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COMPARATIVE ANALYSIS OF READINESS FOR INCLUSIVE EDUCATION ON THE EXAMPLE OF TWO UNIVERSITIES IN UKRAINE AND THE REPUBLIC OF POLAND

In Ukraine, due to martial law, inclusive education and the creation of a barrier-free space for people with disabilities are taking on a new meaning.

Purpose. To study the European experience and conduct a comparative analysis of the provision of educational services to people with disabilities (PD) by two higher education institutions: a domestic University and a University of an EU country.

Methods and materials. The comparative analysis method was applied to ensure the readiness of the provision of educational services to PD on the materials we collected from the documents of the National University «Lviv Polytechnic» (NULP) (Ukraine) and the University of Opole (Republic of Poland). Storage of information on the organization of inclusive education is carried out within the framework of the GoodPharma project. The materials used were data from the PD Resource Center, the Lviv City Organization of the Ukrainian Society of the Deaf, the Galician Pharmaceutical Association (Lviv), the Lviv branch of the All-Ukrainian Association of Sign Language Interpreters and People with Disabilities.

Results and discussion. The National Strategy for the Creation of Barrier-Free Space in Ukraine for the Period Until 2030 is reviewed, which is oriented towards international documents, in particular for the implementation of the right to education. It has been established that free access to the infrastructure of higher education institutions is a basic condition for the inclusion of people with disabilities in the educational process. Standards for the accessibility of buildings have been developed in individual EU countries, in particular in the Republic of Poland and Ukraine. A comparative analysis of these documents allows us to establish that they concern the arrangement of parking spaces for vehicles for people with disabilities, their dimensions, ease of exit, and marking. Requirements are also put forward for buildings: the equipment of ramps, special lifts, tactile floor tiles, information tables and the well-known Braille font, audio guides for people with visual impairments, duplication of important audio information with texts, organization of sign language interpretation, use of a sound amplification system for people with hearing impairments, etc. These standards are mandatory and are implemented at both the University of Opole and the Polish National University of Physical Education. It has been proven that physical accessibility is the first component of the inclusion of people with disabilities in the life of the University, and the second component is ensuring inclusion in learning, teaching, participation in self-government, scientific and research work, etc. Special units have been created at the Polish National University of Physical Education: the International Center for Professional Partnership «Integration» (ICPP), the Center for Veteran Development (CVR), the inclusive space «Without Limits», the Resource Center for Educational Technologies.

Conclusions. A comparative analysis of the organization of the provision of educational services for people with disabilities in two higher education institutions of Ukraine and the Republic of Poland confirmed the possibility of further studying the European experience of creating a barrier-free environment and ensuring the readiness to provide educational services.

Key words: people with disabilities, educational institutions, medical (pharmaceutical education), educational services, material and technical support.

Аеліта Кричківська, Наталія Заярнюк, Наталія Монька, Віра Лубенець, Галина Кухтенко, Ізабела Ясіцька-Місяк. ПОРІВНЯЛЬНИЙ АНАЛІЗ ГОТОВНОСТІ ДО ІНКЛЮЗИВНОЇ ОСВІТИ НА ПРИКЛАДІ ДВОХ УНІВЕРСИТЕТІВ УКРАЇНИ ТА РЕСПУБЛІКИ ПОЛЬЩА

В Україні, у зв'язку з воєнним станом нового змісту набуває інклюзивна освіта та створення безбар'єрного простору для людей з інвалідністю.

Мета. Дослідити європейський досвід та провести порівняльний аналіз надання освітніх послуг людям з інвалідністю (ЛІ) двома закладами вищої освіти: вітчизняним Університетом та Університетом країни ЄС.

Методи та матеріали. Метод порівняльного аналізу було застосовано щодо забезпечення готовності надання освітніх послуг ЛІ на зібраних нами матеріалах документів Національного університету «Львівська політехніка» (НУЛП) (Україна) та Опольського університету (Республіка Польща). Отримання інформації щодо організації інклюзивної освіти відбувалось у межах виконання проєкту GoodPharma. Матеріалами слугували дані Ресурсного центру ЛІ, Львівської міської організації Українського товариства глухих, Галицької фармацевтичної асоціації (м. Львів), Львівського підрозділу Всеукраїнської асоціації перекладачів жестової мови і людей з інвалідністю.

Результати та обговорення. Розглянута Національна стратегія із створення безбар'єрного простору в Україні на період до 2030 року, яка орієнтується на міжнародні документи, зокрема й для реалізації права на освіту. Встановлено, що вільний доступ до інфраструктури ЗВО є базовою умовою інклюзії ЛІ до навчального процесу. Стандарти доступності будівель розроблені в окремих країнах ЄС, зокрема в Республіці Польща та в Україні. Порівняльний аналіз цих документів дозволив встановити, що в них йдеться про облаштування місць паркування транспортних засобів для ЛІ, їх розміри, зручність заїзду, маркування. Також висуваються вимоги до будівель: обладнання пандусів, спеціальних підйомників, тактильної підлогової плитки, інформаційних таблиць та позначень шрифтом Брайля, аудіопоказчиків для людей з порушеннями зору, дублювання важливої звукової інформації текстами, організації сурдоперекладу, використання систем звукопідсилення для людей з порушеннями слуху та інше. Ці стандарти є обов'язковими до виконання і впроваджуються і в Університеті Опольському і у ЛПНУ. Доведено, що фізична безбар'єрність є першою складовою інклюзії ЛІ у життя Університету, а другою складовою є забезпечення інклюзії у навчання, викладання, участь у самоврядуванні, науково-дослідній роботі тощо. У ЛПНУ створені спеціальні підрозділи: Міжнародний центр професійного партнерства «Інтеграція» (МЦПП), Центр Ветеранського розвитку (ЦВР), інклюзивний простір «Без обмежень», Ресурсний центр освітніх технологій.

Висновки. Порівняльний аналіз організації надання освітніх послуг ЛІ у двох ЗВО України та Республіки Польща підтвердив необхідність подальшого вивчення європейського досвіду щодо створення безбар'єрного середовища та забезпечення готовності надання освітніх послуг.

Ключові слова: люди з інвалідністю, заклади освіти, медична (фармацевтична освіта), освітні послуги, матеріально-технічне забезпечення.

Introduction. Prolonged martial law in Ukraine has led to an increase in the number of people with disabilities. Over the years of the full-scale invasion of the Russian Federation, the number of Ukrainians with disabilities has increased by 300 thousand and exceeded 3 million people, according to the European Disability Forum [19]. The need for the process of rehabilitation and socialization of people with disabilities is becoming an urgent task common to Ukraine and the countries of the European Union (EU) [9, 21].

The GoodPharma project, a grant for which was won under the Erasmus+ Jean Monnet Modules program at Lviv Polytechnic National University (Lviv Polytechnic) by a team of employees of the Department of Biologically Active Compounds Technology, Pharmacy and Biotechnology (TBSFB) Department of Marketing and Logistics (ML) and the Resource Center for Educational Information Technology for Persons with Disabilities (RCEIT) in 2022, aimed at eliminating gaps in domestic pharmacy by studying European experience [12]. The objectives of the module, which was developed by the project team before the military invasion of Ukraine by

the Russian Federation, were: to study the principles of good practice in drug distribution; to introduce European approaches to the organization of the educational process and to provide future pharmacists with the opportunity to gain knowledge of best practices and management of drug distribution, innovative methods of pharmacy service, remote drug delivery, digitalization in pharmaceutical enterprises, etc. However, at present, due to the situation in Ukraine, including in the city of Lviv, important issues such as education and employment of people with disabilities remain unresolved. According to the All-Ukrainian Association of Employers "Organizations Confederation of Employers of Ukraine", as of the beginning of 2024, 53% of able-bodied people with disabilities were employed in the UK, 44% in France, and 17% in Ukraine. The largest number of people with disabilities work in Kyiv - 76.2 thousand, which is 17% of the total number of employed people, in Lviv region there are much fewer - 42.5 thousand (9.5%), even fewer - in other regions of Ukraine [5]. Many companies usually do not know how to effectively integrate people with disabilities, especially those

who return from the front line with physical or psychological injuries. This uncertainty makes society struggle to create an inclusive and supportive environment for people with disabilities. Ukraine has some experience in building a barrier-free environment during a full-scale war, with more than 300 multidisciplinary teams working in healthcare facilities to provide rehabilitation care to patients without waiting for official disability determination. The digitalization of the entire social sphere is also being introduced, which allows people to seek help online, and changes have been made to legislation to help people with disabilities work officially [8]. A bibliometric analysis of scientific publications and regulations showed that there are many unresolved issues in providing people with disabilities with full participation in society, both in Ukraine and in other countries. Many of these issues are related to access to educational and medical (pharmaceutical) services [11,16,20]. An important issue is obtaining higher education by people with disabilities, as inclusive education involves the involvement of people with disabilities in active student life, student self-government, and providing them with additional opportunities, such as student mobility. Accordingly, creating a barrier-free educational space is an urgent task for higher education institutions (HEIs).

The purpose of the study was to examine the European experience of organizing the provision of educational services to people with disabilities by HEIs and to compare the readiness of the provision of educational services by a national university and a university in an EU country.

Methods and Materials. A comparative analysis of the readiness to provide educational services for people with disabilities in Ukrainian and European higher education institutions was conducted using the example of Lviv Polytechnic National University (Ukraine) [14] and Opole University (Republic of Poland) [22]. Faculty members of the Department of Technology of Biologically Active Substances, Pharmacy and Biotechnology (TBSFB) at Lviv Polytechnic underwent an internship at Opole University (UO) to study the practical organization of chemical and pharmaceutical education for people with disabilities at this institution.

Research Objects. These higher education institutions were chosen for the study due to the numerous similarities between their structural units. The Department of Technology of Biologically Active Substances, Pharmacy, and Biotechnology (TBSFB) at Lviv Polytechnic National University (LPNU) has long collaborated with the Faculty of Chemistry and Pharmacy at Opole University (UO) under a cooperation agreement. Graduates from these units specialize in the field of pharmacy.

The University of Opole was founded through the consolidation of two distinguished institutions of higher learning in Opole: the Higher School of Education, widely recognized as one of the foremost pedagogical

universities in Poland, and the Opole Branch of the Catholic University of Lublin. The latter institution drew upon the intellectual and institutional heritage of the Higher Theological Seminary in Nysa, whose academic profile had been shaped by faculty members formerly affiliated with the Faculty of Theology at the Jan Kazimierz University in Lviv (now Ivan Franko National University of Lviv) [22]. LPNU was founded in 1816 in Lviv as an Imperial School and is one of the oldest technical higher education institutions not only in Ukraine but also in Eastern Europe. It is worth noting that LPNU consistently ranks among the top five universities in Ukraine based on educational performance and has the capacity to create conditions for inclusive education.

We have reviewed the possibilities of providing barrier-free educational services at these universities, namely: physical barrier-free accessibility through accessibility to physical environment for persons with disabilities; information barrier-free accessibility through improving access to information in various formats and using technologies such as Braille, audio description (audio description), sign language translation, etc. digital inclusion through access to high-speed Internet and public digital information; social inclusion through involvement in student self-government.

Obtaining information on the organization of inclusive education at Lviv Polytechnic was largely carried out within the framework of the GoodPharma project and events in cooperation with employees of the RECIT, Lviv City Organization of the Ukrainian Society of the Deaf, Galician Pharmaceutical Association (Lviv), Lviv Subdivision of the All-Ukrainian Association of Sign Language Interpreters and People with Disabilities, as well as future employers of graduates of the Department of TBSFB of Lviv Polytechnic - representatives of pharmacies and pharmaceutical manufacturing enterprises in Lviv.

We have analyzed scientific publications and regulatory documents on inclusive education to identify possible strategies for the development of higher education in universities in Ukraine and the Republic of Poland in recent years.

Results and discussion. The National Strategy for Creating a Barrier-Free Space in Ukraine until 2030 is guided by international documents on creating a barrier-free space, including for the realization of the right to education. The state policy in the field of higher education is implemented by creating and ensuring equal conditions for access to educational services, including providing additional support for people with disabilities [7]. Free access to the infrastructure of higher education institutions is a basic condition for the inclusion of persons with disabilities in the educational process [4]. The universal design of physical environment, programs and services does not exclude auxiliary devices for specific groups of people with disabilities. Standards

for accessibility of buildings for people with disabilities have been developed in some EU countries, including the Republic of Poland and Ukraine [1,18]. The documents refer to the arrangement of parking spaces for vehicles for people with disabilities, their size, ease of access, and labeling. They also set out requirements for buildings, including: equipment of ramps, special lifts, tactile floor tiles, information tables and signs in Braille, audio signs for people with visual impairments, duplication of important audio information with texts, organization of sign language interpretation, use of sound amplification systems for people with hearing impairments, etc. These standards are mandatory and are being implemented at both Opole University and Lviv Polytechnic National University.

The UO academic building at 87a Katowicka Street is equipped with physical barrier-free elements. This academic building has parking spaces for people with disabilities, the entrance to the building is equipped with a ramp (Fig. 1), and there is no threshold at the entrance both from the outside and inside the building (Fig. 2).

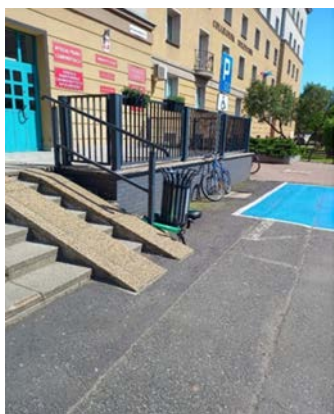


Fig. 1 Parking spaces near the academic building of the University of Opole (87a Katowicka St.)



Fig. 2. The lobby of the academic building of the University of Opole (87a Katowicka St.)

The "Niechcic" student house at 87B Katowicka Street, as well as the educational building at 11a Kopernika Street, are also equipped with ramps (Fig. 3, 4.)

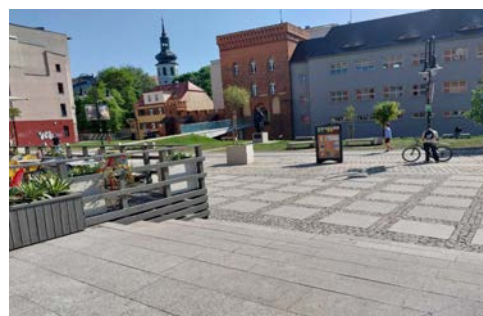


Fig. 3. The "Niechcic" student house (87B Katowicka St.)

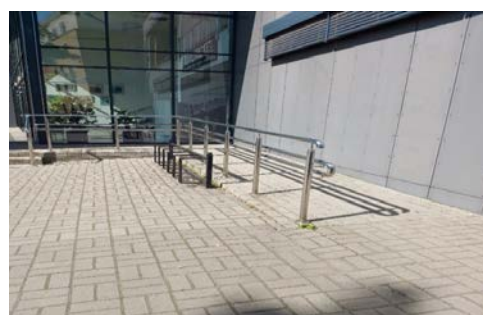


Fig. 4. The entrance to the academic building (11a Kopernika Street)

The interiors of the University of Opole buildings take into account the needs of people with disabilities with their elements: flat floors; convenient elevator entrances; doors that open both outward and inward and have no thresholds; inscriptions and markings, doorbells, etc. These elements are unified and convenient for all visitors, regardless of their physical abilities (Fig. 5-7).



Fig. 5. The entrance to the academic building of the University of Opole (48 Oleska St.)



Fig. 6. A door for people with disabilities equipped with inscriptions, special signs, and a bell (Oleska, 48)



Fig. 7. Wheelchair access to elevators (48 Oleska St.)

The advantage of the University of Opole is that the buildings were designed to provide free access for all groups of people. It is much more difficult to create an inclusive environment in the buildings of Lviv Polytechnic National University, some of which are architectural monuments. To ensure access of persons with disabilities to the educational process, the educational building №1 (2/4 Starosolskikh St.) is equipped with all the necessary means. The main entrance to the building as well as the entrance from the side of the academic building № 4 (5 Metropolytoho Andrii St.) are equipped with ramps (Figures 8, 9).



Fig. 8. Ramp to the main entrance to the building №1 of Lviv Polytechnic National University (2/4 Starosolskikh St.)



Fig. 9. Ramp to the entrance to the building № 1 of LNU from the side of the building №; LNU

The lobby of building №1 is equipped with ramps, which provides access to both classrooms and lecture halls (Figures 10, 11).



Fig. 10. Ramp for access to classrooms 101-110 of the educational building №1 of LNU

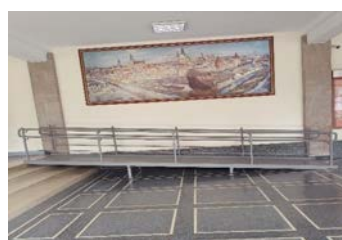


Fig. 11. Ramp for access to classrooms 101-110 of the educational building №1 of LNU

Certain classrooms, veteran services, and restrooms are located directly at the entrance from the courtyard to Building № 1 (Fig. 12).



Fig. 12. Veteran services and classrooms located near the entrance from the courtyard to Building № 1 of LPNU

It should be noted that a separate structural unit has been established at the National University of Lviv Polytechnic to develop construction plans for the re-equipment of all buildings to create a barrier-free space for people with disabilities. However, as of today, we can state that there is only one academic building at NULP, the first floor of which is fully equipped for conducting classes with students or teachers with disabilities.

However, physical barrier-free access is only the first component of inclusion of persons with disabilities in the life of the University (learning, teaching, participation in self-government, research, etc.). As mentioned above, LNU is a powerful higher education institution in Ukraine. LNU holds various events and has created special units for public relations and providing quality inclusive education to students with disabilities.

The International Center for Professional Partnership "Integration" (ICPP) was established in 2015 to ensure the formation of an inclusive educational environment, architectural and social accessibility for people with special educational needs at LNU. The Accessibility Service for Learning Opportunities "Without Limits" was created as part of the ICCP. The staff of the ICCP conducts informational and educational work on the interaction of participants in an inclusive educational environment and supports partnerships of Lviv Polytechnic with state and non-governmental organizations of Lviv and other partner organizations in Ukraine and abroad. The University has created a database of students with disabilities [2, 3, 14].

The Center for Veteran Development (CVD) was established at NULP in 2023 to provide comprehensive assistance in social and professional adaptation to military personnel (mobilized persons) and their families, family members of fallen (deceased) defenders of Ukraine from among students and employees of the University. In May 2024, the inclusive space "Without Limits" was opened, which operates on the basis of the CCR and the Center for International Professional Partnership of the Institute of Humanities and Social Sciences [2, 3, 14].

The RCEIT was established in 2011 to introduce innovative technologies in the educational and socio-cultural spheres. Currently, the RCEIT is the only center in Ukraine that meets the needs of inclusive education of blind children throughout the country. The RCEIT provides methodological, didactic, technical, advisory, and correctional assistance to secondary and higher education institutions, teachers, inclusive resource centers, parents of blind children, etc. [2, 3, 14]. The RCEIT staff developed the Ukrainian model of inclusive education for blind children, which is based on the experience of other countries, primarily Sweden and Canada, and, most importantly, on the experience of people with severe visual impairments. In 2018, this model was implemented for the inclusive education of 24 blind students from 11 regions of Ukraine [6]. Under the leadership of Honored Social Worker of Ukraine and well-known public figure Oksana Potymko, the center's

staff is engaged in publishing literature in Braille, creating audio textbooks in DAISY format, producing video content with audio description, organizing audio description courses for guides/actors, inclusive education courses for school teachers, etc.

As part of the implementation of the GoodPharma project, the RCEIT team introduced new areas of activity, including public lectures and workshops for students, pharmacists, biotechnologists, doctors, museum and library workers, among others (Fig. 14).

RCEIT employees, together with lecturers from the TBSFB department (the GoodPharma project executors), participated in organizing an elective course titled "European Aspects of Drug Distribution from Manufacturer to Consumer" [12].

Additionally, within the framework of the project, a workshop on inclusive solutions for people with hearing impairments was held, as well as training for students on the basics of sign language and the proper service standards for people with disabilities, conducted by the Head of the Lviv branch of the All-Ukrainian Association of Sign Language Interpreters and People with Disabilities (Fig. 13, 14).



Fig. 13. The head of RCEIT, Ms. Oksana Potymko, conducts a training session for students of Lviv Polytechnic National University (LPNU) on the service of blind individuals in healthcare institutions, May 2024



Fig. 14. The head of the Lviv branch of the All-Ukrainian Association of Sign Language Interpreters and People with Disabilities, Ms. Olena Chernyshova, conducts a workshop for participants of the II International Student Scientific and Practical Conference "Good Solutions for Gaps in Pharmacy: In Line with the European Priorities," November 2024

Thus, the management and staff of LNU have already done a lot to gradually transform the University into a barrier-free learning space and provide access to education for people with disabilities. However, the training of students in sign language and service for people with disabilities is possible only in the form of the above-mentioned optional courses, as well as during master classes and trainings. The Catalog of Educational Programs of LNU presents the discipline "Social Inclusion and Human Resource Development" of the educational program (EP) "Sociology and Human Resource Development" of the first (bachelor's) level for students majoring in 054 "Sociology". The main focus of the program is special education and professional training in the analysis of social processes at the micro-, meso- and macro-social levels, in particular, social communications and management of political, socio-economic, socio-cultural processes and human resources [14]. Graduates of LNU in this specialty do not plan to serve people with disabilities directly in the future, as will graduates of the Department of TBSFB - future pharmacists as health care professionals.

In the Republic of Poland, on the basis of the Order of the Minister of Education and Science of the Republic of Poland of May 16, 2019 "On the basic curriculum of vocational education professions and additional professional skills within the selected professions of vocational schools", the discipline "Sign Language" was developed, which is a component of the educational program "Pharmacy Technician" [17]. It should be noted that a pharmacy technician is a healthcare profession that belongs to the category of nursing staff in accordance with the Classification of Occupations and Specialties for the Needs of the Labor Market (KZiS). The profession arose in response to the pharmaceutical industry's need for qualified pharmacy technicians who perform professional duties under the guidance and supervision of a pharmacist. In fact, this profession in the Republic of Poland corresponds to the profession of pharmacist's assistant (junior pharmacist) in Ukraine. A pharmaceutical technician is responsible for the manufacture and packaging of medicines, dietary supplements, specialized food products, as well as other products authorized for circulation in accordance with applicable law. A pharmaceutical technician also participates in the analysis of the quality of medicines and medical devices in laboratories in accordance with the powers defined by the current legislation of the Republic of Poland.

In our opinion, such educational components of medical (pharmaceutical) specialty programs as "Sign Language" and "Peculiarities of Serving People with Disabilities in Healthcare Facilities" should be introduced more widely both in Ukraine and in the Republic of Poland.

An analysis of scientific publications showed that there are still many unresolved issues regarding the opportunities for participation of people with disabilities in society: access to education and health services, disability in the context of climate change and environmental issues [24]. Many scholars are concerned about employment and barriers to access to social services for people with disabilities, including those displaced to other countries as a result of Russian aggression [13, 23]. The full inclusion of people with disabilities involves increasing their level of activity in the public sphere, including by improving access to various leisure facilities. According to the research of Polish scientists, accessible tourism is becoming increasingly popular, in particular, the assessment of accessibility for people with disabilities of cultural attractions located in Krakow (Republic of Poland) [10]. In the field of education, scientists from different countries are interested in developing inclusive educational projects that are in line with the Society 5.0 era [15].

Thus, it can be stated that the problem of inclusion of people with disabilities in society must be addressed, as the absence of barriers shapes their safety in society and ensures a proper quality of life not only for these people but also for the entire civil society.

Conclusions. A comparative analysis of the organization of educational services for people with disabilities in two higher education institutions of Ukraine and the Republic of Poland confirmed the need for further study of European experience in creating a barrier-free environment and ensuring the readiness of educational services. It is proved that the implementation of the National Strategy for Creating a Barrier-Free Space in Ukraine, as well as the implementation of educational projects aimed at all aspects of an inclusive society, will contribute to improving socialization and education for people with disabilities.

It has been established that higher education institutions in Ukraine are working to address the issues of creating conditions for receiving and providing educational services to people with disabilities by providing accessibility to physical environment, creating specialized structural units, developing and implementing new educational components in the EP, organizing information barrier-free access and participation in self-government, as well as training students and research and teaching staff in the proper rules of conduct with people with disabilities.

Sharing the experience of EU countries in realizing the rights of people with disabilities and organizing a space for education for this particular group of citizens is one of the top priorities for Ukraine. In order to ensure an adequate level of quality of life, people with disabilities, especially those resulting from martial law in Ukraine, should have the opportunity to receive higher education guaranteed by the state both in Ukraine and abroad.

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