

## Traditional Felt in the Kazakhs Folk Art

Zhazira D. Zhukenova<sup>a</sup>, Gulnar S. Soltanbaeva<sup>a</sup> and Baikonir Izhanov<sup>a</sup>

<sup>a</sup>Kazakh National University of Arts, Astana, KAZAKHSTAN

### ABSTRACT

This research investigates the history of culture of Turkic nations and analyzes the traditions of making felt products. The literary sources devoted to the semantic meaning of images on felt products is analyzed. Special attention is paid to the symbolic meaning of images on Kazakh felt products. The technology of felt manufacturing and the decoration process are presented. The connection between traditional and modern art is established. The value of this research is determined by its relevance not only for the Kazakh society, but also for all Turkic nations. The connection between these nations is established from the perspective of felt art. The peculiarities of signs and symbols of the Pazyryk carpet are investigated; its ritual origins and influence of the ornament is proven.

### KEYWORDS

Kazakh art, felt products, tekemet, syrmak, pazyryk mound

### ARTICLE HISTORY

Received 11 April 2016  
Revised 19 May 2016  
Accepted 27 May 2016

## Introduction

Felt art is traditional for Central Asian nations, including Kazakhstan, where the main activities were nomadic and domestic animal husbandry (Marlugan, 1986). Felt products remain some of the most popular ones in the decorative art of Kazakhstan. Classic techniques of felt treatment and manufacturing of traditional felt products underwent insignificant changes; nowadays, felt products are manufactured in accordance with the principles that were established many years ago (Zhogova & Sheromova, 2014). The artistic features of felt are related to the technique of its manufacturing, which is dictated by the diversity of felt carpets.

The purpose of this research is to investigate the technique of felt product manufacturing and the conceptual meaning of these products. The main types of felt products were reviews: kiiz, tekemet, syrmak, and tuzkiiz (Bolatova, 2014).

All the above felt products are a source of notions of the history of a nation's worldview. They preserve the artistic and esthetic content that is related to the

**CORRESPONDENCE** Zhazira D. Zhukenova ✉ [jazira\\_zhukenova@mail.ru](mailto:jazira_zhukenova@mail.ru)

© 2016 Zhukenova, Soltanbaeva and Izhanov. Open Access terms of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>) apply. The license permits unrestricted use, distribution, and reproduction in any medium, on the condition that users give exact credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if they made any changes.



festive side of life and family rituals. As a form of public consciousness, they express the images of the nation's collective and mythological thinking in artistic form (Mazhitayeva, 2015).

Modern Kazakh artisans typically use artistic and graphic features of the Kazakh national felt carpet; however, besides the direct borrowing and repeating of elements of fashion, décor, and technological treatment, elements of modern interpretation of traditional materials and colors also exist (Dzhelbuldin & Yerkebulan, 2014).

### Literature Review

The history of emergence and use of felt products was studied by many researches, both Kazakh and foreign. The cultural heritage of the Kazakh people was studied (Edelbay, 2012; Erkin, 2013; Aneesh, Hall & Petro, 2015); the meaning of ornaments depicted in felt products was analyzed (Baytenov, 2004). The features of Kazakh art and its influence on the people's thinking was analyzed in detail (Kunanbay, 2003). The stages of development and the technological of decorative and applied art were studied (Koshayev, 2010); logical links between modern and ancient felt products were investigated (Beisenbayev, 2014; Somhegyi, 2013). The historical foundation of the development of the felt fabric manufacturing technology was studied (Malinova & Malina, 1988); its use in making national women's garments was investigated (Usmanova, 2010).

Various theories exist regarding the semantic meaning of the felt carpet image. Researcher S.A. Yatsenko (2015) wrote that the Nart saga reinterpreted a part of a legend about the miraculous marriage between god Uastyrdzhi and goddess Dzerassa, the mother of Narts, or the Fire Goddess who met the Nart hero and demigod Soslan. Another researcher, V. Tsagarayev (2000), wrote that the story of the goddess and horseman is associated with the path to the afterworld: the archetype of a cultural hero is realized in mythology as an afterlife travel of a deceased person.

In general, the semantic issue is complicated due to the hypothetic or lacking direct analogies that could prove the unambiguous interpretation of images (Shamigulova, 2015). However, the significant and recognizable images in the artistic tradition of many nations can be traced in the felt carpets. Over the course of time, these images were transformed into ornamental elements due to the fact that depicting living creatures was prohibited in Muslim art (Dzhelbuldin & Jeteyeva, 2014).

The study of the mythological idea in the interpretation of artistic images requires special attention (Frank, 2006). Felt as an artistic and esthetic phenomenon has especially capacious semantic meaning. The symbolism of the yurt – the felt house of ancient Kazakhs – embodied the idea of the World Tree, whose semantics is similar to that of the World Mountain, where the felt carpets on the group mark the floor as the border of the underworld, while the carpets protected people from that world. The walls and the inner space belong to the world of people. The dome space belongs to the world of deified ancestors – the guardian spirits (Baytenov, 2004).

It is interesting to trace the analogy between the concept of a yurt and ancient burial structures – Scythian mounds, where the burying imitated the mortal life of its owner, and where the structures are based on the same

worldview notions. For instance, in Pazyryk mounds (fourth-third century BCE) the burial chamber was built as a wooden blockhouse, sometimes even with windows on the sides, wherein each of the numerous elements (inventory) had its specific place. The vertical plane of the mound structure included three zones of the world model. There was a distinguished center, the bottom of which was occupied by the burial chamber with felt upholstery, with a four-sided altar on top, built in the form of a stone box or sometimes in the form of a pit with a distinct spatial structure with a place for sacrificial horses and other inventory (Yurievna & Doroshenko, 2016).

The main direction of development of modern Kazakh art is the ethnofuturism style, which has formed in recent years. This style is expressed in the synthesis of traditional and modern product design (Darmenova, 2016).

When working with felt, it is possible to use one of the most interesting effects – the creation of a smooth and seamless transition from one material to another. This can be achieved by overlaying felt on another fabric, for instance, silk or cotton, in accordance with the original pattern. This creates the effect of felt lace. This technique, the distinguishing feature whereof is the creation of a single material out of felt and fabric, is called nuno felting (from the Japanese word “nuno”). It is a type of wet felting (Zhogova & Sheromova, 2014).

Another issue is the ensemble and artistic-imagery system in the folk art of Kazakhstan and its rich conceptual meaning (Zhukenova, 2012). It is worth noting that not all types of ornaments and technologies have been studied (Mukanov, 2015), which confirms the relevance of this topic for world science.

### ***Aim of the Study***

The aim of the study is to investigate the cultural heritage of Kazakhstan and the symbolic meaning of images on felt products. Special attention was paid to the investigation of traditional types of felt products.

### ***Research questions***

The following objectives were set:

- to study the relevant sources on the science of culture, history of culture, and history of Turkic nations;
- to review the types of traditional felt products;
- to analyze the mythological idea in the interpretation of artistic images of felt products;
- to compare traditional and modern felt.

### ***Methods***

This research used the method of analysis of literary sources to study the felt heritage of Turkic nations. This analysis investigated all theories regarding the origin of the felt art and the basics of the felt product manufacturing technology. It is also worth mentioning the method that was used to study the culture and traditions of Kazakhstan and to make the main generalizations on the subject at hand. The main conclusions of these methods are presented in this paper. The main research object is felt carpets and the symbolism of their patterns. It was found that the ornamental compositions of Kazakh carpets were



sometimes replaced with realistic images. Such forms were typical for wall fabric tapestries of East Kazakhstan in the 1990s. Nowadays, the images of flowers, birds, horses, and deer can be found on wall carpets of Kazakhs in the Russian Altai Republic.

The method of abstraction allowed establishing connections between the pattern and its symbolic meaning. The motifs of the Kazakh ornament are deeply symbolic. Flowers are the most symbolic element of the Kazakh ornament. However, they should follow a certain pattern. Irregular arrangement of flowers can make even the most original ornament grey and expressionless. The ornament pattern follows the logic of its content, while the choice of flowers is always related to the ethnographic history of the Kazakh nation and is symbolic.

### Data, Analysis, and Results

The study of the felt heritage of Turkic nations gave the following results.

Felt is made of sheep wool or, sometimes, camel hair. According to archeological materials, felt products were made of the wool coarse-wool and fine-wool sheep or, maybe, the hair of coarse-wool sheep. Fine-wool sheep are sheared once per year (April-May); coarse-wool sheep are sheared twice per year (in spring and in autumn). The shearing is layer-based; the layer is called fleece. Shears date back to the early Iron Age; they have specific form – with a U-shaped handle, both blades whereof are sharpened. The blades intersect when pressed and return to their original position when released.

After shearing, the wool undergoes several more treatment stages, including sorting, cleaning, opening, and selection of fiber by hair length and other characteristics.

According to ethnographic data, after manual sorting, wool grease is removed. To that end, the wool is put into fermented urine that was gathered in winter and held. The alkaline properties of urine remove grease and other animal secretion from the wool. In addition, the ammonium carbonate released during the urine fermentation makes the wool soft and flexible and easier to dye with natural dyes.

When necessary, the wool is washed and retreated; during this stage, all the litter is removed from the wool. This stage also involved wool opening by whipping and beating it with rods. Then the wool is separated into fractions by carding. Carding is an important stage of treatment, which enables arranging fibers parallel to each other, removing short ones, and leaving only the ones required for felting.

The wool intended for felt manufacturing is either dyed or used in its natural undyed form. The prepared wool is spread across a mat, watered, and then rolled up into the mat and felted. Then the mat is removed and the product is felted without it. Then the product is washed, dried, and dyed if needed.

Since ancient times, felt products were part of the interior design of a dwelling place, marquee or yurt. The most traditional ones are:

- kiiz – a simple felt carpet made of white, brown or grey wool, used as a basis for making other products or to cover various parts of the yurt;

- tekemet – floor carpet, made by felting dyed wool patterns into a half-ready basis – the kiiz, as shown in Figure 1;



Figure 1. Tekemet (wool, felting) 1951. 136x215. Artykbayeva A. Central Kazakhstan

- syrmak – floor carpet, made by laying out on a basis (kiiz) ornamental patterns cut out of thick multicolor felt, which are then clasped to the basis and sewed with color lace along the contour of the pattern, as shown in Figure2;



Figure 2. Syrmak (felt, lacing) 1948. 140x217. Akhmetzhanova B. Central Kazakhstan



- tuzkiiz – wall carpet, made by sewing ornamental compositions on felt or solid color fabric – velvet or silk, and then sewing them to the felt basis, as shown in Figures 3 and 4.



Figure 3. Tuzkiiz (application) 1960s. 141x168. Zhumabayeva Rakhiya. Central Kazakhstan



Figure 4. Tuzkiiz (sewing), fragment 1958. 90x158 Artisan. East Kazakhstan

The technology of making felt tekemet determines the specificity of the visual effects of its décor. During the felting of tekemet, the woolen pattern of one color penetrates the basis of a different color. Therefore, the structure of fibers in the two parts of the tekemet does not have a distinct border. Colors merge into each other, while the point of contact of their parts is somewhat indistinct. The ornamental tradition of the Kazakh felt floor tekemet is characterized by a schematic nature of the big ornament and its free arrangement. The main ornamental motifs used in this felt are squares and rhombs with cross-shaped figures and framing in the form of a wave or meander.

The color palette most frequently is based on a combination of light and dark wool; however, red and brown dyed wool is also used.

Syrmak is one of the main decorative articles of the Kazakh yurt. In terms of their design technique, syrmaks are divided into mosaic, application, stitched, and mixed.

Mosaic syrmaks are characterized by an ornamental center consisting of two or more mirrored two-color patterns in the form of squares or rhombs with a framing decorative border. It does not have a distinct center in the form of a rosette or medallion. The elements of the ornamental center of the mosaic syrmak are made by sewing together felt ornaments of different colors. The mosaic technique gives a distinct border of two color parts, which is enhanced by their contrasting ratio and symmetry.

The ornamental pattern of Kazakh syrmaks primarily features a carpet space filled with a pattern and a balance between the background and the pattern, i.e. the background is also an ornament. Therefore, when making mosaic syrmak, the pattern is applied to two overlying pieces of different color felt; both layers are cut out simultaneously afterwards. They are placed on a flat surface, inserted into each other. This makes the two parts of the central element of syrmak with a symmetric design of patterns. The color palette of the syrmak is most often based on a combination of contrasting colors or white and dark wool. After the central part is compiled, a border is sewn to it. The places of contact are stitched; a winding lace is sewn on to make the syrmak neat and elegant. The places of contact of ornamental figures, usually laced in red or orange, make the product complete, smoothen the contrast of figures, and add prominent expressivity to the carpet. To make it stronger, the finished carpet is stitched on the reverse side with felt or strong fabric.

Application syrmak carpets are characterized by ornamental richness. Application could be done in thin felt, velvet, plush, satin or cloth. The diverse color and texture of fabrics and the relatively simple way of cutting out patterns provide for coloristic richness and a strong ornament that is active with respect to the background. These syrmaks were richer and were hung on yurt walls. They were also put on the floor for special guests.

Stitched syrmaks are rarer. Ornamental motifs made of different color laces are arranged on a felt canvas. Unlike mosaic carpets, stitching can do finer and very wavy patterns. The ornament is mostly thick and covering the entire carpet. The infinite spiral ornament is encountered frequently.

Tuzkiizs are especially rich and ceremonial carpets than not only served as the decorative center of the yurt, but also demonstrated the wealth and status of the hosts. The tuzkiiz was an integral part of the dowry and was sewn by the bride herself. The mastery of the future hostess was judged by the beauty and quality of the tuzkiiz. The tuzkiiz had an n-shaped border that framed the internal motif – a solar circle filled with an interwoven plant ornament, an image of the sun that gives warmth and life, a deity worshipped by the nomads since ancient times. The border was not sewn on the bottom part of the tuzkiiz, since that part was usually covered by the bed or chests. The images on the tuzkiiz had symbolic meaning and served as a protective charm. Therefore, a magnificent embroidered carpet, which was passed on from generation to generation, served as a talisman for the home.



## Discussion and Conclusion

Similar to some studies (Beisenbayev, 2014; Dzhelbuldin & Jeteyeva, 2014; Erkin, 2013; Yurievna & Doroshenko, 2016), this research showed that the ancient notions of the world, such as the axis of the world, the World Tree, and the World Mountain, were expressed in symbolic form in the ornamental design of felt products. The semantics of the Tree, which underlies the notion of world order (with a central axis and numerous levels), is the foundation of the compositional structure of carpets, each level whereof is filled with meanings that were important for ancient Kazakhs. These include the symbols of fertility, endless life and wealth, and elements that protect from evil (Mazhitayeva, 2015). Any work of art expresses the symbolism of the nation's tangible culture. At that, symbolism may be expressed through the compositional design of the product in general and its parts and décor in particular, the color design, the ornamental design of the décor, and the location or intended purpose of the product.

One of the most ancient examples of felt carpets is the Pazyryk carpet, which was preserved in eternal frost.

The interior of the burial chambers in the fifth Pazyryk mound contained some undamaged items: clay and wooden containers, leather bags, flasks, and the felt carpet with color applications, which became famous worldwide. The felt carpet was probably a part of a marquee, the foundation whereof was the frame made of four logs with pole holes, which was discovered at the base of the grave. The big (about 30 m<sup>2</sup>) white felt carpet features altering friezes of ornamental figures and repeating compositions that depict a horseman with a cloak in front of a goddess sitting on a throne with a lush plant in her hand (Figure 5).

The interesting thing is that all depicted figures have realistic features and, regardless of each other, create a vivid visual image, in which the interpretation of the scene is related to certain associations, for instance, the cyclical nature of time.

In general, the plastic completeness, monumental forms, and intricate design of certain parts of the felt product indicate a high level of technical mastery, the maturity of the artistic consciousness, and readiness to switch from learning and transforming forms to compiling an artistic language.



Figure 5. Wall felt carpet. Pazyryk culture (sixth-third century)

The decorative composition of the felt carpet consists of three frieze-shaped stripes and a border. The rhythmic combination of wide central stripes include consistently repeating compositions: a woman – a goddess and a horseman, which create the sense of motion.

The sitting woman is the goddess of fertility, holding in hand the twisting branches of a plant with stylized leaves and flowers on the end. The other hand of the goddess is raised to her mouth. She is sitting sidewise in a chair with carved legs and bent back with arrowhead-shaped points. Her head is shaven, like those of women buried in Pazyryk mounds. She is wearing a hat with a neck flap, decorated with wide triangles along the crown. The goddess has a flat back of the neck, high forehead, small eyes with straight eyebrows, a big aquiline nose, and a massive protruding chin. The ear is depicted in the form of a curl with protrusions at the bottom end. The goddess is dressed in an ankle-long robe folded to the left side and decorated with an ornament of large pointy curls. Her neck is covered with a collar, which is probably part of the underwear; the narrow sleeves end with wristbands.

The horseman facing the goddess has a long moustache curled up and a hatless head with eastern facial features, similar to those of the goddess. He has curly hair, depicted with several semicircular protrusions. He is holding a lead in one hand; the other hand is not depicted. The horseman is dressed in a short jacket adorned with embroidery along the shoulder, flare, and hem. He is wearing narrow pants and soft boots. He is also wearing a short cloak decorated with big circles. On his belt, the horseman is wearing a gorytos with a bow and an arrow box. He is sitting in a saddle with high saddlebows, decorated chest strap and crupper. The horse has a hog mane with two protrusions and a fringe. The bridle has metal plates at the belt cross with a splint.

The Pazyryk carpet has elements that are part of the traditional Kazakh ornamental art. The element that is the prototype of the Kazakh “toert kolak” – the crosspiece, is of greatest interest. It is located in the border of the felt carpet. Since the Pazyryk carpet had a ritualistic purpose, while its center told the story of a soul’s path in the afterworld, the border of the felt carpet that features the “toert kolak” element is regarded as a “linking” space between the otherworld and the real world. The compositions of Kazakh felt products have a “reverse” structure – the composition of the carpet is usually treated as a horizontal and extended concept of the world, in accordance with the ancient mythological ideas of ancestors. The compositional center of traditional Kazakh felt products is a sacred zone, the ornamentation whereof gradually incorporated the “toert kolak” motif (four corners of the earth, intersection of roads). The borders featured such elements as “omyrtka” – the spine and the “synar moyiz” – broken horn. Thus, the compressed pattern that consists of complex combinations of curls tells about the present time, while the periphery is the area of the otherworld. It is worth noting that the notions and images of the real world back in ancient times laid the foundation for the development of decoration in applied products, where the expressive means were a flat image, conventional spot, color, and line. In case of felt products, the decoration of the entire form is not only the story, but also the meaning imbued in the beauty of the material, the treatment technique, and construction.



This research showed the importance of researching and elaborating the subject of felt art of Turkic nations, since this area is understudied. The conclusions and findings described in this paper are relevant and innovative from the perspective of the structure of human knowledge.

### **Implications and Recommendations**

Prominent Kazakh artists use the following elements of the artistic structure of the traditional felt carpet: stylistic (visual and conceptual) features; artistic, compositional, and rhythmic structure; coloristic structure and texture design; constructive and styling design; ornamental and decorative features; semantic features.

It is important to create an assortment of modern products, both souvenirs and household, which use elements of the traditional felting art, which will help to preserve the spiritual and cultural heritage of Kazakhs in a new interpretation.

For instance, the rich culture of Kazakhs became the main reflection in the ethnic work of designer Ai Bapani, who makes felt clothes. Her felt dresses and coats are covered in national ornaments and embroidery using the manual felting technology. This technique allows creating felt ornaments on thin silk, which relevant in modern times. This technique can also be used to create decorative elements and accessories.

The felting technology uses the upgraded “taldyrma” technique – a way of laying stretched wool over a felt base and using an original stitching contour that provides for clear and expressive arrangement of ornaments. With the development of new technologies, artisans have also begun using carding machine to card wool.

A unique characteristic has emerged in the ornamentation of modern Kazakh felt products, with which one can achieve a variety of compositions with a limited number of elements. Almost all elements of the ornament are equally used in various motifs and easily transported from one type to another.

The color interpretation underwent certain changes; the colors are updated; clear and vivid colors are being used. These new trends are largely related to the abundance of artificial dyes that are being used alongside natural ones.

Despite the labor intensity, felt products are becoming popular due to the natural properties of felt. Felt is incredibly plastic, warm, and, despite its ancient origins, modern material that attracts increasingly more people with its beauty, softness, and naturalness. Wool felt is environmentally friendly. Felt products are very light and conserve heat.

Thus, the modern felt art in Kazakhstan is developing in accordance with the call of the times, while also remaining original and preserving the artistic heritage of the culture of ancient Kazakhs and the great achievements of Kazakh artisans.

### **Disclosure statement**

No potential conflict of interest was reported by the authors.

### **Notes on contributors**

**Zhazira D. Zhukenova** holds a PhD, Associate Professor of Department of Painting and Sculpture, Kazakh National University of Arts, Astana, Kazakhstan.

**Gulnar S. Soltanbaeva** holds a PhD, Professor of Department of Scenography and Decorative Arts, Kazakh National University of Arts, Astana, Kazakhstan.

**Baikonir Izhanov** - holds a PhD, Professor of Department of Painting and Sculpture, Kazakh National University of Arts, Astana, Kazakhstan.

## References

- Aneesh A., Hall, L. & Petro, P. (2015). Beyond Globalization: Making New Worlds in Media, Art, and Social Practice. *Journalism & Mass Communication Quarterly*, 92(1), 245-247.
- Baytenov, E. (2004). Religious and Mythological Notions as the Foundation of Memorial Architecture. *The Memorial Architecture of Kazakhstan: Evolution and Problems of Formation*, 42-56.
- Beisenbayev, S. (2014). Aesthetic-Artistic Features of the National Color in Modern Kazakhstan Arts. *GISAP: Culturology, Sports and Art History*, 4, 23-25.
- Boatova, D. (2014). The Felt Manufacturing Technology. Engineering Sciences – from Theory to Practice. *Collection of Materials of the 25<sup>th</sup> International Scientific and Practical Conference*, 8(21), 119-124.
- Darmenova, R. (2016). Formation cultural art of students in the conditions of studying features of national clothes. *WALIA Journal*, 32(1), 7-9.
- Dzhelbuldin, Y. & Jeteyeva, D. (2014). *Traditions and Customs of Kazakhs*. Bloomington: Authorhouse, 180 p.
- Edelbay, S. (2012). Traditional Kazakh Culture and Islam. *International Journal of Business and Social Science*, 3(11), 122-133.
- Erkin Z. (2013). History of Handicraft in Pavlodar Region. *Middle-East Journal of Scientific Research*, 14(9), 1230-1234.
- Frank, V. (2006). *The Eurasian People of Saka*. Almaty: Dayk-Press, 248 p.
- Koshayev, V. (2010). Stages of Development and the Technologies of Decorative and Applied Art, In Z. Anipenko (Eds.). *Decorative and Applied Art: Concepts. Stages of development*, 234-259.
- Kunanbay, A. (2003). The Soul of Kazakhstan. *Saudi Aramco World*, 54 (3), 20-33.
- Malinova, R. & Malina, Ya. (1988). Fabric Manufacturing. *A Jump to the Past. An Experiment Reveals Ancient Secrets*, 80-89.
- Marlugan, A. (1986). *Kazakh Folk Applied Art*. Almaty: Oner, 256 p.
- Mazhitayeva, S. (2015). Semiology of Kazakh Ornaments. *Review of European Studies*, 7(6), 170-182.
- Mukanov, M. (2015). Cultural Phenomenon of Aesthetic Minimalism in Copyright Tapestries Alibi and Saule Bapanova. *Mediterranean Journal of Social Sciences*, 6(1), 658-665.
- Shamigulova, A. T. (2015). Vocabulary of Clothes and Jewelry in Studies of Turkic Languages (From the History of the Study of the Issue). *Mediterranean Journal of Social Sciences*, 6(5), 194-200.
- Somhegyi, Z. (2013). Wide perspectives Contemporary arts in Central Asia. *Contemporary Practices Art Journal*, 14, 70-75.
- Tsagarayev, V. (2000). History, Mythology, Art, Semantics. Vladikavkaz: Gassiev Republican Publishing and Printing Company, 300 p.
- Usmanova, E. (2010). *Kazakh Women's Garments in the Bronze Age*. Karaganda: Lisakovsk, 252 p.
- Yatsenko, S. (2015). *The Costume of Iranian-Language Nations in Ancient Times and Methods of its Historical and Cultural Reconstruction*. Moscow: Nanka Publishers, 47 p.
- Yurievna, Y. & Doroshenko, T. (2016). Traditions of art and craft decoration and architecture of kazakh yurt as a source of modern art. *European Journal of Science and Theology*, 12(3), 221-232.
- Zhogova, M. & Sheromova, I. (2014). The Synthesis of Technologies and Traditions in the Modern Fashion Industry by the Example of Felting in Clothes Design. *Modern Problems of Science and Education*, 4, 118-126.
- Zhukenova, Zh. (2012). *The Ensemble and Artistic-Visual System in the Kazakh Folk Art*. Moscow: Medline-C, 229 p.