



Ганна Іванюк,

доктор педагогічних наук, професор, завідувач кафедри педагогіки та психології,
Київський університет імені Бориса Грінченка (м. Київ, Україна)

Hanna Ivaniuk,

Doctor of Science in Pedagogy, Professor, Head of the Department of Pedagogy and Psychology,
Borys Grinchenko Kyiv University (Kyiv, Ukraine)

h.ivaniuk@kubg.edu.ua

ORCID 0000-0001-7758-5121

37.018:7.035.92(477.83/.86) "17/19"

ГЕНЕЗА ХУДОЖНЬО-ПРОМИСЛОВИХ ШКІЛ У ГАЛИЧИНІ (КІНЕЦЬ ХІХ СТОЛІТТЯ – 1918 Р.): ІСТОРИКО-ПЕДАГОГІЧНІ АСПЕКТИ

Анотація. У статті висвітлено результати дослідження актуальної наукової проблеми генези художньо-промислових шкіл у Галичині в перебігу історії кінця ХІХ ст. – 1918 р. У зазначених хронологічних межах Галичина розвивалася в правовому полі Австро-Угорської держави. Генеза художньо-промислових шкіл на теренах Галичини становить культурно-освітній феномен – сув'язь традиційних практик народної художньої культури та європейських естетичних концептів і практик. Розкрито вплив державної економічної та освітньої політики на становлення художньо-промислових шкіл у Галичині, яка перебувала в статусі Коронного Краю, пізніше – Коронної землі Австро-Угорської монархії. За результатами історико-педагогічного дослідження висвітлено співпрацю художніх музеїв, які функціонували на теренах Австро-Угорщини та в інших країнах Європи, їх культурно-освітню місію в розвиток художньо-промислових шкіл у Галичині в політико-правовому полі Австро-Угорської монархії. Реалізовано мету: обґрунтовано та узагальнено особливості становлення та розвитку художньо-промислових шкіл на землях Галичини як культурно-освітнього феномена в зазначених хронологічних межах. За результатами аналізу теоретичних і архівних джерел проаналізовано передумови та особливості становлення і розвитку художньо-промислових шкіл у Галичині за цього періоду. Фактологічний матеріал, викладений у статті, може слугувати для узагальнення нових знань про історичний поступ шкільництва в Галичині.

Ключові слова: генеза, художньо-промислова школа, художній музей, мистецтво, ремесло, естетичні концепти, зміст художньо-промислового навчання.

GENESIS OF ART AND INDUSTRIAL SCHOOLS IN GALICIA (END OF 19TH CENTURY – 1918): HISTORICAL AND PEDAGOGICAL ASPECTS

Abstract. The article highlights the results of a study of the current scientific problem of the genesis of art and industrial schools in Galicia during the history of the late 19th century - 1918. Within these chronological boundaries, Galicia developed in the legal field of the Austro-Hungarian state. The genesis of art and industrial schools in Galicia is a cultural and educational phenomenon - the connection of traditional practices of folk-art culture and European aesthetic concepts and practices. The influence of the state economic and educational policy on the formation of art and industrial schools in Galicia, which was in the status of the Crown Land, and later - the Crown Land of the Austro-Hungarian Monarchy, is revealed. According to the results of historical and pedagogical research, the cooperation of art museums operating in Austria-Hungary and other European countries, their cultural and educational mission in the development of art and industrial schools in Galicia in the political and legal field of the Austro-Hungarian monarchy. The purpose is achieved: the peculiarities of formation and development of art and industrial schools in the lands of Galicia as a cultural-educational phenomenon of progress within the specified chronological limits are substantiated and generalized. According to the results of the analysis of theoretical and archival sources, the preconditions and peculiarities of the formation and development of art and industrial schools in Galicia in these years are highlighted. The factual material presented in the article can serve to summarize new knowledge about the historical post of schooling in Galicia.

Keywords: genesis, art and industrial school, art museum, art, craft, aesthetic concepts, content of art and industrial education.

INTRODUCTION

The problem formulation. The study of the historical preconditions for the formation of art and industrial schools in Galicia shows the existence of favorable conditions for the development of this educational and cultural phenomenon after the abolition of serfdom by the Imperial Government of Austria-Hungary (1848). During these years, interest in the development of arts and crafts at both the state and local levels grew in the lands that were part of Austria-Hungary. This was facilitated by accelerated economic development. To work in weaving, ceramics, woodworking industries needed workers who had the skills of artistic processing of various materials. Traditionally, the training of these workers was carried out by artisans in workshops, and the transfer of professional (artistic) knowledge and skills took place from father to son. However, in conditions of strong industrial growth, they did not meet the needs of



professional craftsmen. Education of students, which was concentrated in craft workshops and did not contribute to providing conditions for professional training of arts and crafts masters.

The results of historical research clarify the origins of the genesis of art and industrial schools in Galicia, which was in the cultural, economic, and political-administrative field of the Austro-Hungarian monarchy since 1772, by the first division of the Commonwealth (Topographic maps of Europe (Zone 8. Eastern Poland, North-Eastern Bohemia, Galicia: Stary Sambir, Drohobych, Zhydachiv, Stary Rohatyn, Berezhany), sheet 35). During the years 1849-1867 Galicia (Geographical maps to individual articles of Mayer's encyclopedic dictionary: "Germany", "Poland", "Hungary. Galicia and Bukovina", sheet 10) was in its composition as a crown land (Atlas of the Austrian Empire, sheet 48), and from 1867 to November 1, 1918, its lands were listed as the Crown Land of the Austro-Hungarian Monarchy (Stepankov, V.S., Golobutsky, P.V., p. 178).

At one time, Austria-Hungary, together with Galicia (General geographical map of Galicia and Bukovina, sheet 2; General geographical maps of Galicia, compiled by S. Mayersky, sheet 4), included 14 provinces. The center of the governorship of Galicia was the city of Lviv, headed by the plenipotentiary of the emperor, Count von Pergen. With his assistance, a comprehensive study of the region by state institutions was conducted to identify its real economic, social, and political situation. First of all, attention was paid to the study of natural, labor resources, ethnography, and life. To overcome the backwardness of Galicia from other provinces, in particular the education of the people, the government took care to open art and industrial schools alongside public schools.

THE PURPOSE OF THE RESEARCH

The purpose of the study is to substantiate and generalize the features of the formation and development of art and industrial schools in Galicia, as a cultural and educational phenomenon in the history of the late nineteenth – early twentieth century. According to the purpose of the study, the following tasks were identified: based on the results of the study of sources to determine the preconditions that influenced the formation and development of art and industrial schools in Galicia and to characterize the links; to reveal the essence of the genesis of art and industrial schools within certain chronological limits.

RESEARCH METHODS

To identify and reveal the essence of historical and pedagogical aspects of the genesis of art and industrial schools of Galicia in the chronological framework of scientific research used a set of research methods that allowed to comprehensively characterize this cultural and educational phenomenon: general (historical and pedagogical analysis, synthesis, generalization, chronological); historical and genetic analysis of historical and pedagogical aspects of the genesis of art and industrial schools, coverage of progressive cultural, educational and artistic ideas that influenced their progress; problem-genetic made it possible to characterize and reconstruct the formation and development of art and industrial schools in Galicia in the late nineteenth and early twentieth centuries as an integrated cultural and educational phenomenon; hermeneutic - led to a new reading of historical and pedagogical processes in the territorial and chronological boundaries of the study.

The study of historical and pedagogical aspects of the formation of art and industrial schools of Galicia within certain chronological boundaries, which as an independent cultural and educational phenomenon was determined by economic, cultural, social needs of society to prepare children and youth for work and relevant practices, based on communication ideas of pedagogical concepts and practices with social (political and legal), economic, aesthetic and cultural environment. They can stimulate, accelerate the development of art and industrial education or inhibit it.

RESULTS OF THE RESEARCH

Historical and pedagogical aspects of the formation of art and industrial schools in Galicia are considered in the context of political, ideological trends that were decisive in the development of the region in terms of history, which dates to 1876-1918. It was found out that in Galicia in the middle of the XIX century craft (professional) schools developed. However, most of the professional training was carried out in small workshops, and professional knowledge was transferred in the process of individual work of students. The political and economic system of the Austro-Hungarian monarchy contributed to the increase of labor resources for handicraft production. This was facilitated by the legal tradition of inheritance of land for the eldest son and family. According to this, the younger children learned the craft.

The development of machine production has brought to the fore the problem of education and preparation for work in the arts and crafts of children and youth. Secondary, fifth- and sixth-grade Latin-language schools in Galicia could not meet the new requirements for artistic pursuits. The opening of Ukrainian gymnasiums in a number of cities, namely in Przemyśl (1887), Kolomyia (1893), and Ternopil (1898), did not solve the problems of artistic and industrial professional training of children and youth. Acceleration of economic development in the late nineteenth century contributed to a real boom in construction, which contained a powerful artistic component. Therefore, the need for training qualified masters with artistic skills has increased.

Over the years, the region has developed favorable conditions, characterized by the longevity of the traditions of handicraft production, which were mostly ethno-regional in nature and enriched by recognized in European countries fine arts. In the professional environment of these years, folk crafts were recognized as applied arts, which accelerated the growth of the number of art and industrial schools in Galicia (Galicia).

The historical and pedagogical search testifies to the formation of the relationship between the economy and the development of art and industrial education at various levels in Galicia. First of all, primary art and industrial education was relevant and most in demand. It was focused on training craftsmen for arts and crafts. The development of primary art and industrial schools was determined by the socio-economic component, namely: the need to decorate the interiors and



facades of buildings. The development of manufactories and factories led to the launch of art and industrial schools and training courses for workers.

According to the analysis of the source base, in the second half of the 19th century royal, state, and private art and industrial schools functioned in Galicia. An essential feature common to these types of schools was the cooperation with European art and industrial museums and the pan-European movement "Arts and Crafts" (Shmagalo, R.T., 2005, p. 12). The spread of the ideas of the "Arts and Crafts" movement in the socio-cultural space of Galicia influenced the formation of art and industrial schools. European recognition was given to the Lviv Art and Industrial School, which began its activities in accordance with the decree of the Ministry of Education of Austria-Hungary and the decision of the Supervisory Board of the Lviv Art Museum of March 7, 1876 (Shmagalo, R.T., 2005).

The activity of the professional School of Drawings was started in Lviv. Its activities were focused on the development of needlework in Galicia. On December 18, 1886, the Ministry of Education issued an order on the functioning of the School of Drawing and Modeling at the City Industrial Museum (Lviv) (*W szkole rysunków i modelowania. Gazeta Lwowska. 27.IX.1876, p. 3*).

In the conditions of economic and socio-cultural growth, the need to train specialists (teachers, masters) for teaching in art and industrial schools, as well as masters for various industries in the ethnocultural environment of Galicia and abroad has increased. Art and industrial schools performed the task of training specialists ready to create samples of artistic products used in construction, furniture and other spheres of human life.

Art and industrial schools had various profiles and practical purposes to meet the social training needs of the time. First of all, the number of vocational schools grew, namely: ceramics, pottery, artistic metal, carpet weaving, weaving, woodworking. The institutional stage of formation of art and industrial schools began with the opening the General School of Drawing and Modeling at the Lviv Museum of Arts and Crafts (Shmagalo, R.T., 2005). At this stage of formation of art and industrial education of Galicia, two features were traced: 1) the organization of courses by masters who worked in line with established traditional trades; 2) the development of art and industrial education was based on the study of folk art traditions and classical art.

Pedagogical aspects of this educational and cultural phenomenon are characterized by significant improvements in the content and methods of teaching in art and industrial schools. In the context of the subject of scientific research, we consider them as a set of normative and semantic-methodological components that influenced the progress of art and industrial schools in Galicia in the chronological period of the late nineteenth century.

The content of art and industrial education in schools of different levels was influenced by Western European ideas of modernism, which were quite successfully combined with traditional original artistic techniques of folk artists from different parts of Galicia. Improving the content of art and industrial education has gone beyond the professional environment. The development of philosophical trends in the content of art and industrial education can be traced. The ideas of integrating the fine arts and crafts, considered as applied arts, were popular among philosophers and artists of the time.

In practical terms, the content of education in art and industrial schools combined both artistic and industrial components (focused on productive production activities of the master). This period was characterized by interdisciplinary links between art education and the demands of the economy, which developed under favorable political and economic reforms.

A specific feature of the pedagogical aspects of that time was the integration of various traditional techniques of folk artists. This factor was formed on the traditional locations of art and industrial education, which were concentrated in villages and towns that had an authentic folk tradition of crafts (Kosiv, Yavoriv, Kolomyia).

Analysis of the source base on the problem of research shows the growing interest of the imperial authorities of Austria-Hungary in the development of art and industrial education in Galicia. At the end of the 19th century, the educational policy of the Austro-Hungarian monarchy was formed, which determined the development of art and industrial education. In line with the state educational policy developed state or royal art and industrial schools. The activities of these schools were characterized by close cooperation with art and industrial museums and the pan-European movement "Arts and Crafts" (Shmagalo, R.T., 2005, p. 12).

State support consisted in the legal and financial support of art and industrial schools. For example, by imperial order (dated 05.12.1890) and the order of the Ministry of Education and Religions (dated 23.05.1891) the Lviv Art and Industrial School was reorganized into a State Art and Industrial School (*Wiadomosci statystyczne o miescie Lwowie. Lwow, T. VI., p. 112-116*). The school operated in accordance with the statute; in its structure there were the following departments: construction and art and metalwork, furniture and carpentry and construction, turning and carving (wood). Women also joined art and industrial schools. In particular, the work of the quilting and lace department was launched. The State Art and Industrial School in Lviv operated within the framework of the legislation of the time. The city authorities supervised the training of craftsmen. In addition, he provided great support in the organization of material support of the educational process, the development of workshops. The status of this school is evidenced by the fact that since 1893 it has been managed for ten years by the architect Sigmund Gogolevsky – the architect who designed the Lviv Opera House.

Art museums (of various levels) together with the government of the cities together with the public popularized the activity of art and industrial schools. In the cities and towns carried out systematic work on the organization of exhibitions of students of art and industrial, vocational schools. Famous museums of European countries joined these exhibitions. Galician art and industrial schools, especially Lviv, were leading in the integration of art and industrial education. This trend was maintained at both the national and local levels. The students' products were exhibited at exhibitions in Vienna (1980s), Lviv (1894), Prague and other cities on the European continent.



Funding for the activities of art and industrial schools was provided from the state budget and patrons. This was facilitated by a well-developed self-government in the lands of Galicia (Galicia) (Dybiec, J. 1981, pp. 55-58, 71). For example, after the Lviv Art and Industrial School was transformed into a State Art and Industrial School in the early 1890s, funds were raised for the construction of educational facilities and the expansion of student training. In this school in 1893 there were 306 students in the courses of various departments, namely: construction, arts and crafts, artistic metal, decorative painting and sculpture. The professional training of students was measured by participation in exhibitions (in Vienna, Lviv, Prague and other European cities) (Szóste spawozdanie C.K. pastwowej Szkoły przemysłowej we Lwowie za rok szk. 1897/98. Lwów, 1898, pp. 57-58).

The development of art and industrial schools at various levels has raised the issue of teacher training in professional and basic subjects. Much attention was paid to improving the skills of creative and professional tasks at all levels of training. It is worth noting that in these schools much attention was paid to the general education of future teachers. The content of education included material on the history of crafts, as well as professional training, including technology of materials processing and art disciplines. The content of training of future teachers in the Lviv Art and Industrial School was built considering the standards of arts and crafts training that existed at that time in the schools of Poznan, Krakow, Vienna.

Thus, the Lviv Art and Industrial School in close cooperation with the city industrial museum for more than half a century has defined the activities of a network of other arts and crafts schools in Galicia, namely: woodworking, weaving, pottery, carpet weaving. At the end of the XIX century, thanks to her pedagogical and educational activities, the system of training teachers for art and industrial schools of the region was formed.

The development of art and industrial schools was positively influenced by the multifaceted cultural ties of Galician masters with European communities. It is worth noting that the art and industrial schools in those years themselves contributed to self-discovery, self-identification of traditional folk art, which distinguished Galicia from other lands of Austria-Hungary. It was found that the connection of art and industrial education with the activities of museums led to the construction of special forms of self-organization and self-affirmation of aesthetic, folk and generally accepted aesthetic ideals.

The period of formation of art and industrial education in Galicia is characterized by the interaction of specialists based on aesthetic and cultural concepts, which allowed the development of both national art and European artistic concepts. The rapid development of industry and urbanization have largely emptied the established norms and traditional ideals of folk art.

For decades to come, Galicia's art and industrial schools have defined an aesthetic and cultural space that combines the regional features of traditional arts and crafts with European aesthetic standards. Artistic currents that combined elements of classical and folk experience became practically widespread, and aesthetic concepts of environments (domestic, residential, landscape) with a combination of elements of folk-art tradition developed. That is, we note once again that art and industrial schools developed in accordance with the challenges of the time, combining artistic tradition and modern industrial trends of the time.

A prominent place belonged to the relationship between state and regional educational policy in the field of training of specialists in the field of art and industry. The formation of art and industrial schools in Galicia took place under rather favorable circumstances, namely: state funding of educational institutions, the use of funds from public and cultural and artistic communities, individuals. It is worth noting that state funding of art and industrial schools, as well as the use of patrons' funds, put some of these schools in a worse position, as the communities that maintained such schools had different financial opportunities. We consider such fundings as a factor of development, which in the conditions of lack of funds slowed down the progress of art and industrial schools. Considerable attention was paid by city governments to diversifying the professional training of teachers for art and industrial schools, which contributed to the growth of their network and structure. Updating the content of training took place in the professional and cultural field. Changes in aesthetic ideals have been studied, which in the conditions of rather rapid industrial development were reflected in the content of professional training, which contributed to the integration of the content of art and industrial education.

During 1876–1918, the training of specialists in art and industrial schools was characterized by a combination of traditional and classical art with industrial production. In the years that belong to the chronological boundaries of the study, art and industrial schools developed based on cultural traditions. Part of the content of training: knowledge, skills and abilities, ways of working in the field of folk traditions depended on the educational policy of Austria-Hungary, which in those years included Galicia.

The development of industry in Galicia prompted the ruling elites of these states to reproduce and use for business and artistic purposes of traditional folk art: embroidery, carpet weaving, weaving, laziness, cooperage, carving and others. A network of vocational schools was set up to train specialists for new art and industrial factories. Coverage of the leading trend of its development, namely: the influence of cultural traditions and changes in the purpose, content and organization of training of masters, we consider in the historical and pedagogical context of this chronological period.

According to the study of historical and pedagogical sources, the progress of art and industrial schools in Galicia within the chronological framework of scientific research was determined by the social goal of preparing children and youth of the region to work in art workshops, factories and other enterprises. It should be noted that in accordance with the requirements of the state art and industrial schools had to combine the achievements of arts and crafts masters, which were traditional in these areas, with established (scientific) artistic techniques and technologies of the time, which in European countries have developed significantly.



The "Arts and Crafts" movement, founded in Western Europe in the second half of the 19th century, spread throughout Ukraine and influenced the activities of several societies, museums, art schools and workshops. Determinant in this process was the establishment of folk art as a valuable cultural and artistic phenomenon, the revival of handicraft production and its purposeful support (Shmagalo, R., 2000, pp. 186-193). In the process of evolution of the "Arts and Crafts" movement, new principles of creative cooperation between folk artists and professional artists were established, which ensured the preservation of traditional crafts and contributed to the development of aesthetic principles of the art industry. Involvement of folk artists in co-creation, giving them freedom of expression within the general artistic plan encouraged the development of artistic potential of new original works (Shmagalo, R. 1991, pp. 57-61).

Significant progress in the development of art and industrial schools is characteristic of the Hutsul region of that time. According to written sources, the Hutsul region has long tradition of artistic craft. The products of Hutsul masters were exhibited at exhibitions in Vienna (1872), Lviv (1877), Trieste (1878), and Stanislavov (1879). Hutsul craftsmen were known outside the region, and their products became the decoration of imperial homes and government agencies of Austria-Hungary. Therefore, the need for products of Hutsul masters was constantly growing, which led to the intensification of educational policy of the state in the field of art and industrial education. Thanks to this, art and industrial schools in Galicia reached a special heyday in Hutsul towns (Kolomyia, Kosiv).

CONCLUSIONS AND PROSPECTS OF FURTHER RESEARCH

According to the results of historical and pedagogical studies, the progress of art and industrial education in Galicia in the late nineteenth and early twentieth centuries was influenced by European cultural concepts and traditional artistic practices that have developed in the artisanal environment of the region. The formation and development of art and industrial schools was influenced by the current educational and economic policies, both at the level of state power and at the level of local government. There was a productive collaboration of art museums with art and industrial schools and local government, which contributed to the spread of progressive art ideas and practices, improving the content and methods of teaching students in art schools of different levels. Close cooperation between art and industrial schools and art museums contributed to the development of the artistic component of the content of training specialists and teachers, the need for which was acutely felt.

Ideas of the contribution of pedagogical staff to the development of art and industrial schools in Galicia; relationships between art museums and art schools may be promising for further research.

REFERENCES

- Atlas Avstrijskoi imperiji [Atlas of the Austrian Empire]. Centralnyj derzhavnyj istorychnyj arkhiv Ukrainy, m. Ljviv. F. 742 Kolekcija kart i planiv. Description 1. Case 82. Sheet 48.
- Gheografichni karty do okremykh statej encyklopedychnogho slovnyka Majjera: «Nimechchyna», «Poljshha», «Ughorshhyna. Ghalychyna i Bukovyna» [Maps for individual articles in Mayer's encyclopedic dictionary: «Germany», «Poland», «Hungary. Galicia and Bukovina»]. Centralnyj derzhavnyj istorychnyj arkhiv Ukrainy, m. Ljviv. F. 742 Kolekcija kart i planiv. Description 1. Case 25. Sheet 10.
- Zaghaljnoheoghrafichna karta Ghalychyny ta Bukovyny [General geographical map of Galicia and Bukovina]. Centralnyj derzhavnyj istorychnyj arkhiv Ukrainy, m. Ljviv. F. 742 Kolekcija kart i planiv. Description 1. Case 742. Sheet 2.
- Zaghaljnoheoghrafichni karty Ghalychyny, skladeni S. Majjerskym [General geographical maps of Galicia, compiled by S. Mayersky]. Centralnyj derzhavnyj istorychnyj arkhiv Ukrainy, m. Ljviv. F. 742 Kolekcija kart i planiv. Description 1, Case 746. Sheet 4.
- Stepankov, V.S., Gholobucjkyj, P.V. (2009). Koronnyj kraj [Crown edge]. Smolij, V. A. (gholova) ta in. (Red). Encyklopedija istoriji Ukrainy: u 10 t. (T. 5). Instytut istoriji Ukrainy NAN Ukrainy. Kyjiv: Naukova dumka, Kon–Kju.
- Topoghrafichni karty Jevropy (Zona 8. Skhidna Poljshha, Pivnichno-Skhidna Chekhija. Ghalychyna: Staryj Sambir, Drohobych, Zhydachiv, Staryj Roghatyn, Berezhany) [Topographic maps of Europe (Zone 8. Eastern Poland, Northeastern Czech Republic. Galicia: Stary Sambir, Drohobych, Zhydachiv, Stary Rohatyn, Brzezany)]. Centralnyj derzhavnyj istorychnyj arkhiv Ukrainy, m. Ljviv. F. 742 Kolekcija kart i planiv. Description 1. Case 165. Sheet 35.
- Shmaghalo, R. (1991). Persha v Ukraini (do istoriji rozvytku Kolomyjskoi ghoncharnoji shkoly) [The first in Ukraine (to the history of Kolomyia pottery school)]. Visn. Ljviv. akad. mystectv. Dekoratyvno-uzhytkove ta obrazotvorche mystectvo: istorija, teorija, praktyka, 5, 56–62.
- Shmaghalo, R. (2000). Istorychnyj rozvytok derevoobrobnoji shkoly u Stanislavovi (1883–1920) i suchasna khudozhnja osvita [Historical development of the woodworking school in Stanislavov (1883–1920) and modern art education]. Dialogh kuljtur: Ukrainina u svitovomu konteksti. Khudozhnja osvita: zb. nauk. pr., 5, 185–194.
- Shmaghalo, R. T. (2005). Mystecjka osvita v Ukraini seredyny KhKh – seredyny KhKh stolittja: strukturuvannja, metodologhija, khudozhni pozyciji [Art education in Ukraine in the mid-nineteenth - mid-twentieth century: structuring, methodology, artistic positions]: avtoref. dys. ... d-ra mystectvoznavstva: 17.00.06 / Ljviv. naci. akad. mystectv. Ljviv, 44.
- Dybiec, J. (1981). Mecenat naukowy i oświatowy w Galicji w 1860-1918 / Polska Akademai Nauk. Wydział I Nauk Społecznych Wrocław. Warszawa: Ossolineum, 216.
- Szóste spawozdanie C.K. pa_stwowej Szkoły przemysłowej we Lwowie za rok szk. 1897/98 (1898). Lwów, 57–68.
- W szkole rysunków i modelowania. Gazeta Lwowska. 27.IX.1876. (1876). 3.
- Wiadomości statystyczne o mieście Lwowie. Lwów, VI, 112–116.

Received

12.09.2021

Accepted

26.09.2021