методичне забезпечення практичного заняття із застосування кейс-методу [8].

II фаза – це безпосередня діяльність викладача при обговоренні кейсу на занятті (вступне слово, організація дискусії або презентації, забезпечення ділового настрою в аудиторії, оцінка індивідуального внеску студентів в аналіз ситуації, забезпечення організації роботи в малих групах студентів і взаємного обміну інформацією, підведення підсумків, заключне слово).

На підготовчому етапі роботи з case-study методом викладач, відповідно до мети і завдань заняття, вибирає потрібні кейси і підбирає літературу,

необхідну для підготовки до заняття. Студентів об'єднують у 2 підгрупи по 5-6 осіб кожна. Цей етап припускає короткий вступ педагога. Якщо учасники раніше не працювали за методом case-study, необхідно познайомити їх з даним методом як з однією з форм активного навчання, коротко озвучити основні етапи їхньої подальшої роботи, а також позначити способи й критерії оцінки їхньої роботи на занятті за даним методом. Для вирішення кейсів, зокрема з анатомії людини, рекомендують опрацювати матеріали підготовки до практичних занять та лекцій, презентації лекцій, веб-сайти за даною темою, абстракти сучасних статей, реферати статей, список рекомендованої літератури. На основному етапі потрібно провести: 1) визначення основних проблем аналізованої ситуації, рівня виникнення проблем і прийняття рішень, мети й шляхів рішення головної проблеми, обмежень і вимог до рішення; 2) підготовку до формулювання власних висновків та висновків перед групою. Обов'язковими вимогами цього етапу виступають: участь кожного в обговоренні; можливість кожному висловити свою точку зору та одержати уявлення про думки інших; командний характер роботи, що вимагає вміння вислуховувати й враховувати думки інших людей. Підсумковий етап передбачає оцінювання роботи студентів за такими критеріями, як теоретична підготовка, практичні навички, клінічне мислення, участь у дискусії, взаємодія у групі, компетентнісний підхід до розв'язання завдання, вміння прийняти правильне рішення в нетиповій конкретній ситуації.

Для проведення клінічного симуляційного сценарію наповнення кейсу повинно бути максимально наближено до реальних умов та нагадувати історію хвороби від моменту госпіталізації до виписки. Якщо сценарій має декілька варіантів розвитку клінічної ситуації (складний сценарій), то кожен можливий варіант доповнюється результатами лабораторних, інструментальних досліджень та іншими даними в залежності від стану «пацієнта» [9].

Клінічний кейс має містити наступні дані: паспортна частина; скарги; anamnesis morbi; anamnesis vitae; спадковість; status praesens; план обстеження; дані лабораторних та інструментальних досліджень; клінічний діагноз; план лікування; додаткові дані. Частина даних стає доступною для студентів не відразу та надається за запитом. Деякі дані покликані відволікти увагу при постановці діагнозу та призначенні лікування. Однак, помилково вважати, що кейси можуть замінити живе спілкування з хворим, фізикальне обстеження пацієнта, лекції. Без оволодіння теоретичного матеріалу вирішення кейсу неможливе. Безумовно, що дану педагогічну технологію слід використовувати в органічному зв'язку з іншими методами навчання, в тому числі і традиційними, які формують у студентів обов'язкові нормативні знання.

Висновок. Виявлено, що якість застосування педагогічних технологій у вищій медичній освіті залежить від взаємодії ряду факторів, які забезпечують педагогічний процес: компетентні викладачі, які на високому рівні володіють інноваційними педагогічними технологіями та постійно удосконалюють свій професійний рівень; мотивація та достатній рівень базової підготовки майбутніх лікарів; сучасне організаційне й методичне забезпечення процесу упровадження технологій; ефективне поєднання усіх видів та рівнів педагогічних технологій.

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*Yasynska Elvira Tsezarivna**Candidate of Medical Sciences, Associate Professor of the Department of Social Medicine and Public Health. Bukovinian State Medical University, 58002. str. Teatralna 2, Chernivtsi, phone: 380956748935, e-mail:**<https://orcid.org/0000-0002-3768-7278>**<https://doi.org/10.5281/zenodo.12800515>***ANALYSIS OF SELF-ASSESSMENT RESULTS OF OWN HEALTH OF SELECTED CONTINGENTS****Abstract.**

The article analyzes the indicators of own health of selected contingents living in the city of Chernivtsi. The author used an adapted health questionnaire-36 (MOS-36 - Short-Form Health Survey, or MOS SF-36), which was first tested in the USA. The adapted questionnaire gave respondents the opportunity to give their own self-assessment of their health according to the following blocks: self-assessment of their own health; respondents' attitude to their own health; the presence of diseases; seeking medical help; self-assessment of lifestyle; respondents' awareness of a healthy lifestyle. 45% of respondents, especially (ages 20-39), do not pay attention to their health. From the male group of this age, according to their own assessment, 1 man had a bad state of health and 1 man - very bad (presence of a chronic incurable disease). 60% of respondents (40% of men and 20% of women sought medical help only when absolutely necessary and self-medicated). 12% of men and 10% of women in the age group (40-59 years) did not know about the presence of chronic diseases for several years. In addition, 30% of male respondents in two age groups (20-39 years and 40-59 years) who did not follow a healthy lifestyle rated their lifestyle as satisfactory. 70% of respondents, including people of both genders, noted strong stress and nervousness due to a full-scale war.

As a result of the conducted research, the results of awareness of the selected contingents regarding a healthy lifestyle were obtained. Most often, respondents obtained information about a healthy lifestyle from the Internet, the press, and television programs (45% of men and 32% of women of the II and III age groups) ($p \leq 0.001$). 27% of men and 15% of women of the 1st age group noted a low level of awareness about preserving their health in family doctors' offices. However, respondents of older age groups (70% of men and 65% of women) are satisfied with receiving this information. The analysis of the subjective component of health made it possible to identify certain deviations in the self-assessment of individual health and subsequently to correct the influence of adverse factors on the formation of one's own health.

Keywords: health, contingents, self-assessment

Introduction. It has been proven that the health of the population is one of the priority values of the state policy of any European country. In the complex characteristics of the quality of life of the population [3], the state of health of residents, the organization and efficiency of the health care system occupy an important place.

Undoubtedly, the current situation requires urgent strategic approaches aimed at reforming the health care system. Health care in all countries without exception is a priority direction of the social policy of each state and in many cases – a component of national security [5].

The health of the population is a key indicator of the social well-being of society and the effectiveness of the state's social policy. The level of public health directly depends on investments in this area and the quality of provided medical services, which, in turn, reduces morbidity and increases the duration of the productive period of life. The health of the population reflects a combination of such factors as working conditions, the state of the environment, the material and technical base of society, as well as the effectiveness of the health care system. Low population health indicators and a high level of morbidity negatively affect the quality of human life and lead to an increase in additional costs for the provision of medical services, a decrease in labor productivity, etc. [4].

Presenting main material.

At the population level, health is a multifactorial phenomenon that includes objective and subjective components. Low self-esteem of health affects the formation of risky behavior, the development of bad habits and psychological disorders. The subjective component of health makes it possible to identify certain deviations in self-esteem or to minimize the influence of adverse factors on the formation of one's own health.

Health is determined by an integral assessment of various factors. Approximately 50% of all factors affecting health are objective and are distributed as follows: the environment is approximately 25%, heredity - 18-20%, medical care - 8-10%. About 50% belong to subjective factors related to lifestyle. These factors include the mode of work and rest, physical activity or lack thereof, diet, psycho-emotional state, smoking, alcohol abuse. In addition, emphasis is placed on anti-risk factors: moderate exercise and sports, humor, benevolence, and an optimistic outlook on life.

External factors include: climate-geographical conditions, poor ecological situation, low socio-economic status, urbanization, etc.

Internal factors include: lifestyle, heredity, genetic susceptibility to diseases.

The purpose of the article: analyze and evaluate the results of self-assessment of the selected contingents using the modernized health questionnaire-36.

Materials and methods: The research was conducted by interviewing 245 people (125 men and 120

women) who living in the city of Chernivtsi. All respondents were divided into 3 age groups, including men and women (20-39 years; 40-59 years; 60-79 years). The sociological survey was based on a specially developed modernized health questionnaire-36 (MOS-36 - Short-Form Health Survey, or MOS SF-36) [1], which included the following blocks of questions:

- self-assessment of one's own health;
- respondents' attitude to their own health;
- the presence of diseases;
- seeking medical help;
- self-assessment of lifestyle;
- respondents' awareness of a healthy lifestyle.

The average age of the examined patients was 50.5 years. The questionnaire consisted of 36 questions. Each respondent's answer was evaluated in points, which were later added up and analyzed. The evaluation indicators ranged from 0 to 100, where 100 is full health. Statistical processing of the material was carried out using the χ^2 method. The difference was considered significant at $p \leq 0.05$.

Based on the results of the sociological research, the following was established: among the respondents of the 1st age group (20-39 years old), 2 men (4.5%) and 6 women (15%) rated their state of health as "very good"; 10 (22%) and 12 (30%) women - "good"; 31 men (69.5%) and 22 women (55%) rated their health as satisfactory. From the male group of this age, according to their own assessment, 1 man (2%) had a bad state of health and 1 man (2%) – very bad. These respondents had a history of chronic diseases and 1 of them periodically abused alcohol. Gender specificities were noted in persons of this age group. None of the women in this group rated their health status as "bad" or "very bad" ($p < 0.05$). When analyzing the respondents of the II age

group (40-59 years old), only 2 women (5.7%) rated their own state of health as "very good", 7 women (20%) and 5 (16.7%) men rated their health as "good". 20 men (66.6%) and 22 women (62.8%) had a satisfactory state of health (according to their own assessment). 3 men (10%) and 2 women (5.7%) had poor health status; very bad - 2 men (6.7%) and 2 women (5.7%).

As a result of our analysis of the III group (60-79 years old), we saw changes in the direction of deterioration of their health according to the respondents' own self-assessment. Thus, none of the interviewees assessed their state of health as "very good", 2 men (4%) and 2 women (4.4%) of this age group consider their state of health to be good. 34 men (68%) and 35 women (77.8%) had a satisfactory state of health (according to their own assessment). 10 men (20%) and 6 women (13.3%) had poor health; 4 men (8%) and 2 women (4.4%) - considered their state of health to be "very bad" ($p < 0.01$).

Assessing their health status using the health formula, respondents were able to determine their risks and anti-risks and make the necessary adjustments.

Considering the fact that low self-esteem of health is a factor influencing its formation in young people, their choice of risky behavior, predisposition to harmful habits and psychological disorders, it is important to take into account the subjective component of health in teenagers and young people with the aim of early detection of certain deviations in self-esteem or the influence of adverse factors on the formation of health, the effect of which can be minimized.

Therefore, it is extremely important to emphasize the subjective components of health. This allows you to minimize the effect of adverse risk factors and detect certain deviations in self-esteem in a timely manner.

Table 1

Results of respondents' self-assessment of health

Age of respondents		20-39 years old				40-59 years old				60-79 years old			
		males		females		males		females		males		females	
Gender of respondents		abs	%	abs	%	abs	%	abs	%	abs	%	abs	%
State respondents' health	Very good	2	4.5	6	15	0	0	2	5.7	0	0	0	0
	Good	10	22	12	30	5	16.7	7	20	2	4	2	4.4
	Satisfactory	31	69.5	22	55	20	66.6	22	62.8	34	68	35	77.8
	Bad	1	2	0	0	3	10	2	5.7	10	20	6	13.3
	Very bad	1	2	0	0	2	6.7	2	5.7	4	8	2	4.4
In total		45	100	40	100	30	100	35	100	50	100	45	100

The respondents received information about a healthy lifestyle from the Internet, television programs, and the press (45% of men and 32% of women of II and III age groups) ($p \leq 0.001$). The analysis of awareness of a healthy lifestyle by respondents in the age group of 20-39 years showed that 27% of men and 15% of women noted a low level of awareness of maintaining their health in outpatient clinics. Respondents in the 60-79 age group (70% of men and 65% of women) are satisfied with receiving this information. To the question "Are you satisfied with the promotion of a healthy lifestyle in medical institutions?" 46% of men in the 1-st age group (20-39 years) answered that rather "No". But the respondents of the older age group 970% (45% of men and 55% of women) gave a positive answer.

Conclusion.

Regardless of the stage of life, the improvement of self-esteem of health must be achieved through the improvement of the social environment and the implementation of the principles of a healthy lifestyle. This includes various forms of self-realization (regular physical education, moderate sports, etc.). Inadequate self-assessment of one's own health leads to deviant forms of human behavior and the emergence of harmful habits. People's awareness of subjective risks and anti-risks of their own health gives them the opportunity to get rid of many harmful habits.

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PEDAGOGICAL SCIENCES

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STRESS IN THE PROFESSIONAL ACTIVITIES OF HIGHER EDUCATION INSTRUCTORS DURING WARTIME

Abstract.

This article is devoted to the study of stress in the professional activities of instructors in higher medical education institutions during wartime. Military actions create additional psychological pressure on educators, causing high levels of stress and professional burnout. The main stress factors include physical danger, psychological pressure, the need to transition to remote learning, decreased student motivation, and increased workload.

Keywords: *stress, war, professional activities, instructors, higher education institutions, medical education, psychological support, professional burnout, remote learning.*

Introduction

Stress is an integral part of the professional activities of educators in higher medical education institutions, especially during wartime. Military actions significantly affect the psycho-emotional state of teachers, forcing them to adapt to new working conditions. The COVID-19 pandemic has already prepared educators for remote learning, but military actions create new, significantly more complex challenges. This article discusses the main factors of stress in the professional activities of educators during wartime. The aim of this work was to study the stress faced by higher education instructors during military conflicts.

Material and Methods

To achieve the aim, a literature search was conducted in specified databases such as Google Scholar, Scopus, Web of Science, PubMed Medline, and Embase, as well as from other open sources. The main aspects considered included the impact of military actions on the mental and emotional health of educators, stress reactions and their consequences, as well as effective psychological support and strategies to reduce the impact of stress on professional activities.

Results

Stress, its factors, and consequences among medical education instructors.

Teaching stress is defined as experiencing negative and unpleasant emotions that arise during everyday work [5]. According to research conducted in the USA, educators experience job-related stress twice as often as the general working population [10].

Recent studies have shown that stress levels among medical instructors are extremely high, with the main contributing factors being high performance demands, insufficient administrative support, and challenging working conditions. This highlights the need

for comprehensive support programs for educators to reduce stress levels and improve work efficiency [2].

According to a study conducted at Lahore Medical & Dental College and Ghurki Trust Teaching Hospital, stress was found in 94% of respondents, with 21% experiencing severe stress. The main stress factors included insufficient control over the work process (96%), difficulty expressing thoughts (70%), unsafe working conditions (66%), work overload and unrealistic deadlines (62%), and work pressure affecting personal life (59%) [6].

Mental and emotional health of ukrainian citizens during wartime. According to the DSM-5, war is considered a significant stressor that meets trauma criteria. Trauma is defined as "actual or threatened death, serious injury, or sexual violence" [1].

Research results indicate that stress during the war in Ukraine is a major and complex issue affecting the mental and emotional health of the country's citizens [8]. The ongoing military conflicts in eastern Ukraine create extreme stress conditions due to the constant threat to life, physical and psychological injuries, fear for the future, evacuations, loss of loved ones, and property destruction. The main stress factors during the war in Ukraine include constant anxiety and fear of enemy attacks, traumatic experiences from military actions, high levels of uncertainty, and future unpredictability. People, especially those living in conflict zones, may suffer from severe psychological problems such as depression, anxiety, post-traumatic stress disorder (PTSD), as well as feelings of social isolation and alienation.

According to WHO estimates, around 22% of people during wartime may experience depressive and anxiety disorders, PTSD, as well as bipolar disorder and schizophrenia in the following years. Depression and

anxiety are correlated with age, with depressive disorders being more frequently diagnosed among women [3,4].

The impact of war on mental health has been observed both among Ukrainian citizens directly affected and among the population living outside the conflict zone [12].

Anxiety-depressive disorders have a profound impact on various aspects of life, including the social sphere, professional activities, and overall quality of life. Studies have shown that a person's psychological state is closely linked to the intensity of social events. In particular, increased stress levels can lead to asthenia, characterized by general weakness and fatigue, as well as increased anxiety and depression. These mental disorders can significantly reduce people's ability to perform their professional duties, maintain social connections, and function in everyday life. Traumatic events often cause deep emotional experiences that affect cognitive processes such as memory, concentration, and decision-making ability. Moreover, they can lead to significant changes in behavior, including avoiding social contacts, reduced activity, and interest in previously significant activities. Changes in emotional state may manifest through feelings of helplessness, irritation, or even aggression, further complicating adaptation to new living conditions [9].

Research shows that during the war in Ukraine, the level of psychological distress can reach 47%, and PTSD is found in about 5% of the population. A link has also been established between the frequency of traumatic events and the increased prevalence of these disorders. For example, in conflict zones like Ukraine, studies have shown a direct link between the impact of war, including combat actions, financial instability, and forced displacement, and the occurrence of psychological disorders and PTSD symptoms among the affected population. Additionally, chronic stress can lead to other health problems, such as an increased risk of cardiovascular diseases, sleep disorders, and exacerbation of chronic illnesses. Uncertainty about the future, constant tension, and losses create additional psychological pressure, complicating the adaptation and recovery processes among the population experiencing these tragic events [11].

Stress among Instructors during Wartime.

War creates additional challenges for instructors, including:

- *Physical danger:* Instructors, like the rest of the population, face risks to life and health due to military actions. Destroyed infrastructure and the lack of basic safety conditions make conducting classes difficult or impossible.

- *Psychological pressure:* Feelings of uncertainty, fear for loved ones, and general anxiety create constant mental stress. These factors can lead to chronic anxiety, depression, and other mental disorders.

- *Transition to remote learning:* The need to quickly master new technologies, adapt teaching materials, and ensure effective remote teaching creates additional stress.

- *Decreased student motivation:* Lack of access to resources, students' psychological problems, and general instability can lead to decreased motivation to learn.

- *Increased workload:* The need for constant student support, additional administrative duties, and acting as a psychologist for students add to instructors' workload.

The highest stress levels are found among instructors who have been in the combat zone or nearby since the beginning of the war; the lowest stress levels are found among instructors who have left Ukraine [7].

Conclusions

Stress in the professional activities of medical higher education instructors during wartime is a complex challenge requiring a comprehensive approach to overcome it. Creating a safe educational environment, support from administration, interaction with colleagues, personal responsibility, and the development of professional skills, as well as psychological support from specialists, can significantly reduce the negative impact of stress.

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DEVELOPING FOREIGN LANGUAGE COMMUNICATIVE COMPETENCY OF ENGINEERING SPECIALISTS IN THE CONTEXT OF HIGHER VOCATIONAL EDUCATION

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ФОРМУВАННЯ ІНОШОМОВНОЇ КОМУНІКАТИВНОЇ КОМПЕТЕНТНОСТІ ФАХІВЦІВ ІНЖЕНЕРНОГО ПРОФІЛЮ У КОНТЕКСТІ ВИЩОЇ ПРОФЕСІЙНОЇ ОСВІТИ

Анотація.

У статті розкривається поняття «іношомовна професійна комунікативна компетентність» в контексті сучасної вищої професійної освіти. Автор розглядає вищезазначене поняття як динамічну інтегративну професійно важливу якість особистості майбутнього фахівця інженерного профілю, що дозволяє ефективно здійснювати міжкультурні професійні контакти під час вирішення технічних завдань та комунікативних ситуацій у професійній сфері. Автор виділяє наступні компоненти іношомовної професійної комунікативної компетентності: мотиваційно-ціннісний, який передбачає ціннісне ставлення до процесу міжкультурної професійної комунікації та бажання підтримувати активність у комунікативній професійній діяльності під час вирішення технічних завдань; пізнавальний, що включає знання іноземної мови та розуміння соціолінгвістичного і соціокультурного аспектів мови для вирішення професійних комунікативних завдань; діяльнісний, який передбачає реалізацію діяльності, спрямованої на міжкультурну професійну комунікативну взаємодію для набуття та поповнення комунікативного досвіду; рефлексивно-оцінювальний, що включає самостійне оцінювання результатів комунікативної професійної діяльності та вдосконалення набутих комунікативних навичок.

У статті автор виокремлює ключові компетенції (лінгвістична, комунікативна, прагматична), які складають структурно-змістовну модель іношомовної професійної комунікативної компетентності майбутнього викладача технічних дисциплін; підкреслює, що цільовий, змістовий, процесуально-технологічний та результативний компоненти вважаються ключовими структурними складовими моделі формування іношомовної комунікативної компетентності фахівця технічного профілю. У статті визначено умови, які сприяють формуванню іношомовної професійної комунікативної компетентності студентів під час викладання іноземної мови у вищих інженерних навчальних закладах. На основі аналізу теоретичних матеріалів та практики в університетах встановлено, що процес формування цієї компетентності у фахівців технічного профілю відбувається в кілька етапів, які поступово змінюють один одного. Зазначено, що динаміка формування іношомовної професійної комунікативної компетентності проходить через наступні етапи: розвиток лінгвістичної, комунікативної та соціокультурної компетенцій, потім формування іношомовної професійної комунікативної компетентності, і, нарешті, досягнення професіоналізму вторинної мовленнєвої особистості майбутніх фахівців інженерного профілю.

Abstract.

The article presents the concept of "foreign language professional communicative competence" in the context of modern higher professional education. The author views this concept as a dynamic and integrative personality trait essential for future engineering specialists. It enables effective intercultural professional communication when solving technical problems and facing communicative situations in the professional field. The author identifies three components of foreign language professional communicative competence: motivational and value-based, cognitive, and activity-based. The first component involves valuing intercultural professional communication and an active approach to solving technical issues. The cognitive component encompasses language knowledge and an understanding of the sociolinguistic and sociocultural aspects of language for effective professional communication. The activity-based component involves engaging in intercultural communication. Furthermore, the author identifies key competencies, such as linguistic, communicative, and pragmatic, that constitute the structural and content model of foreign language professional communicative competence for future technical teachers. The article highlights that the target, content, procedural, technological, and effective components are pivotal structural components in the formation of foreign language communicative competence for technical specialists. The article also outlines the conditions that contribute to the development of students' foreign language professional communicative competence in teaching a foreign language in higher engineering educational institutions. Through the analysis of theoretical materials and university practices, it is established that the process of developing this competence in technical specialists occurs in several stages that build upon each other. These stages include the development of linguistic, communicative, and socio-cultural competences, followed by the establishment of foreign language professional communicative competence, and finally, the attainment of expertise in the linguistic abilities of future engineering specialists.

Ключові слова: *іншомовна професійна комунікативна компетентність, майбутній фахівець інженерного профілю, компетенція, комунікація, заклад вищої професійної освіти, міжкультурна взаємодія, комунікативне навчання.*

Keywords: *foreign language professional communicative competence, competence, communication, higher vocational educational institution, cross-cultural interaction, communicative learning, future engineering specialists*

Problem statement. Globalization and integration efforts in Ukraine require the training of engineering specialists with strong foreign language skills. These skills are essential for effective communication with people from different cultures. The analysis of teaching foreign languages to technical specialists shows that developing communication skills in a foreign language is easier when certain pedagogical principles are revised. For example, Ukraine's participation in the Bologna Process helps align national higher vocational education systems and create a unified European market for skilled labor. Additionally, Ukrainian higher vocational education focuses on implementing the state educational standard and considering the profile of the industry. Establishing a common European educational space needs Ukraine's higher educational institutions to adopt a competence-based approach. This approach focuses on developing practical skills and the ability to apply knowledge, particularly in vocational education and foreign language learning.

Relevance of the problem. Many scientists are interested in developing communication skills, but there is still a lack of academic knowledge and practices to fully tap into higher education's potential to develop these skills for technical specialists. Technical fields of study and humanities differ in how communication is practiced and its importance in the learning process and implementation. It is important to note that there are contradictions between several key points today: the potential prospects of the educational program designed to train future teachers of technical disciplines in order to cultivate communicative competence, and the inadequately developed pedagogical conditions for this process; the insufficient study of communicative competence from a general psychological and pedagogical perspective, as well as the underdeveloped theoretical and practical approaches to fostering communicative competence among technical specialists; the requirements for the level of communicative competence expected of graduates from technical fields of study, which reflect their preparedness to engage in professional activities within intercultural interactions, and the discrepancy in the level of practical training of these specialists.

The purpose of the article is to reveal the essence of the concept of "foreign language professional communicative competence" in the context of modern higher vocational education based on the analysis of psychological and pedagogical literature; to identify the main competencies that make up the structural and content model of foreign language professional communicative competence of a future engineering specialists; to determine the conditions that contribute to the for-

mation of students' foreign language professional communicative competence in the process of teaching a foreign language in higher education.

Presentation of the basic material. Considering the significant impact of learning a foreign language on the academic preparation of a specialist, it is necessary to consider its key functions:

- Just like any other academic discipline, learning a foreign language plays a crucial role in the holistic development of a specialist. It not only broadens their horizons but also deepens their understanding of the world around them and diverse national cultures.

- The educational process intertwines with the shaping of a specialist's personality. When it comes to technical professionals, the deliberate cultivation of specific character traits, essential for their professional growth, stands out as a fundamental purpose of learning a foreign language.

- Foreign language study impacts students' intellectual activity, fostering independent work, bilingual dictionary usage, and the development of linguistic self-education. It also promotes creativity and abstract thinking. Additionally, it exposes students to different thought formulations and ideas from their native language, enhancing imagination through real-life communication scenarios and language games [1, p.214].

- Learning a foreign language impacts communication and speech in the native language. It helps develop students' language abilities and speech behavior, improving proficiency.

- Communicative learning aims to model the communication process during the learning experience. Learning a foreign language, for example, can significantly enhance communication skills. In language classes, students not only learn the language itself but also acquire communication techniques, speech etiquette, and the nuances of dialogue and group communication. They become adept at addressing various communication challenges, become proficient speech partners, and develop essential skills to connect with others [2, p.48]. These abilities, such as taking initiative, displaying friendliness, and communicating correctly, are crucial qualities for a modern vocational discipline teacher.

"Foreign language professional communicative competence" refers to a person's ability to effectively communicate in a foreign language while conducting professional activities. This competence includes both the motivation and value system necessary for successful intercultural professional communication. Acquiring foreign language professional communicative competence will enable a technical specialist to effectively engage in intercultural communication as a non-native speaker; interact with foreign language speakers by incorporating advanced knowledge of technical sciences,

scientific perspectives, professional nuances, national values, norms, and perspectives; foster a positive attitude during professional communication in a foreign language; employ appropriate methods of verbal and non-verbal communication based on the context.

Through an examination of scientific and pedagogical literature, we can identify the key competencies that constitute the structural and content framework of foreign language professional communicative competence [3, p.250]:

Linguistics encompasses essential skills that determine the mastery of both oral and written foreign languages. Speech competence involves possessing knowledge about the language, as well as the ability to accurately identify and utilize its different linguistic components. Linguistic competence, on the other hand, refers to the ability to use the language effectively in various communication tasks, employing linguistic tools and understanding their functioning to convey emotions and convey intricate intellectual and professional information.

The communicative aspect encompasses both professional and intercultural competencies. Professional and communicative competence entails the correct application of language and linguistic means according to communicative goals. It involves constructing speech behavior that is tailored to professional communication situations, and the ability to engage in various foreign language activities within the technical field. Intercultural competence, on the other hand, entails having a specific knowledge base about the culture associated with a particular foreign language. Such knowledge is utilized to facilitate cultural interaction within the scientific and technical realm. Moreover, it also involves overcoming intercultural barriers during foreign language communication.

Pragmatic competency encompasses both information technology and self-educational skills crucial for a technical specialist. Information and technological competence refer to the ability to seek and acquire relevant professional information from diverse sources, translate it into different sign systems, assess its value, and effectively utilize Internet resources in professional endeavors [4,p.50]. The development of self-educational skills in a technical specialist is somewhat hindered by the limited academic hours dedicated to foreign language learning in higher education. Therefore, a key requirement for continuous self-improvement in professional performance is the capacity to expand knowledge and learn through independent research and creative endeavors in the technical domain.

The key components for developing a technical specialist's foreign language communicative competence are the target, content, procedural and technological, and result components.

The *cornerstone* of developing foreign language communicative competence for technical specialists is the formulation of clear and strategic goals, serving as the foundation for shaping the content. The process of cultivating the competencies encompassed in foreign language communicative competence should pave the way for attaining educational objectives (such as fos-

tering professionally significant qualities and motivation to explore foreign cultures), as well as educational outcomes (including elevating the overall cultural and professional proficiency of technical specialists, and expanding and enhancing foreign language proficiency through continuous self-education). Furthermore, the process should contribute to developmental objectives (shaping the intellectual, psychological, and motivational aspects of specialists' personalities, fostering self-improvement), and personal growth.

The *content component* encompasses various forms of education, including formal, non-formal, and informal. Formal education consists of practical classroom lessons and didactic materials designed to develop foreign language communicative skills. Non-formal education involves active participation in international language programs, scientific conferences, competitions, quizzes, and other events. Informal education encompasses activities such as preparing for language competitions, essay writing, maintaining a student's diary, and creating a portfolio.

The procedural and technological components comprise a system of stages: stage 1 involves establishing the theoretical foundation, stage 2 focuses on acquiring knowledge at the reproduction level, and stage 3 emphasizes the transfer and independent application of acquired knowledge and skills to solve educational research problems and tasks related to informal speech activity. These components are supported by various technologies such as games, projects, and methods implementing contextual learning and problem-based learning, which facilitate the development of specific competences through a set of actions by the participants in the educational process.

The resulting component represents the structural framework of a technical specialist's communicative competence in a foreign language, encompassing motivational, cognitive, and reflective-evaluative elements, as well as the evaluation criteria for the development of these components [5,p.124]. This includes an assessment of the individual's motivation for learning a foreign language, their comprehension of foreign language material, and the extent to which they have developed reflective skills and self-regulation abilities.

Developing students' foreign language professional competence in higher vocational education involves:

- using philosophical, scientific approaches and technologies specific to teaching future technical teachers;
- applying various language teaching methods based on technical educational level;
- promoting personality-oriented learning and building tolerance, empathy, respect for culture;
- implementing competence-based approach and considering international standards;
- combining various teaching approaches;
- assessing competence level with credit-modular teaching technology;
- organizing control and self-assessment of students' performance;
- monitoring the development of professional interests and interdisciplinary integration;

- establishing personalized learning trajectories and gradual competence development.

Conclusions and prospects for further research. The main goal of education has shifted from knowledge to "competence". This change addresses a common problem in higher education: students often have theoretical knowledge, but struggle to apply it to solve real-world problems or tasks. One of the main objectives of teaching future teachers in technical disciplines a foreign language is to develop their communicative skills. This entails engaging future specialists in oral and written communication within a foreign language team, and fostering the psychophysiological mechanisms necessary for effective communication in specific areas and language forms. Put simply, the goal is to enhance the communicative competence of future engineering specialists in foreign languages. This involves comparing linguistic tools with specific areas, situations, criteria, and communication tasks, recognizing language material as a means of enabling speech communication.

Based on the in-depth analysis of theoretical material and practical experience in universities, it has been established that the process of cultivating foreign language professional communicative competence in technical specialists unfolds through a series of sequential stages. Consequently, it is evident that the evolution of foreign language professional communicative competence follows the following progressive sequence: starting from the refinement of linguistic, communicative, and socio-cultural competences, advancing towards the establishment of foreign language professional communicative competence, and ultimately culminating in the growth and consolidation of expertise

within the secondary linguistic persona of future engineering specialists.

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UTILIZING A FOREIGN LANGUAGE TO ENHANCE THE COMMUNICATION SKILLS OF FUTURE VOCATIONAL DISCIPLINE TEACHERS

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ІНОЗЕМНА МОВА ЯК ІНСТРУМЕНТ ФОРМУВАННЯ КОМУНІКАТИВНОЇ КОМПЕТЕНТНОСТІ МАЙБУТНІХ ВИКЛАДАЧІВ ТЕХНІЧНИХ ДИСЦИПЛІН

Abstract.

Nowadays, education is moving focus from just knowledge to "competence". This helps to address the issue in many higher education institutions where students have theoretical knowledge but struggle to apply it to solve tasks or problems. When teaching future teachers of technical foreign languages, the main aim is to develop their communication skills. This involves encouraging them to participate in oral and written exchanges with others in a foreign language. The goal is to help them become effective communicators in specific areas and language forms, using different types of communicative activities. We're discussing the enhancement of communicative competence in foreign languages for future teachers of technical disciplines. Specifically, communicative competence in a foreign language refers to the ability to effectively use language resources in various contexts, situations, criteria, and communication tasks. Consequently, language materials are viewed as tools for facilitating and engaging in meaningful communication.

Based on an analysis of theoretical material and university practice, it has been determined that the formation of foreign language professional communicative competence among technical specialists occurs through multiple stages that progress sequentially. As such, one can assert that the dynamics of developing foreign language professional communicative competence unfolds in the following pattern: starting with the development of linguistic, communicative, and socio-cultural competences, then advancing to the establishment of foreign language professional communicative competence, and finally culminating in the stage of fostering and solidifying the professionalism of future technical discipline teachers' secondary linguistic persona.

To develop the necessary skills in future specialists for a particular type of speech activity and achieve the required level of foreign language communicative competence, it is essential to prioritize providing students with active oral practice in a foreign language. Merely relying on conditional communicative tasks or classroom exercises is insufficient in forming foreign language communicative competence outside of a language-rich environment. There must also be a focus on enabling students to think, solve specific problems, and engage in discussions about the means of solving them. This approach ensures that they are concentrating on the content of their statements, while the language itself serves its primary purpose of shaping and articulating thoughts. Additionally, in order for students to perceive language as a tool for intercultural interaction, it is paramount not only to expose them to culture-specific materials, but also to employ various techniques that foster active dialogue between cultures. This way, students can gain firsthand experience of how language functions within a new culture, facilitating a deeper understanding of its nuances.

Анотація.

На основі аналізу психолого-педагогічної літератури, в статті здійснено спробу розкрити поняття «іноземна професійна комунікативна компетентність» у контексті сучасної вищої технічної освіти. Це поняття розглядається як динамічна інтегративна професійно важлива якість особистості майбутнього викладача технічних дисциплін, яка дозволяє ефективно здійснювати міжкультурні професійні контакти під час вирішення технічних завдань та комунікаційних ситуацій у сфері професійної діяльності. Автор виділяє наступні компоненти іноземної професійно-комунікативної компетентності: мотиваційно-ціннісний, що передбачає наявність ціннісного ставлення до процесу міжкультурної професійної комунікації, що виражається у бажанні підтримувати активність комунікативної професійної діяльності при вирішенні технічних завдань; пізнавальний, що включає знання іноземної мови та розуміння соціолінгвістичного і соціокультурного характеру мови для вирішення професійних комунікативних завдань; діяльнісний, що передбачає реалізацію діяльності, спрямованої на міжкультурну професійну комунікативну взаємодію з метою набуття та поповнення комунікативного досвіду; рефлексивно-оціночний, що включає самостійне оцінювання результатів комунікативної професійної діяльності та поліпшення набутих комунікативних навичок.

У статті автор виокремлює ключові компетенції (лінгвістична, комунікативна, прагматична), які складають структурно-змістовну модель іноземної професійної комунікативної компетентності майбутнього викладача технічних дисциплін; підкреслює, що цільовий, змістовий, процесуально-техно-

логічний та результативний компоненти вважаються ключовими структурними складовими моделі формування іношомовної комунікативної компетентності фахівця технічного профілю. У статті визначено умови, які сприяють формуванню іношомовної професійної комунікативної компетентності студентів під час викладання іноземної мови у вищих технічних навчальних закладах. На основі аналізу теоретичних матеріалів та практики в університетах встановлено, що процес формування цієї компетентності у фахівців технічного профілю відбувається в кілька етапів, які поступово змінюють один одного. Зазначено, що динаміка формування іношомовної професійної комунікативної компетентності проходить через наступні етапи: розвиток лінгвістичної, комунікативної та соціокультурної компетенцій, потім формування іношомовної професійної комунікативної компетентності, і, нарешті, досягнення професіоналізму у вторинної мовленнєвої особистості майбутніх викладачів технічних дисциплін.

Keywords: foreign language professional communicative competence, future teacher of vocational disciplines, competence, communication, higher educational institution, cross-cultural interaction, communicative learning.

Ключові слова: іношомовна професійна комунікативна компетентність, майбутній викладач технічних дисциплін, компетенція, комунікація, заклад вищої освіти, міжкультурна взаємодія, комунікативне навчання.

Problem statement. Globalization and integration efforts in Ukraine require the training of specialists with strong foreign language skills. These skills are essential for effective communication with people from different cultures. The analysis of teaching foreign languages to technical specialists shows that developing communication skills in a foreign language is easier when certain pedagogical principles are revised. For example, Ukraine's participation in the Bologna Process helps align national higher education systems and create a unified European market for skilled labor. Additionally, Ukrainian higher education focuses on implementing the state educational standard and considering the profile of the industry. Establishing a common European educational space needs Ukraine's higher education institutions to adopt a competence-based approach. This approach focuses on developing practical skills and the ability to apply knowledge, particularly in vocational education and foreign language learning. Establishing a common European educational space needs Ukraine's higher education institutions to adopt a competence-based approach. This approach focuses on developing practical skills and the ability to apply knowledge, particularly in vocational education and foreign language learning.

Relevance of the problem. Foreign authors such as B. Amadei, G. Bugliarello, L. Corrello, D.P. Daniels, A.L. Darling, K. McCormick, and M. Yusoff have effectively addressed this issue. They have provided studies that analyze the psychological and pedagogical aspects of forming communicative competence and the development of linguistic and mental activity. Works by P.Y. Halperin, L.K. Heichman, G.A. Kitaygorodskaya, E.S. Polat, J. Searle, and others also contribute to this important area of research.

Many scientists are interested in developing communication skills, but there is still a lack of academic knowledge and practices to fully tap into higher education's potential to develop these skills for technical specialists. Technical fields of study and humanities differ in how communication is practiced and its importance in the learning process and implementation. It is important to note that there are contradictions between several key points today: the potential prospects of the educational program designed to train future teachers

of technical disciplines in order to cultivate communicative competence, and the inadequately developed pedagogical conditions for this process; the insufficient study of communicative competence from a general psychological and pedagogical perspective, as well as the underdeveloped theoretical and practical approaches to fostering communicative competence among technical specialists; the requirements for the level of communicative competence expected of graduates from technical fields of study, which reflect their preparedness to engage in professional activities within intercultural interactions, and the discrepancy in the level of practical training of these specialists.

The purpose of the article is to reveal the essence of the concept of "foreign language professional communicative competence" in the context of modern higher vocational education based on the analysis of psychological and pedagogical literature; to identify the main competencies that make up the structural and content model of foreign language professional communicative competence of a future teacher of technical disciplines; to indicate its structural components; to determine the conditions that contribute to the formation of students' foreign language professional communicative competence in the process of teaching a foreign language in higher education.

Presentation of the basic material. Considering the significant impact of learning a foreign language on the academic preparation of a specialist, it is necessary to consider its key functions:

- Just like any other academic discipline, learning a foreign language plays a crucial role in the holistic development of a specialist. It not only broadens their horizons but also deepens their understanding of the world around them and diverse national cultures.

- The educational process intertwines with the shaping of a specialist's personality. When it comes to technical professionals, the deliberate cultivation of specific character traits, essential for their professional growth, stands out as a fundamental purpose of learning a foreign language.

- Foreign language study impacts students' intellectual activity, fostering independent work, bilingual dictionary usage, and the development of linguistics

tic self-education. It also promotes creativity and abstract thinking. Additionally, it exposes students to different thought formulations and ideas from their native language, enhancing imagination through real-life communication scenarios and language games [1, p.214].

- Learning a foreign language impacts communication and speech in the native language. It helps develop students' language abilities and speech behavior, improving proficiency.

- Communicative learning aims to model the communication process during the learning experience. Learning a foreign language, for example, can significantly enhance communication skills. In language classes, students not only learn the language itself but also acquire communication techniques, speech etiquette, and the nuances of dialogue and group communication. They become adept at addressing various communication challenges, become proficient speech partners, and develop essential skills to connect with others [2, p.48]. These abilities, such as taking initiative, displaying friendliness, and communicating correctly, are crucial qualities for a modern vocational discipline teacher.

"Foreign language professional communicative competence" refers to a person's ability to effectively communicate in a foreign language while conducting professional activities. This competence includes both the motivation and value system necessary for successful intercultural professional communication. Acquiring foreign language professional communicative competence will enable a technical specialist to effectively engage in intercultural communication as a non-native speaker; interact with foreign language speakers by incorporating advanced knowledge of technical sciences, scientific perspectives, professional nuances, national values, norms, and perspectives; foster a positive attitude during professional communication in a foreign language; employ appropriate methods of verbal and non-verbal communication based on the context.

Through an examination of scientific and pedagogical literature, we can identify the key competencies that constitute the structural and content framework of foreign language professional communicative competence [3, p.250]:

Linguistics encompasses essential skills that determine the mastery of both oral and written foreign languages. Speech competence involves possessing knowledge about the language, as well as the ability to accurately identify and utilize its different linguistic components. Linguistic competence, on the other hand, refers to the ability to use the language effectively in various communication tasks, employing linguistic tools and understanding their functioning to convey emotions and convey intricate intellectual and professional information.

The communicative aspect encompasses both professional and intercultural competencies. Professional and communicative competence entails the correct application of language and linguistic means according to communicative goals. It involves constructing speech behavior that is tailored to professional communication situations, and the ability to engage in various foreign

language activities within the technical field. Intercultural competence, on the other hand, entails having a specific knowledge base about the culture associated with a particular foreign language. Such knowledge is utilized to facilitate cultural interaction within the scientific and technical realm. Moreover, it also involves overcoming intercultural barriers during foreign language communication.

Pragmatic competency encompasses both information technology and self-educational skills crucial for a technical specialist. Information and technological competence refer to the ability to seek and acquire relevant professional information from diverse sources, translate it into different sign systems, assess its value, and effectively utilize Internet resources in professional endeavors [4, p.50]. The development of self-educational skills in a technical specialist is somewhat hindered by the limited academic hours dedicated to foreign language learning in higher education. Therefore, a key requirement for continuous self-improvement in professional performance is the capacity to expand knowledge and learn through independent research and creative endeavors in the technical domain.

The key components for developing a technical specialist's foreign language communicative competence are the target, content, procedural and technological, and result components.

The *cornerstone* of developing foreign language communicative competence for technical specialists is the formulation of clear and strategic goals, serving as the foundation for shaping the content. The process of cultivating the competencies encompassed in foreign language communicative competence should pave the way for attaining educational objectives (such as fostering professionally significant qualities and motivation to explore foreign cultures), as well as educational outcomes (including elevating the overall cultural and professional proficiency of technical specialists, and expanding and enhancing foreign language proficiency through continuous self-education). Furthermore, the process should contribute to developmental objectives (shaping the intellectual, psychological, and motivational aspects of specialists' personalities, fostering self-improvement), and personal growth.

The *content component* encompasses various forms of education, including formal, non-formal, and informal. Formal education consists of practical classroom lessons and didactic materials designed to develop foreign language communicative skills. Non-formal education involves active participation in international language programs, scientific conferences, competitions, quizzes, and other events. Informal education encompasses activities such as preparing for language competitions, essay writing, maintaining a student's diary, and creating a portfolio.

The procedural and technological components comprise a system of stages: stage 1 involves establishing the theoretical foundation, stage 2 focuses on acquiring knowledge at the reproduction level, and stage 3 emphasizes the transfer and independent application of acquired knowledge and skills to solve educational research problems and tasks related to informal speech activity. These components are supported by various

technologies such as games, projects, and methods implementing contextual learning and problem-based learning, which facilitate the development of specific competences through a set of actions by the participants in the educational process.

The resulting component represents the structural framework of a technical specialist's communicative competence in a foreign language, encompassing motivational, cognitive, and reflective-evaluative elements, as well as the evaluation criteria for the development of these components [5,p.124]. This includes an assessment of the individual's motivation for learning a foreign language, their comprehension of foreign language material, and the extent to which they have developed reflective skills and self-regulation abilities.

Developing students' foreign language professional competence in higher technical education involves:

- using philosophical, scientific approaches and technologies specific to teaching future technical teachers;
- applying various language teaching methods based on technical educational level;
- promoting personality-oriented learning and building tolerance, empathy, respect for culture;
- implementing competence-based approach and considering international standards;
- combining various teaching approaches;
- assessing competence level with credit-modular teaching technology;
- organizing control and self-assessment of students' performance;
- monitoring the development of professional interests and interdisciplinary integration;
- establishing personalized learning trajectories and gradual competence development.

Conclusions and prospects for further research. The main goal of education has shifted from knowledge to "competence". This change addresses a common problem in higher education: students often have theoretical knowledge, but struggle to apply it to solve real-world problems or tasks. One of the main objectives of teaching future teachers in technical disciplines a foreign language is to develop their communicative skills. This entails engaging future specialists in oral and written communication within a foreign language team, and fostering the psychophysiological mechanisms necessary for effective communication in specific areas and language forms. Put simply, the goal is to enhance the communicative competence of future

technical discipline teachers in foreign languages. This involves comparing linguistic tools with specific areas, situations, criteria, and communication tasks, recognizing language material as a means of enabling speech communication.

Based on the in-depth analysis of theoretical material and practical experience in universities, it has been established that the process of cultivating foreign language professional communicative competence in technical specialists unfolds through a series of sequential stages. Consequently, it is evident that the evolution of foreign language professional communicative competence follows the following progressive sequence: starting from the refinement of linguistic, communicative, and socio-cultural competences, advancing towards the establishment of foreign language professional communicative competence, and ultimately culminating in the growth and consolidation of expertise within the secondary linguistic persona of future technical discipline educators.

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TECHNICAL SCIENCE

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MODERN TECHNOLOGY FOR CABBAGE (*Brassica oleracea*) STORAGE

Abstract.

*The article briefly summarizes the state of production and storage of cabbage. The world experience of cabbage (*Brassica oleracea*) storage technology is analyzed. The main diseases affecting cabbage during long-term storage are described in detail.*

Keywords: cabbage (*Brassica oleracea*), storage, technology

Introduction.

Cabbage is one of the most widespread crops in the world and in Europe. She can rightfully be called the queen among vegetables. The Ukrainian vegetable growing industry is gradually increasing production volumes and in 2021 reached almost 40 million tons, including 2 million tons of cabbage. Vegetable production volumes are growing, but the ever-increasing demand is not fully satisfied. Per capita, we consume up to 100 kg of vegetables and up to 40 kg of our own cabbage per year, while according to medical standards we should consume 140-160 kg of vegetables per year. In this regard, it is necessary to increase their production to at least 20 million tons, and even more for export. Developed countries are experiencing a boom in global vegetable production, including cabbages. Their consumption in different countries increases from year to year and ranges from 220 to 450 kg per person. in year. It should also be taken into account that we consume only 4.4 kg of vegetables from protected soil at a rate of 12-15 kg per year, melons - 5-8 kg (and in China - 90 kg) per year, mushrooms - 0.12 kg per year (and in developed countries - 10-11 kg), the problem of providing the population with vitamin products is urgent [1, 6, 7, 8, 11, 12].

Regular consumption of fresh cabbage and its processed products (sauerkraut, stewed, soup, cabbage

rolls, solyanka and as a side dish for meat and fish dishes), people take full advantage of its healing properties for the body. The preventive and medicinal properties of cabbage have been known to many scientists since ancient times, and in folk medicine it is promoted almost as a panacea for treating a wide variety of ailments. The issue of increasing the efficiency of long-term storage of cabbage is relevant [2, 4, 6, 9, 10].

Among cabbages, the most valuable in terms of suitability for long-term storage and processing is white cabbage. Various sources recommend: when processing, use moderate heat treatment (this reduces the loss of ascorbic acid, since ascorbigen is transformed into vitamin C); use the outer green leaves of cabbage (contain more folic acid); Use the juice for stomach diseases and to regulate fat metabolism. In addition, consuming cabbage improves general metabolic processes in the body, blood circulation, potassium salts help regulate water-salt metabolism, the tartonic acid present has anti-sclerosis properties (it helps delay the process of converting carbohydrates into fats and does not contribute to the deposition of cholesterol and fats). In addition, cabbage (*Brassica oleracea*) contains simple sugars, even more than those found in oranges, lemons and apples, and is superior in fructose content to carrots, onions, potatoes and lemons (table).

Nutritional and biological value of cabbage (*Brassica oleracea*)**The nutritional value**

Calorie content – 28 kcal
 Proteins – 1.82 g
 Fats – 0.1 g
 Carbohydrates – 4.68 g
 Dietary fiber – 2.01 g
 Organic acids – 0.3 g
 Water – 90.4 g
 Mono- and disaccharides – 4.61g
 Starch – 0.1 g
 Ash 0. – 72 g

Macronutrients

Calcium – 48.2 mg
 Magnesium – 15.9 mg
 Sodium – 12.7 mg
 Potassium – 305 mg
 Phosphorus – 31 mg
 Chlorine – 37.2 mg
 Sulfur – 37 mg

Vitamins in cabbage

PP – 0.701 mg
 Beta-carotene – 0.02 mg
 A (RE) – 3.01 µg
 B₁ (thiamine) – 0.03 mg
 B₂ (riboflavin) – 0.042 mg
 B₅ (pantothenic) – 0.21 mg
 B₆ (pyridoxine) – 0.1 mg
 B₉ (folic) – 11 mcg
 C – 44 mg
 E (TE) – 0.1 mg
 H (biotin) – 0.101 mcg
 K (phyloquinone) – 75 mcg
 PP (Niacin Equivalent) – 0.91 mg
 Choline – 10.6 mg

Microelements

Iron – 0.61 mg
 Zinc – 0.43 mg
 Iodine – 3 mcg
 Copper – 76 mcg
 Manganese – 0.16 mg
 Selenium – 0.3 mcg
 Chromium – 5.3 mcg
 Fluoride – 10.34 mcg
 Molybdenum – 9.8 mcg
 Boron – 200 mcg
 Cobalt – 3.234 mcg
 Aluminum – 568 mcg
 Nickel – 16 mcg

Presentation of the main material.

Ordinary consumers can use late-ripening cabbage almost every day from early autumn until the summer of next year in various dishes (consumption rate is 45-55 kg per year), so there is an urgent need to store it for 7-10 months. During storage, complex biochemical and physiological changes occur in cabbage heads, which to one degree or another affect the nutritional and commercial qualities. Under optimal storage conditions, nutrient losses are minimal, and the presence of even minor periods with unfavorable conditions can significantly reduce product quality. As a result, the products may significantly lose their marketability and nutritional suitability. In addition, in unfavorable conditions, various diseases develop intensively, worsening the quality of products and reducing the storage time. Losses of vegetables from field to consumer reach 40-60%. Therefore, the awareness of optimal conditions for ensuring high keeping quality of cabbage is an urgent question and is set by both a good housewife and a vegetable storage technologist [5, 10].

The purpose of our research was to summarize and systematize information about domestic and foreign experience in the effective storage of late white-headed cabbage.

Growing conditions. The most important stage in the formation of the quality of finished products occurs during the growing season. Therefore, soil and climatic conditions, agricultural technology and protection from diseases, pests and weeds significantly affect the quality and shelf life. This especially applies to: cabbage

heads harvested too early or too late (for example, sprouted or cracked heads); loose heads of early, mid-ripening, mid-late and late-ripening varieties; heads of cabbage grown on an excess background of nitrogenous fertilizers; heads of cabbage harvested in rainy weather (wet); frozen heads of cabbage (only in some cases, for frost-resistant varieties of cabbage, heads of cabbage with slight freezing, but not frozen ones, are allowed), as well as significantly stripped or with a larger portion of the stump surface cut off than normal. When growing cabbage for storage, it is advisable to adhere to the basic requirements of state standard 6013:2008 Head cabbage. Growing technology. General requirements [3].

Cleaning and storing. It is advisable to carry out cleaning in sunny and dry weather with an average daily temperature of +8...+10 °C. Products for storage must be mature without excessive moisture and signs of damage by pests and diseases. For short-term and long-term storage, it is recommended to store only late varieties of cabbage with dense heads and tight-fitting leaves. Most of the released varieties and hybrids of late cabbage are suitable for long-term storage.

Harvesting. Cabbage is harvested manually or mechanized using an MSK-1 combine, a TP-12 conveyor, etc. Cabbages after mechanized harvesting have more damage (pressures, scratches, cuts to outer sheets, etc.) and they quickly lose their keeping quality (they germinate quickly and lose moisture intensively and mass).

Harvesting too early can cause excessive wilting, and conversely, harvesting too late causes cabbage heads to crack. Therefore, cabbage heads must be healthy and free from physiological diseases. Heads of cabbage with a damaged or frostbitten stalk should be discarded. The stump should be cut slightly below the attachment point of the covering loose-fitting leaves (the maximum length of the outer stump is no more than 8 cm), leaving the outer tight-fitting leaves; the cut must be clean. Trimming the stump is necessary in order to protect the cabbage heads from mechanical damage during transportation. If cabbage heads are collected in wet weather, they should be dried for the required time before storing for the main storage, using active ventilation of the product.

The intensity of respiration of cabbage stumps before storage in cool weather at a temperature of 6-8 °C contributes to an increase in temperature by 1 °C per day and the release of one ton up to 800 - 1000 g of water. In autumn, with significant differences in day and night temperatures, condensation can form and cause intensive development of pathogenic microflora. Considering these features, it is advisable to store sorted cabbage manually or on lines (UDK-30 for processing, cleaning and loading cabbage into containers and vehicles or MPC-30.01 for feeding heads into storage). On these lines, during inspection, products are reworked (excess castings are removed and the stump is trimmed, and defective units are rejected).

Quality of cabbage stored for storage. Products stored for storage must comply with the following regulatory documents: state standard 7037:2009 Fresh white cabbage. Technical minds. All products must undergo appropriate phytopathological studies (state standard 7336:2013 White cabbage for dry preservation. Methods of phytopathological control. Bookmark for storage. To prevent accelerated falling of leaves from the stump and over-ripening during storage, cabbage heads should not be stored together with other fruits and vegetables (especially ripe ones) that intensely emit ethylene.

Cabbage placed for long-term storage in containers in refrigerated chambers with a capacity of over 50 tons with general ventilation (hereinafter referred to as chambers) must meet all the requirements for white cabbage and red cabbage. The shelf life of a batch of cabbage when stored at destinations more than 150 km away from the procurement sites may be less than its shelf life than when stored at the procurement sites, but not more than 1 month. Storage of botanical varieties of cabbage, the shelf life of which is less than 5 months, is carried out only in places of procurement or production. Heads of cabbage should have 2-4 loose-fitting covering leaves, a stalk length of 1-3 cm, a weight of at least 2.0 kg for white cabbage and at least 1.2 kg for red cabbage. Heads of cabbage with frozen stumps are not allowed.

When storing cabbage in places where it is grown, it is formed into homogeneous batches. The quality of white cabbage is determined based on the analysis of the average sample, which is taken from each batch. From a batch of up to 100 packaging units, at least three packaging units are selected. If there are more than 100

units in a batch, for every 50 over 100, an additional unit of packaging is taken. When cabbage arrives without containers, the average sample is made up of separate recesses taken from different layers. To determine quality, for every ton over 5000 kg, an additional 5 kg are selected.

The average sample is disassembled and analyzed according to all standard indicators. During the analysis, non-standard products include heads of cabbage of less than the established weight (exceeding the permissible norms by the standard), sprouted, cracked, loose for mid-late and late-ripening cabbage; heads of cabbage affected by point necrosis, with parchment of the inner leaves (dry layer inside).

Waste also includes sprouted with flower stems, severely affected by punctate necrosis, completely frozen, steamed, rotten, with live larvae and their excrement between the leaves, as well as unformed heads of late-ripening cabbage. Cabbage is transported in boxes with a capacity of no more than 40 kg and in containers. It is allowed to transport mid-late and late cabbage without containers (in bulk on clean litter). In winter, cabbage is transported in boxes, containers, bags and nets with mandatory shelter (for protection from low temperatures).

In places of procurement or production, a batch of cabbage is stored within 24 hours from the moment of harvesting, in destinations - within 24 hours from the moment of delivery to the destination. Each packaging unit (box, container) with cabbage is accompanied by a label indicating: the inscription "for long-term storage"; name of product and botanical variety; name and address of the manufacturer; date of cleaning and packing; crew or packer number; designation of this standard. The quality document additionally indicates: the inscription "for long-term storage"; name and address of the manufacturer; shelf life of the batch; varietal purity of crops; supplier guarantees (when cabbage is supplied with a warranty).

Storage methods. Cabbage can be stored in trenches, piles and specialized storage facilities. In modern conditions of unstable temperatures and precipitation in winter, storage in trenches and piles has certain unforeseen risks, but is economically cheaper. Storage in specialized or adapted storage facilities (above-ground, buried or underground) is characterized by high construction and maintenance costs, but inspection, condition control and product safety are much higher.

Cabbage heads can be stored in bulk or in containers. If cabbage heads are stored in bulk, then good air circulation should be ensured through the bulk of the product. To facilitate air circulation between packaging units, the latter should not be placed close to each other. Cabbage heads must be laid in rows with the stalk facing up. The height of the embankment should be no more than 3 m.

For effective storage of cabbage, it is necessary to create optimal conditions and it is advisable to be guided by the following regulatory documents: state standard 28373-94 Fresh cabbage. Storage Guide. ISO 6000 Round cabbage. Outdoor storage (for drying or

cooling before the main storage period); ISO 6822 Potatoes, root vegetables and cabbage. Recommendations for storage in piles with forced ventilation; ISO 2167 Round cabbage. Recommendations for refrigerated storage and transportation; ISO 2167 Fresh cabbage. Storage Guide; state standart 7336:2013 White cabbage for long-term storage. Methods of phytopathological control.

Optimal storage conditions. It is usually recommended to maintain the optimal temperature from 0 to 1 °C, but for white cabbage temperatures down to minus 0.8 °C are allowed. Reducing the temperature below minus 0.8°C can contribute to freezing of the tissues of the outer leaves (it is advisable to remove frozen products from storage and sell or process them). Relative humidity should be maintained at 90-95% to avoid wilting and weight loss. Air circulation in a closed space ensures uniform temperature and relative humidity. The recommended circulation rate is from 20 to 30 product volumes per hour. Air exchange is necessary to remove heat and prevent the accumulation of excess carbon dioxide and ethylene released during respiration.

When using free cooling during periods when it is no longer possible to ventilate with outside air, cycles should be shortened and the atmosphere in the storage facility must be refreshed frequently. A mixture of outside air and storage air can be used provided that its temperature is above 0°C.

When using artificial refrigeration and air mixing in a confined space, air exchange should be carried out at regular intervals throughout the storage period. In both cases, it is recommended to provide an air flow of 100 m³ per 1 m³ of product per hour.

The most advanced and economical method is widely used - in a high layer in storage facilities with active ventilation. Using a TZK-30 loader, heads of cabbage of long-lived varieties are loaded in a continuous stack over the entire floor area of the storage facility with a height of 2.5-3.0 m. Narrow passages (0.5 m) are left near the walls. Heads of cabbage of less shelf-stable varieties are laid up to 2.5 m high, leaving a central passage. Side stacks are sometimes divided into sections 4-8 m long, each weighing 20-40 tons. In this case, if the cabbage in any section is warmed and spoiled, you can take the necessary measures. Until the end of May, you can store late varieties of cabbage in the refrigerator. Containers filled with cabbage heads are installed in chambers in stacks 3-4 containers wide, 4-5 tiers high.

Good results are obtained by using liners in containers made of polyethylene film. To prevent condensation from accumulating in the lower part, the bottom of the liners is perforated (perforation area 25% of the base).

It is effective to store cabbage in a modified atmosphere (MA) using polyethylene wrappers with a capacity of 5-25 tons. The containers are installed in stacks in a storage chamber, cooled and after 7-10 days are hermetically sealed with plastic wraps, into the side walls of which gas-selective membranes are glued. After 3-4 weeks, an MA is created under the capes, containing 4-5% - CO₂ and 13-15% - O₂. If the temperature

conditions are observed, this method reduces losses by 15-20%.

When storing cabbage, it is necessary to regularly monitor the temperature and humidity both in the storage and in the product stack. Heads of cabbage should be inspected and stacks or containers removed if reduced quality (withering) or signs of deterioration (rotten) are detected. During storage before shipment or sale, the heads of cabbage are not peeled, as this contributes to the spread of diseases.

The shelf life for late varieties of cabbage, subject to the above requirements for it, is on average 3-8 months, depending on the place of cultivation, botanical variety, condition of the products being stored and physical storage conditions.

Losses during storage of cabbage are caused by the evaporation of water and the consumption of dry substances through respiration, forming a natural loss of mass, as well as damage by physiological and microbiological diseases, resulting in significant losses.

The increased natural loss of cabbage weight coincides with its high heat and moisture release and is one of the biological features of cabbage vegetables. Therefore, the norms of natural loss for cabbage are also set higher (9.0-12.8%) compared to potatoes (6.6-8.5%) for 6-9 months of storage.

The amount of cabbage losses is greatly influenced by the quality condition of the heads of cabbage before storage, especially the presence of mechanical damage, agricultural pests, diseases, as well as the creation of optimal storage conditions.

When storing cabbage, there is also a loss of essential nutrients caused by their consumption to maintain tissue viability. First of all, sugars and organic acids contained in cabbage are consumed for respiration. To replenish the supply of sugars in cabbage, hydrolytic breakdown of polysaccharides occurs: starch, a small amount of which is contained in freshly harvested cabbage, and hemicelluloses. Significant changes also occur with nitrogenous substances.

During storage, various diseases and physiological abnormalities may appear that significantly affect the quality. The main measures to prevent diseases are preventive (careful sorting, rejection of sick and damaged heads of cabbage in the field). In case of severe development of diseases and physiological abnormalities, the temperature is reduced and ventilation is increased to reduce humidity. When fungal diseases develop, it is necessary to reduce the temperature to -1...-1.5°C and prepare these products for sale or processing.

Removal from storage and modification of products after storage. Before being sent for sale or sale, cabbage heads should be thoroughly inspected and cleaned of outer leaves that may have deteriorated or dried out (lost their marketable appearance); the stump should be cut again. Immediately before sale, the heads of cabbage are cleaned, being careful not to chop or cut off the leaves too much. Stripping is carried out manually (1 ton in 10-12 hours) or with a ZMOK-2 head peeling machine (its productivity is 2 t/h, operated by 2 people). It is advisable to store peeled heads of cabbage for no more than 2-3 weeks at temperatures up to 10°C until final sale.

Fresh white cabbage sold in retail outlets must comply with the following regulatory documents: State Standard of Ukraine 7037:2009 Fresh white cabbage. Technical conditions; 4154:2003 Fresh red cabbage. Technical specifications and UNECE FFV-09 Capitata cabbage (recommendations for supplies and quality control).

Conclusions and suggestions.

Effective cabbage storage technology is a complex and multi-stage process. Errors made during cultivation, post-harvest processing and storage can dramatically affect the formation of waste at the end of storage. It is advisable to take the above information into account when planning the storage of cabbage (*Brassica oleracea*) in large volumes

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PHILOLOGICAL SCIENCES

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<https://doi.org/10.5281/zenodo.12800667>ISSUES OF NATIONAL NOTION IN THE AZERBAIJANI CHILDREN'S PROSE
(ON THE BASIS OF Z. MARAGAYI'S NOVEL "IBRAHIM BEY'S TRAVELOGUE")

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ВОПРОСЫ НАЦИОНАЛЬНОЙ ИДЕОЛОГИИ В ДЕТСКОЙ ПРОЗЕ АЗЕРБАЙДЖАНА
(ПО ПОВЕСТИ З. МАРАГАИ «СЕЯХАТНАМЭ ИБРАГИМ-БЕКА»)**Abstract.**

Main objective in the research of this subject is to evaluate Zeynalabdin Maragayi as an artist who pursued an educational goal throughout his creativity and to subject his works to analysis as a valuable example of art that guides the ethical and aesthetic education of the young generation.

The result of the research revealed that Ibrahim Bey's Travelogue, which stands out with its content and plot, bold ideas, symbolic calls and high poetics, is the first work written in this genre in Azerbaijani literature. In fact, Z. Maragayi's appeal to a genre peculiar to European literature was due to his effort to adapt literature from didacticism and exhortation to the conditions of education, and the application of subjects that might be important to children to this field. Behind this effort stood free and big ideas. The means of literary investigation, description and expression that the author chose to reflect the current problems were a more suitable form for the style of travelogue. Another feature of the travelogue is that the facts arising from the imagination of the artist are told here in the language of the hero. Thus, the author creates his own artistic character and explains what actually happens to him with his language. Thus, the reader easily understands that the events described are related to the author's own fate.

Аннотация.

В статье с привлечением историко-научных источников исследован роман Зейналабдина Марагаи «Сеяхатнамэ Ибрагим бека», который сформировался на основе использования различных литературных источников и сыграл важную роль в развитии азербайджанской детской прозы. Вместе с тем, в статье, дающей краткую информацию о романе писателя, пропагандируются просветительские идеи, изложен широкий авторский подход относительно влияния этого произведения на обогащение азербайджанской детской прозы в жанровом и стилевом отношении.

«Сеяхатнамэ Ибрагим бека» считается первым произведением этого жанра в азербайджанской литературе, отличающимся содержанием и сюжетной линией, смелыми идеями, символическими призывами, высокой поэтикой. В действительности обращение З. Марагаи к жанру, специфичному для европейской литературы, исходило из попытки приспособить литературу от дидактизма и увещевания к требованиям просвещения. За этой попыткой стояли свободные, великие идеи. Жанр травелога оказался более подходящей формой художественного вдохновения автора, средствами описания и выражения, стилем, выбранным с учетом существующих проблем. Другая особенность травелога состоит в том, что истины, проходящие через воображение художника, представлены здесь по велению героя. Таким образом, автор создает свой художественный образ и интерпретирует своим языком то, что на самом деле с ним происходило. Таким образом, читатель легко осознает, что изложенные события связаны с собственной судьбой автора.

Keywords: child, youth, prose, educationalism, novel, national self-consciousness, patriotism, concept, nation, freedom

Ключевые слова: ребенок, проза, просвещение, роман, патриотизм, идеология, нация, свобода.

Introduction

Since the second half of the 19th century, a community of intellectuals with progressive-democratic mind and national spirit has grown on the basis of the formation of educational ideas in Azerbaijan. A. Bakikhanov, I. Gutgashinli, M. F. Akhundzade, S. A. Shirvani, A. Talibov, Z. Maragayi, M. H. Rushdie,

N. Narimanov, S. M. Ganizade, J. Mammadguluzade and other literary thinkers united around the idea of increasing the potential of cultural activity of the people. The educational-intellectuals first saw the realization of this historic mission in the transformation of the national concept line into the main priority in the newly

established children's and youth literature. Thus, national self-consciousness in literary thought proves its importance in prose as well as in poetry. Researcher S. Sharifova (9) mentions the development trends of prose in literature during this period as follows: "At the end of the 19th and the beginning of the 20th century, in Azerbaijani national literature, the literary figures saw the way of the nation's salvation in education and science, and in their works they found it appropriate to convey to the readers in literary language the socio-political events and deficiencies, the problems related to the fate of the people and the real events in the society. Meanwhile, the process of growing interest in novels, stories, feuilletons and other genres of importance to our national literature now peculiar to the new European literature has accelerated".

New literary styles and traditions led to the genre taking a leading position in children's and youth literature in the following years. In fact, the search for form and content in literature arose from life itself. Observations have revealed that after the age of nine, children become interested in reading large volumes of works that are vivid, as well as reflective of the lives of adults. Considering this tendency, these authors set the main goal of the embodiment of the ideas of national self-consciousness and patriotism and began to write large-volume works in the form of educational novels, scientific-pedagogical treatises, travelogues, fantastics and allegorical literary works.

Researcher N. Akhundova (45) has interpreted the new thinking processes that emerged in the humanist system of thought in the 19th century as follows: "The instillation of educational ideals in the first Azerbaijani novels was closely related to the educational realism movement. In their works, the educational realists saw the freedom of the people first in their prudence and knowledge, in the development of education and culture. In their view, society should be governed in accordance with the rule of reason".

Objective of the research

It should be noted that up to this stage the concept of the national spirit had not yet entered the literary texts, the characters had not yet passed from lyrical feelings to concerns about the nation and homeland. It is at such a time that literary thought comes into play. The Homeland-Nation-Freedom Trilogy emerges as the most important factor in the formation of national, social consciousness and morality in his large-volume works such as A. Talibov's *Donkey Loaded with Books*, *Ahmed's Book*, *Way of Philanthropists*, Z. Maragayi's *Ibrahim Bey's Travelogue*, S. M. Ganizade's *Maktubat-i Sheyda Bey Shirvani*, C. Mammadguluzade's *The Story of the Danabash Village*. These works also influenced the formation and development of children's prose at the end of the 19th and early 20th centuries.

In general, world experience confirms that children's literature is not just about works written for young children. Works aimed at young people can also be included directly in this genre of literature. In this regard, the leading literary scholar Firidun Bey Kocharli wrote in one of his letters to his close friend Hasan Ali Aga Karacadagi as follows: "I would ask you to write a novel-style story about our own lives. But this

is a very important task, it is necessary to prepare and think a lot about it, and it is not possible to complete it in a hurry. Let it be known that in that novel the voice of the first person, of one of the fresh and newly grown young people, may be commended for its moral beauty and good deeds. That young man should be different from the old-fashioned and narrow-minded Muslims in every work and thought, as we would like..." (Hesenova 19-20).

Such a young character was brought into the literary text of the novels *Ibrahim Bey's Travelogue* by the educationist-writer Zeynalabdin Maragayi, who lived in South Azerbaijan at the end of the 19th century, and was able to rise to the level of national character on the plane of struggles, debates and fights for beliefs. In general, "... distinguished from literary genres by its unique subject matter and structural possibilities, the novel has the ability to show the history, psychology, and a range of eternal and eternal anxieties of the nation in deep social layers" (Şerifova 22-23).

The first volume of the Trilogy was published in Cairo in 1897. The novel, published unsigned, reveals how the literary fate of its author will be in the future from the day it is published. In a short time, the work spread to Iran, Turkey, India, Afghanistan, Central Asia and the Caucasus and gained great fame. However, the debate about the identity of the author continues for many years. Many people even think that the author is Mirza Mahdi Khan of Tabriz, one of the writers of *Akhtar* newspaper. These claims only ended after the death of Mirza Mahdi Khan. In other words, the II (Calcutta 1907) and III (Istanbul 1909) volumes of the book were published. Z. Maragayi also gives his own biography at the beginning of the third volume. Later, the work was translated into Azerbaijani Turkish and Russian, as well as into Western languages such as German, English and French.

The work, which literary scholars describe as "the first Azerbaijani novel written in Persian", is a literary reflection on a great literary scale of the social and political realities that took place in South Azerbaijan, which remained part of Iran after the treaties of Golestan (1813) and Turkmenchay (1828). The leading literary scholar F. Kocharli once wrote on this subject with farsightedness: "This book has once again strengthened our conviction that Iran is the most miserable country and will surely disappear in the near future" (Köçerli 27).

It is no coincidence that the novel was also a fundamental source of ideas for young revolutionaries in the struggle against the autocracy, system of government, feudalism and ignorance that prevailed in South Azerbaijan in 1905-1911. The Russian orientalist E. E. Berthels (140) appreciated the role of the novel in the formation of a new kind of social consciousness in South Azerbaijan and wrote: "His influence (*Ibrahim Bey* – A.N.) on all modern literature is immense. This is the first original novel in the European style written in Persian".

The famous Iranian historian, author Ahmad Kasrawi Tabrizi (45), in his work *Tarikh-i Mashruta-i Iran*, evaluates that the basic idea of the novel is to mobilize the people to fight against reaction: "Those who

read this book in their own time and feel a deep jolt in their hearts, only they can tell the value of this book, through which there are many who awaken from the sleep of grave ignorance and join the learned people”.

It was a new situation that social and political problems were put forward so sharply in the literature of South Azerbaijan. Z. Maragayi (*Дневник путешественника*, 7) himself explains this mission as follows: “I am proud to be the first writer to expose the errors and shortcomings seen in Azerbaijan. I, like European writers, speak openly and openly about oppression, abuse and ignorance of my fellow citizens”.

Distinguished by its content and plot, bold ideas, symbolic appeals and high poetics, *Ibrahim Bey's Travelogue* is considered “the first work that enters the genre of literary travel” (Saraçlı, 24). In fact, Z. Maragayi's appeal to a genre peculiar to European literature stemmed from his attempt to adapt literature from didacticism and exhortation to the conditions of education. Behind this effort stood free and big ideas. The means of literary investigation, description and expression that the author chose to reflect the current problems were a more suitable form for the style of travelogue. “The emergence, formation and maturation of the literary genre in Azerbaijani literature is directly provided by the dialectic of development of national life. Azerbaijani prose -the Azerbaijani way of thinking, the national character, the national issues, the national language, the style of saying and intonation, the manifestations of the national style- begins at the point where one, several or the sum of these elements meet with the prose measures of the West-East title, from the point where the sign of nationality is realized in the literary prose” (Mustafayev, 3). Another feature of the travelogue is that the facts arising from the imagination of the artist are told here in the language of the hero. Thus, the author creates his own artistic character and explains what actually happens to him with his language. Thus, the reader easily understands that the events described are related to the author's own fate.

V.Nabiyev (16) explains the reason why educational writers give weight to this genre: “Azerbaijani educational realists, to realize their ideas from a literary point of view, mostly resorted to forms such as travelogues, letters, travel notes, and in some cases chose a general field without name or relatively named. Because forms such as travelogues, travel notes, letters allow for many changes of space, as well as nameless and relatively named (“N” city, “B” village, etc.) spaces would save the author from describing a specific space and the events that took place in this space in a logical sequence and with an objective approach, and would prepare the environment for reflecting various perspectives in the general space in accordance with his socio-political and ethical position”.

The Homeland-Nation-Freedom Trilogy in *Ibrahim Bey's Travelogue*

İbrahim Bey is a character who carries all the beliefs, language, culture, thinking, traditions and customs and memory of the society-nation of which he is a part and representative in the context of social problems. His ideas about the homeland are manifested in his mutual relations with the environment. Nazim

Rizvan (147), who evaluates the homeland-nation-freedom trilogy as the main idea and virtue of the novel, indicates: “Zeynalabdin Maragayi's novel *Ibrahim Bey's Travelogue or The Ordeal of Benevolence*, which has a richer social content, is a valuable work that is kneaded with patriotic feelings from beginning to end and constitutes the natural spiritual image of South Azerbaijan and Iran”.

In general, in the individual style of Zeynalabdin Maragayi, sharp criticism, enthusiasm for revelation, approach to the events that have gained social reality and the reflection of the clear, bold stance in the narration with the publicistic attitude gain weight. The whole trilogy is connected with the events that unfolded around the character of Ibrahim Bey on one basic line. From novel to novel, events and characters change, and this ascetic person, who has only national and national patronage, always remains an example of cleanliness and purity. The novel is combined with the legal narration publications on subjects such as “Rights belonging to the Fatherland itself”, “Rights belonging to the children of the Fatherland”, “Rights belonging to the administrative affairs of the Fatherland”, and “General rights of the Fatherland”. The critic K. Khalilov (74) explains the nature of the author's application of scientific-publicistic to prose and his transmission of it to the reader through narration as follows: “Here the events are sometimes developed in a purely publicistic language, sometimes with epic-lyrical paintings, sometimes with sharp, serious dialogues, and the author touches on such problems related to the affairs of state that they add political and scientific excitement to the general spirit of the novel”. Z.Maragayi interprets all the events in his narration and puts forward scientific and philosophical considerations about the social and political life of the country.

In the first volume of his novel, which is his only literary legacy, the author makes the hero of the work, İbrahim Bey, travel to various countries. In the separate chapters of the novel such as “İbrahim Bey's Travelogue”, “Summary of Qazvin's journey”, “Summary of Ardabil journey”, “Summary of Maraga journey”, “Summary of Urmu journey”, “Summary of Tabriz journey”, “İbrahim Bey's adventure” after entering Istanbul, the author directs the attention of the reader to the difficulties that the hero faced during the journey. The prototype of the author, 20-year-old İbrahim, is a patriotic young man who knows Russian, French and English very well and who lives with the aim of bringing his nation from darkness to light. In the work, there are many episodes that have a positive effect on the moral education of children and young people. For example, in the person of Ibrahim Bey, who stands out with his spiritual qualities, and his father, who raised him in the national spirit, the author calls on children and young people to be patriotic, to fight with courage and determination for the freedom of his people, and to take care of their welfare. “... This faithful and conscientious merchant did not change his national customs and traditions in the slightest during the long years he resided in Egypt, and he followed the path of his grandfathers in his eating, drinking, dressing, relations with people, in short, in his life. He was constantly humming

the hometown song. He would ask everyone he met about the situation of his homeland and its citizens. Even though he was in Egypt, his heart was always in Iran. On winter nights, he would invite a few of his well-known compatriots as guests to his house. At their house meetings, they would be busy reading the history books of Iran and the stories of the shahs of the past" (Maragayi, *İbrahim beyin seyahetnamesi*, 17).

Traveling to cities such as Cairo, Istanbul, Batumi, Tbilisi, Baku, Anzali and Ashgabad, young Ibrahim returned to Iran and traveled to the cities and villages, witnessing the severe consequences of the impact of social problems on the mental structure and character of his citizens. Throughout the novel, the author depicts İbrahim Bey, who aims for the goals of homeland, nation and freedom, in social conflict and struggle. The author chooses the important and typical of what happens in his homeland with the language of his hero and directs the fire of humor precisely to these addresses. "... When I was residing in Egypt, I heard a lot of talk about the disorder of Iran, the travel of the son of the fatherland, the ignorance and treachery of the judges, the cruelty of the poor. I was so in love with my homeland that I did not want to believe the above-mentioned flaws as lies and slander about my homeland. I finally decided to come to Iran and see the homeland with my own eyes. Impatiently, I moved to Iran with the intention of traveling to Iran, but unfortunately, as a sign of misfortune, when I look everywhere from the Iranian border to Tehran, I have to confirm exactly what is being said, even more than enough" (Maragayi 156-156).

The author's literary identity, inner world and outlook on life are understood from İbrahim Bey's thoughts about his civic duties. In this idea, East and West, as two mutual and opposite cultural systems, compete from time to time on the homeland issue and try to impose their superiority over each other. Ibrahim Bey wants his own nation to progress, to have a press, for the state to serve the people, and for individual individuals to be aware of their responsibilities to the homeland. In his opinion, "... The general rights of the homeland consist in the sum of separate happinesses, which include the rights of each individual of this society. However, even if individual members of society want to achieve this happiness, they cannot achieve it alone. But when they unite, they can attain this bliss and benefit from its general pleasure. Citizens should love their homeland more than their own children. Just as they are obliged to protect religion, they should also consider it their duty to protect the homeland. In this way, they fulfill the sacred duty of 'love of country means love of religion'" (Maragayi. *Seyahetnameyi-İbrahim bey*, 135).

The conflicts that have arisen in Ibrahim Bey's world view in the process of understanding and envisioning the concept of "intelligent judge" of Eastern education, which has been behind for centuries, are actually the author's convictions. Although Ibrahim exposes the mullahs, he idealizes religion. The author himself, like his hero, experiences human excitement and hesitation in this regard. Like Ibrahim Bey, he believed that justice would be established in society through the application of sharia law. Edip explains the manifestation

of the problems in society with the negligence of Muslims towards their own religion, the abuse of the duties of the clergy and the lack of education. However, it had to look for the source of the problems in class conflicts and social inequality. For this reason, the hero, who is the prototype of the author, stumbles, hesitates and falls into pessimism on this difficult path. "If Allah's Apostle said, 'O vizier of Persia, O leaders of the nation, where is my Shari'a, where are your means of jihad, where are your mujahid, where is your faith?' But I have juxtaposed love of country with faith, what will you answer to him? How do you explain the absence of all this? (Maragayi. *Seyahetnameyi-İbrahim bey*, 222).

Ibrahim Bey sees that his homeland is in ruins and cannot help but remember the country's past glory. He, too, sees the misery of Iran, the poverty and calamity of its people, in the tyranny of the despots, in the fanaticism and ignorance spread by the clerics. The arbitrary practices of the judges, the bribery of the ministers, the clergy putting the people to sleep, and the fact that the masses who are groaning under the oppression fall into this difficult situation terrify Ibrahim Bey. He describes those who endure this severe cruelty and disaster as "alive when they are dead, dead when they are alive" and repeats these words deliberately throughout the novel.

Another group of motifs found in Z. Maragayi's work, which we evaluate with the word culture, is the reflection of different cultures and world views through the conflicts of East and West. The author portrays these cultural differences in the person of the opposing characters throughout the work. In the opinion of the hero, who encounters ruthless judges, sycophantic poets, unqualified school owners, consuls selling passports, merchants without capital, barefoot soldiers, dishonest clergy, it is not worth talking about a perfect human being or a perfect way of life unless society is liberated, unless free thoughts based on moral and universal values are given the opportunity and benefit from them. As the most important condition, personal desires must be sacrificed to human interests, and the main way to achieve this is through spiritual maturity. Thus, a society based on tyranny, disorder, which is the fruit of a corrupt spirituality – a world of oppressors and oppressed – will be a free and free society that realizes the desire to live humanely.

Ibrahim Bey confronts representatives of the various strata of society. Of particular interest are the episodes of his meeting with ministers. Ibrahim Bey thinks that the ministers are unaware of the turmoil prevailing in the country and the behavior of the Iranian consuls in foreign countries towards their subjects. For this reason, he meets with the ministers with a thousand and one toils and tells them about the lawlessness prevailing in the country. But in return he hears sharp, bitter, insulting words, and is even beaten and robbed on the instructions of the minister of war. An argument with an imam at a friend's house in Istanbul made him sick in bed.

In the second volume of the novel, Ibrahim Bey is depicted in the fight against disease throughout the work. Psychological convulsions, the spiritual crisis he suffers led to his spiritual decline. It distances him from the values he believes in, condemning him to loneliness

and insecurity. After these different spiritual storms, Ibrahim Bey still appears before us as a competent character who thinks about the fate of his nation and homeland. The doctor who examined Ibrahim Bey checked his pulse. When the name of his hometown is mentioned, Ibrahim Bey's pulse beats fast. The doctor concludes that his heart throb is his homeland: he went, he saw, he got into trouble. The young hero, who prays "Oh God, Oh Help!" from the beginning to the end of the work, migrates to eternal life with the longing for the happiness of his people and the rise of his homeland.

In the second volume of the novel, published in Calcutta in 1907, the thoughts of Z. Maragayi (*Дневник путешествия*, 7), who was always interested in the West, who tried to learn how Western people lived, who dreamed of his fellow citizens being free and happy, were also included. He says: "The flaws exist in every country, even more serious than those in Iran... But these are abolished along with freedom of expression. Pushkin of the Russians, Voltaire of the French, and Stuart (Mill) of the English were precisely engaged in searching for and eliminating defects".

The polarization of Eastern and Western ways of thinking in the novel shows that the author is closely in love with the works of classical literary figures such as A. Dante, Calderon, J. Milton, Sartre, Gogol. The author gives equal importance to the ideas of both poles in the novel. Thus, in the work, the East-West understanding emerges as a stylistic comparison with the aesthetic organization. Zeynalabdin Maragayi (Ibrahim beyin seyahetnamesi, 336) says to his compatriots in the language of his hero: "Americans benefit from the weather as well as owning the crop of the land. They also tied the electric power to themselves and made them obey. But there cannot be a single school in our country with its ancient history and magnificence, so that its teacher understands that there is a science other than the science of imitation that can ensure the happiness of the country and the happiness of the nation. There is not a single newspaper in the country of this width. If there is such a thing as a newspaper, it consists of two pieces of paper printed once a week on stone with a thousand labors, and there is not a penny of benefit to either the state or the nation from its content and content".

As can be seen, the author did not only describe the destiny, history, ethnopsychology, national spirit and national characteristics of his people and homeland, but also described and analyzed them in parallel with the values of Western countries. The work, which instills ideas of homeland, nation, freedom of freedom, fighting against ignorance and educationalism, determines the worldview of its author very clearly.

V. G. Belinsky (124-127) said: "The content of the novel is an artistic analysis of modern society, and it reveals such foundations of society that habitual habits and thoughtlessness hide them even from society itself. The task of the modern novel is to reflect life in all its naked reality. It is therefore only natural that the novel, as an exception, should be of interest to everyone compared to all other genres of literature: society considers the novel as its own mirror and sees itself by looking at it, it understands itself".

These thoughts of V. G. Belinsky can be regarded as the most accurate and clear description that

characterizes Z. Maragayi's novel, *Ibrahim Bey's Travelogue*.

Conclusion

The novel, which literary scholars describe as "a kind of encyclopedia of Iranian existence in the last quarter of the 20th century" (Maparan 296), gives a description of an entire era and many human destinies in the light of Ibrahim Bey's "Travelogue".

Z. Maragayi reconciled the events with his own national-spiritual spirit by making his devotion to his history and cultural identity the theme of the novel and making use of the stylistic games typical of educational realism. The product of strong observations and deep creative imagination, the work does not contain topics and issues that tire children and young people. In the episodes depicting the protagonist's struggle for dominance and power in society, important living materials for the younger generations are found. The author approaches his hero with high moral standards and evaluates his personality and actions according to these measures. The character's approach to his people, his homeland and his freedom forms the basis of this measure, the starting point. Ibrahim Bey's drama, his dramatic conflict, his struggle with prohibitions and his quest for freedom are determined by this.

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<https://doi.org/10.5281/zenodo.12800679>**ЭМИН АБИД: ТЕОРЕТИК ФОЛЬКЛОРА, ЛИТЕРАТУРОВЕД И ЖЕРТВА РЕПРЕССИИ**

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AMIN ABID: FOLKLORE THEORIST, LITERARIAN AND THE VICTIM OF REPRESSION**Аннотация.**

Эмин Абид был одним из первых теоретиков фольклора, известным литературоведом и поэтом Азербайджана. В Азербайджане его научные труды представляют собой особый этап в развитии теории фольклора и литературоведения. Эмин Абид в Азербайджане считается первым коркудологом.

В статье рассматривается многостороннее художественное и научное творчество Эмина Абида. Отмечается, что ставший жертвой репрессии Эмин Абид в своем творчестве широкое место уделял исследованию таких эпосов, как «Деде Коркут» и «Огузنامه». Эмин Абид в то же время рассматривал историю тюрков и этапы развития слогового размера, а также писал красивые стихи.

Abstract.

Amin Abid was the one of the first folklore theorist, well-known literarian and poet. His works take a special place in the development of folklore theory and literary criticism. Amin Abid is considered the first Gorgud studier of Azerbaijan. In the article it is talked about the scientific and literary creativity of Amin Abid. It is noted that the attention is paid to the studing of the epics such as "The book of Dede Gorgud" and "Oguzname" in the creativity of Amin Abid who was the victim of repression. Amin Abid also wrote beautiful poems dealing with the history of Turks, the development stages of the history of syllabus.

Ключевые слова: Эмин Абид, теоретик фольклора, первый коркудолог, эпос «Деде Коркут», «Огузنامه», репрессия, «Ледяной ад».

Keywords: Amin Abid, folklore theorist, the first Gorgud studier, "The Book of Dede Gorgud", "Oguzname", repression, "Frosty hell"

Эмин Абид (1898-1937) - Ахмедов Эмин Муталлиб оглу был одним из первых теоретиков фольклора в Азербайджане, одним из тех, кто глубоко понял передовые теоретические идеи своего времени, и привнес основные и новые методы исследования в Азербайджанскую фольклористику. Его настоящее имя – Зейналабдин, имя отца – Муталлиб, а фамилия – Ахмедов, но он в мире науки известен как Эмин Абид, а в сфере литературы его псевдоним – Гюльтекин. Он также был критиком, литератором и поэтом. Эмин Абид взял псевдоним «Эмин» в честь М.А.Расулзаде. По материнской линии он был родственником М.А.Расулзаде. По отцовской линии был потомком последнего Бакинского хана - Гусейнгулу-хана. Он в Азербайджане был известен как брат поэта Алиаббаса Музниба, а в Турции как Гюльтекин.

Амин Абид, отец которого был рабочим-каменщиком, а мать давала женщинам уроки Корана, родился в Баку 2 ноября 1898 года в бедной семье. Юный Эмин Абид, житель квартала «Новханилар» недалеко от нынешней станции метро «Низами» в Баку, первое образование получил в гимназии для мальчиков имени Александра III. Большую роль в становлении Эмина Абида сыграл его брат Алиаббас Музниб, талантливый поэт и издатель.

Первые стихи Эмин Абид начал писать в 1912-13 годах, сотрудничал с журналами

«Dirilik/Дирилик», «Məktəb/Мактаб», «Ovraqı-nəfisə/Овраки-нафиса». В основном он писал стихи и рассказы под псевдонимами «Абид», «Абид Муталлибаде», «Абид Алп Муталлиб оглу». Он сотрудничал с журналами «Dirilik/Дирилик» и «Babayi-Əmir/Бабайи-Амир», в которых его старший брат, поэт-националист Алиаббас Музниб был редактором и издателем. В 1915-16-х годах Э.Абид писал и издавал сатирические стихи и ироническо-сатирические образцы под псевдонимом «Гозгураб» в журнале «Babayi-Əmir/Бабайи-Амир».

В 1918 году, после того как Баку с помощью османских войск был освобожден от захватчиков и стал столицей Азербайджанской Демократической Республики, Эмин Абид уехал учиться в Стамбул. Э.Абид был одним из ста человек, отправленных на учебу в Турцию Азербайджанской Демократической Республикой в 1919 году. Окончив педагогическое училище в Турции, в 1920-1926 годах продолжил обучение на литературном факультете Стамбульского университета.

В студенческие годы он написал монографический труд «История литературы азербайджанских тюрков». Будучи студентом Стамбульского университета, Э.Абид сотрудничал с журналами «Yeni Qafqasiya/Новый Кавказ» и «İstiqlal uğrunda/За независимость», писал стихи против советской власти под псевдонимом «Гюльтекин». С одной стороны, Эмин Абид,

пишущий научные труды, с другой стороны, завоевывает влияние среди азербайджанцев-иммигрантов своими независимыми и националистическими стихами. Во время своих научных исследований в Стамбуле он работает также в библиотеках Газвина, Вены, Будапешта и т.д., защищает научную работу под руководством М.Ф.Копрулузаде. Накануне этого события Эмин Абид знакомится со своей сокурсницей Нафией Ханум в Турции, и между ними складываются искренние любовные отношения. Позже отношения перерастают в брак, и Нафия, по происхождению гречанка, остается верной Амину Абиду до конца его жизни.

Перед тем как его репрессировали Эмин Абид во второй раз побывал в Турции и там написал важные труды, связанные с историей литературы Азербайджана, а также фольклористикой. Он впервые упоминает «Огузнаме» и впервые приводит аллегорическое произведение Физули «Сохбатул Асмар//Спор плодов». Эмин Абид вернулся в Баку в 1927 году, не оставаясь в Турции. Точная причина его возвращения из Турции в Баку не известна. Вернувшись в Баку, Эмин Абид преподавал в педагогическом техникуме, Бакинском Государственном Университете и средних школах. В то время он уже был известным поэтом, писавшим под подписью «Гюльтакин». В то же время Э.Абид выступал в газетах и журналах с литературными и научными статьями об азербайджанском фольклоре, современной и классической литературе, устном народном творчестве (1).

Эмин Абид считается первым исследователем «Книги моего Деда Коркута» в Азербайджане. В его творчестве большое место было уделено изучению таких эпосов, как «Книга моего Деда Коркута» и «Огузнаме». В то же время Эмин Абид вступил в полемику со своими коллегами и выдвинул против них свои контраргументы. Например, Эмин Абид пишет, что Салман Мумтаз упоминает Азери Челеби, как азербайджанского поэта, но на самом деле он является Османским поэтом, и отмечает, что слово азербайджанский используется в качестве названия нации в течение последних десяти лет: «..Сегодня, хотя слово «азери» стало упоминаться в отношении людей живущих в Азербайджане, это слово только в последние десять лет употребляется в этом смысле. Никогда раньше не было, чтобы азербайджанца называли азери».

Он продолжил свои исследования и в результате своих многолетних литературных поисков обнаружил шедевр «Сохбатул-асмар//Спор плодов» великого азербайджанского классика Мухаммада Физули и с комментариями представил его миру науки. Это принесло учёному большую известность среди литературоведов. Статьи Амина Абида охватывают очень интересные темы. Например, в произведении «Огузнаме» Эмин Абид рассказывает об истории тюрков и эпосе «Книга моего деда Коркута». В то

же время он писал об истории силлабического стихосложения, туйугах (четверостиший) Гази Бурханеддина, изучал жизнь таких поэтов, как Фирдовси и Хабиби. Эмин Абид, обладающий обширными научными знаниями, также предоставляет информацию о мани (четверостишие) и баяты в Азербайджане, записывает события о журнале «Молла Насреддин».

Эмин Абид также считается одним из основоположников ахундоведения (исследований по Ахундову) в нашей литературе. Он автор нескольких статей об Ахундове. В этих статьях Эмин Абид затронул вопрос реформы алфавита, борьбы с исламом, а также показал, почему Ахундов был прав в недопонимании между газетой «Әкинчи//Экинчи» и Ахундовым. По мнению Эмина Абида, Ахундов справедливо объяснил Гасан-беку возможность получения образования тремя факторами: финансовой силой, единством, ресурсами (алфавитом). Следовательно, Э.Абид решительно защищает Ахундова в газете «Коммунист». По мнению Эмина Абида, Мирза Фатали – гений XIX века: «Мирза Фатали остается человеком, написавшим больше всего произведений против религии в литературе всех тюркских и татарских народов. Еще нет другого писателя, который займет эту позицию... Мирза Фатали - это огромный мир, который своим творческим гением смог охватить XIX век. В этом отношении мы можем назвать этот век «веком Мирзы Фатали» в истории нашей литературы» (2).

Э.Абид преподавал в литературной семинарии, открытой при Обществе Пролетарских Писателей Азербайджана. В то же время Э.Абид выступил с докладами на темы «Огузнаме» и «Начало азербайджанской литературы» в Бакинском Университете, а также в литературном кружке «Бакинский Дом Образования». Он был одним из ученых, последовательно изучавших богатый материал устной литературы в общетюркском контексте. Эмин Абид боролся против тех, кто хотел разделить общетюркскую литературу и создать локальную литературу, и решительно выступал против них.

Поэт от рождения, Э.Абид с ранней юности писал свободные и силлабические стихи и публиковал их в журналах «Yeni Qafqaz//Ени Кавказ», «Azəri-türk//Азери-тюрк», «Odlu yurd//Одлу юрд» и др. Стихи, написанные им в Турции, были опубликованы отдельной книгой под названием «Buzlu səhənnəm//Ледяной ад» с финансовой помощью политических иммигрантов. В этих стихах, которые он опубликовал под псевдонимом «Гюльтакин», Э.Абид протестовал против жестокой оккупации Азербайджанской Народно-Демократической Республики большевистской армией, депортаций и ссылок в Сибирь, преследований и оскорблений. В то же время в этих стихах чувствуется твердая вера в завтрашний день - день, когда над независимым Азербайджаном будет развеваться трехцветный флаг с полумесяцем и восьмиконечной звездой. Поэтому эти стихи

читались на конференциях и собраниях азербайджанской молодежи, живущей в изгнании, и вдохновляли всех на единение и борьбу. (1, 76)

Э.Абид был одним из первых авторов научных исследований о народных песнях, баяты, ашугском искусстве, образах ашугской поэзии, силлабическом стиле, производных типах, рифме, ритме, повторении сходных звуков, аллитерации, классификации и других поэтических правил. По его словам, история литературы Азербайджана началась с «Книги моего деда Коркута». На этих рассуждениях основан первый том многотомной «Истории азербайджанско-тюркской литературы», написанный Эмином Абидом. «Этот здравомыслящий исследователь азербайджанского фольклора изучает нашу устную литературу в контексте общетюркского и мирового фольклора. Он был подвижником науки, занимался арабскими, персидскими, турецкими, уйгурскими, казахскими, туркменскими, татарскими и т.д. источниками и проводил сравнительно-типологические исследования» (3, 52).

В 1920-х годах Эмин Абид опубликовал в журнале «Дан улдузу» несколько статей, написанных им об эпосе «Книга моего деда Коркута» (4, 8-17). В то время одним из главных достижений азербайджанской фольклористики было изучение эпоса «Книга моего деда Коркута». Он неоднократно отмечал, что эпос имеет энциклопедическое содержание, и за короткий период времени изучил русские, европейские и турецкие источники о «Книга моего деда Коркута». Как мы уже упоминали, Эмин Абид был первым исследователем «Книга моего деда Коркута» в Азербайджане. Он писал: «Деде Коркут – первое произведение азербайджанской литературы в нынешней ситуации. Идею начать историю нашей литературы с «Книги моего деда Коркута» я предложил в 1927 году в Бакинском Университете, Бакинского педагогического техникуме, в 1928 году в литературном кружке Бакинского Дома просвещения, в докладах «Начало азербайджанской литературы» и в работе переданной товарищу Р.Ахундову «История азербайджанско-тюркской литературы» (5, 60).

Профессор П.Эфендиев пишет: «В статьях, посвященных народным песням, сказкам и ашугскому творчеству, Э.Абид высказал важные научные мысли и соображения для своего времени. Надо сказать, что и в его статьях, посвященных нашей народной литературе, встречаются и противоречивые, а порой и неверные мнения. В результате следует сказать, что своими статьями Э.Абид внес значительный вклад в развитие азербайджанской фольклористики в первые годы советской власти» (5, 61; 7).

Заместитель директора сектора Литературы Азербайджанского отделения Академии наук СССР Али Назим, видевший плодотворную научную деятельность Э.Абида, 25 октября 1935 года представил Совету директоров АзФАН такое письмо: «Первоклассный научный сотрудник сектора Литературы Азербайджанского филиала АН

СССР Эмин Абиду предоставляется степень кандидата наук без защиты диссертации. Эмин Абид своей издательской работой и основами своей научной и литературной деятельности в АзФАН, показал себя как честный и внимательный работник, принявший марксистскую методологию. Сектор считает, что работы, представленные в его автобиографии, в частности, работы по М.Ф.Ахундову дают основу для присвоения ему ученой степени в области литературоведения» (18).

После возвращения Э.Абида из Турции его литературная и научная деятельность в Баку в 1927-1937 гг. характеризовалась важными фундаментальными поисками и открытиями. Однако, когда Эмин Абид вернулся в Баку в начале 1927 года, он столкнулся с другим настроением: «Когда он уехал в Стамбул учиться в 1918 году, он увидел подъем национального самосознания, усиление самосознания в народе, пробуждение и признание национальных ценностей. Вернувшись, он обнаружил обратное. Официальные круги пытались разрушить национальные ценности, отдалить народ от его корней и даже преследовать независимых мыслителей. Под именем пролетарского интернационализма, революционной борьбы и строительства социализма стонувшие под колониализмом народы изымались из своей культуры. При осуществлении этой работы были созданы условия для деятельности десятков перьевщиков, отобранных и подготовленных из числа народов. Тем, кто выступал против них, отвечали не разумом, логикой и рассуждениями, а увольнением, преследованием, подавлением, тюремным заключением и расстрелом. Эмин Абид, видя невозможность открытой борьбы в столь сложных условиях, избрал путь научной борьбы. Даже ценой тысячи страданий он раскрыл источники древних и средних веков и попытался их систематизировать (8; 9).

Проф.Б.Ахмедов пишет о репрессиях 30-х годов прошлого века: «Операция «Чистка» была направлена в основном против учителей турецкой литературы, географии и общественного знания. Несомненно, Э.Абид не мог остаться в стороне от этой операции. После этого ему запрещено работать в Баку. Эмин Абид был вынужден работать учителем в Агдашском, Губинском и Агдамском районах в период с 1929 по 1934 год. В эти годы статьи плодотворного ученого редко публикуются в республиканской печати...» (10).

В то время Нафии ханум и Эмину Абиду, которые чувствовали слезку и давление, пришлось пережить очень тяжелые дни. Несмотря на это, Эмин Абид и Нафия ханум мужественно сопротивлялись этому давлению и продолжали свою тайную борьбу.

В 1929 году имя Эмина Абида впервые внесено в «черный список» НКВД. Это отражено в справках КГБ, где говорится о том, что Эмин Абид читал некоторые свои рассказы Нигяр Рафибейли, раздавал студентам привезенные из Турции журналы, прививающие национальные чувства, и

вел националистическую работу. В 1929 году, когда были арестованы члены тайной студенческой организации «Gənc Azər/Юный Азербайджан», имя Эмина Абида также упоминалось в следствии как националист. Эмина Абида выдворили из Баку и отправили работать в регионы - преподавать в средних школах и техникумах.

Таким образом, большевистский режим арестовал Эмина Абида в 1937 году. 16 июня 1938 года помощник начальника 3-го отдела 1-го отделения ДТИ АзССР лейтенант Тевосян и начальник 3-го отдела капитан Мишеряков подготовили справку Эмин Абид Муталлибзаде (Зейналабдин Муталибов) (это его имя и фамилия в документах расследования). В этой справке говорится, что Эмин Абид, родившийся в Баку в 1898 году, во времена Азербайджанской Демократической Республики был отправлен на учебу в Турцию и вернулся оттуда в 1926 году. Во время пребывания в Турции он находился в тесном контакте с жителями и эмигрантами, сотрудничал с журналом «Yeni Qafqaziya/Ени Кавказия», распространявшим антисоветскую информацию. Он ярый пантюркист и контрреволюционный националист.

Любовь Э.Абида к нации, народу, родине обернулась обвинениями в его адрес. Империя беспощадно уничтожила эту великую личность, всем своим существованием связанную с независимостью Азербайджана. В выдержке из протокола следственного дела говорится, что согласно постановлению «Троицы» от 19 октября 1938 года Ахмедов Эмин Абид Муталлибзаде был расстрелян как предатель родины 21 октября 1938 года в 9:30 вечера. (15, стр. 291). Они обвинили его в шпионаже в пользу Турции и пропаганде пантюркизма среди молодежи. Однако у режима не было для этого достаточно фактов и доказательств. Эти факты и доказательства от него пытались получить путем пыток. Эмин Абид до конца стойко сопротивлялся пыткам и отверг обвинения в том, что он был турецким агентом. Несмотря на это, в конце 1937 года его приговорили к смертной казни на основании ложных обвинений. Так оборвалась жизнь этого великого человека в расцвете сил (13).

После ареста и расстрела Эмина Абида Нафия ханум отправилась в Батуми, чтобы вернуться в Турцию. 10 августа 1938 года Нафия ханум, обратившаяся за визой в турецкое консульство в Батуми, была арестована капитаном КГБ армянского происхождения Захаряном. Нафию ханум привезли в Баку и задержали на три года, ее отправили в Сибирь отбывать наказание.

По сравнению с другими репрессированными Эмин Абид был оправдан 21 декабря 1962 года. В связи с этим учёный-исследователь Али Шамиль пишет, что изучение его жизненного пути, исследования и пропаганда его творчества были затруднены: «Поскольку в своем творчестве Э.Абид всегда был против колонизаторов под именем идеологии коммунизма, а в научной деятельности - против тех, кто хотел разделить

общетурецкую литературу и создать локальные литературы» (9;17, с. 6)

М.Э.Расулзаде так вспоминал Э.Абида в своей работе «Современная азербайджанская литература»: «В стихах Гюльтакин мы видим олицетворение настоящей национально-революционной борьбы. Надежда на справедливость борьбы и на то, что она закончится победой, обычно приобретает у Гюльтекин религиозную сущность».

Стих, написанный им по случаю первой годовщины республики, 28 мая 1919 года, на долгие годы стало своеобразной молитвой всех эмигрантов:

Sən bizimsən, bizimsən, durduqca məndə can,
Yaşa, yaşa çox yaşa, ey şanlı Azərbaycan (2).

Ты наш, ты наш, пока душа в теле,
Да здравствует славный Азербайджан.

В 1929 году в Турции эмигранты из Азербайджана составляют книгу «İstiqal uğrunda/За независимость», состоящую из стихов эмигрантов. Но по известным причинам эта книга не издается. Однако Мирзабала Мамедзаде выделяет из этой книги стихи Гюльтакин (Эмина Абида) и публикует их отдельно под названием «Buzlu Səhənnəm/Ледяной ад».

Проводя исследования в Турции в 2014 году, исследователь Дилгам Ахмед приобретает книгу Э.Абида «Buzlu səhənnəm//Ледяной ад», изданную в 1948 году в стамбульской типографии «Каябал-Гуресин». Эта книга была опубликована на арабском языке в 1929 году и на латыни в 1948 году. Книга стала первой и последней книгой стихов Э.Абида - Гюльтакин. Мирзабала Мамедзаде – один из авторов-эмигрантов, мусаватист, собравший стихи в книгу и написавший предисловие. Мирзабала Мамедзаде писал об Э.Абиде: «Гюльтакин в поэзии стоит во главе выросших в эмиграции моджахедов, которые представляли кровавую войну азербайджанских тюрков против красного русского империализма во имя народа, свободы и независимости. Стихи Гюльтакин, призывающие к свободе и независимости, были опубликованы в сборнике «Yeni Kafkasya/Новый Кавказ», изданном Мамед Эмин-беком в 1923-28 годах» (2).

Как писал Мирза Бала Мамедзаде, в тот период в изгнании были поэты, написавшие стихи о независимости. Но их лидером был Гюльтакин. Его стихи были полностью независимыми стихами против большевизма:

Bolşevik atını sürdü Araza,
Oğulsuz analar batdılar yasa.
Ey əziz qardaşlar, bu il olmazsa
Gələcək il olur viran bolşevik...

Большевик прискакал на Араз,
Бездетные матери утопали в трауре.

Дорогие братья, если даже не в этом году

Но в следующем году большевик будет разгромлен.

После распада СССР, после обретения Азербайджаном независимости в 1991 году жизнь и

творчество Эмина Абида были широко изучены и представлены миллионам читателей.

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