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Michał Górski, Barbara Krasieńska, Łukasz Tomkiewicz, Grzegorz Wajda **PBC – the oldest pedagogical digital library in Poland**

The massively available digital technology associated with archiving and distributing data has largely transformed the culture we live in today – according to many researchers today’s society can be termed as “network society”¹. Over the years, ways and sources of access to numerical data have changed. This phenomenon can be observed nowadays in how digital libraries are functioning. Those institutions go beyond the physical and technical barriers of presented materials, thus providing easier access to them, and enabling the creation of new ways of verifying and combining these resources, regardless of geo-location or cultural constraints².

The undoubted advantage of digital libraries covers many categories of materials; from books to representations of three-dimensional artefacts, such as works of art. Their contents are digitally created or converted from various analog prototypes (matrices). This allowed us to transform a substantial amount of traditional scientific and cultural material stored in libraries, archives and museums around the world into widely accessible digital formats. Although today the file conversion process is still far from complete, the result is that the resources of registered information knowledge can be free of physical media and are available in a unified digital form, regardless of their original source³.

According to professional research, the concept of digital library as an autonomous entity appeared in the mid-1990s. Previously, many institutions of science and culture collected electronic or digital materials but did not classify them as separate collections⁴. In the early stages of development, this new entity operated under several names, including: “electronic library”, “virtual library”, “library available on the web” or “library without walls”. The term “digital library”, as Marcin Werla rightly points out, may generate some ambiguity as the two-part structure of this concept

¹ A. Radomski, R. Bomba, *Zwrot Cyfrowy w humanistyce, Internet / Nowe media / Kultura 2.0*, ed. A. Radomski, R. Bomba, Lublin 2013, p. 7–9.

² Cf. I. Xie, K.K. Matusiak, *Discover Digital Libraries. Theory and practice*, Amsterdam, Boston, Heidelberg, London, New York, Oxford, Paris, San Diego, San Francisco, Singapore, Sydney, Tokyo 2016, p. 1.

³ Ibidem.

⁴ Ibidem.

suggests that there are two different ways of interpretation related to such areas as linguistics, science of information and computer science, which is understood in this case as a field of science and technology dealing with information processing⁵. Among the definitions of the “digital library” there are the characteristics which (in the perspective of library and science of information) describe it as follows:

Digital library – a library where a vast majority of the resources are available in machine-readable form (as opposed to printed or microfilm) made available by means of computers⁶.

Contemporary Internet encyclopedias defines “digital library” as:

Digital library (also: online, virtual, electronic) – Internet service that allows digital publications such as electronic journals or eBooks to be made available online, as well as digitized traditional paper publications (journals, books, maps, photos, etc.)⁷.

In the “Digital Library Manifesto” (mentioned by M. Werla), one of the effects of the work of the DELOS Digital Libraries Network of Excellence, financed under the 6th FP6 of the European Commission, the definition of a digital library has been presented as a three-layer model:

1. Digital library (DL) – an organization (potentially virtual) that comprehensively collects, manages and long-term stores rich digital content, and provides its community of users with specialized, content-based functions in a way that ensures consistent quality and compliance to the rules adopted by this organization.
2. Digital library system (DLS) – computer software, based on a (potentially distributed) architecture, providing the full functionality required by the digital library. Digital library users use it through a particular digital library system.
3. Digital library management system (DLMS) – computer software providing the software infrastructure needed to:
 - creating and managing a digital library system,
 - integrate additional software providing the specialized, advanced functions required by the digital library⁸.

Digitalization has contributed to creation a critical mass of scientific resources that are part of the cultural heritage in Poland and in the world. Currently, almost all new data is created in digital format, the number of library resources, including so-called “Born digital” is constantly increasing. Since the early 1990s, digitization has been undertaken by individual organizations and institutions directly involved

⁵ M. Werla, *Co to jest „biblioteka cyfrowa?”* [online], 2017, <http://dl.psnc.pl/co-to-jest-biblioteka-cyfrowa/> [access: 2017.08.012].

⁶ Cf. J. M. Reitz, *Dictionary for Library and Information Science. Libraries Unlimited*, 2004, op. cit. Marcin Werla, *Co to jest „biblioteka cyfrowa?”*...

⁷ *Biblioteka cyfrowa*, [online], 2017, https://pl.wikipedia.org/wiki/Biblioteka_cyfrowa [access: 2017.08.12].

⁸ L. Candela, D. Castelli, Y. Ioannidis, G. Koutrika, P. Pagano, S. Ross, H.-J. Schek, H. Schuldt, *The Digital Library Manifesto*. DELOS, 2006, op. cit. M. Werla, *Co to jest „biblioteka cyfrowa?”*...

in cultural heritage (including higher education institutions). International mass digitization projects include: JSTOR, Open Content Alliance, Europeana, Digital Public Library of America, Internet Archive, HathiTrust and Google Book Project. These large digital organizations and libraries represents almost twenty years of intense work on world digitization⁹.

Digital libraries that have grown into the structure of academic libraries play an immense role in shaping the digital culture of readers. The article will present the activities of the Department of Digitalization and Reprography of the Main Library in the Pedagogical University of Cracow (the oldest pedagogical digital library in Poland) devoted to shaping the digital culture of its customers.

Prior to the libraries (mainly academic), new technological challenges were set up. This is due to the fact that over the last dozen or so years we have become – according to the culture and media researchers, engineers, politicians and technocrats – witnesses to the so-called digital revolution and networking¹⁰. This necessitates the introduction of innovative forms of reproduction, recording and distribution of data, the use of new means of expression in reaching today's readers.

The task of the modern academic library is therefore to convey information in a way that is properly crafted for the “new” reader. This is at most important since competence in the service of new media today becomes elementary skills necessary for living and working in not a just scientific environment. At the same time, number of digital data, information and digital cultural objects is growing¹¹. This phenomenon is undoubtedly related to the notion of digital humanities, which Piotr Celiński describes as a methodological change that introduces new methods, tools and ways of scientific work, enabling the effective use of the world of digital data, interfaces, software and visualization. Constructing the subjects of research and expression, “digital” humanists combine qualitative and quantitative methods to escape textual linearity in thinking and speech, instead of traditional text, more willingly integrate visual languages and other trans-media and interactive digital interfaces as a platform for publication and popularization of their research and theories¹².

Users create their own space of self-regulation (they themselves decide what is, in their development, important and what does not carry any scientific value). This has become possible thanks to the spread of technology, including mobile devices. The recipient of the data has control over the content that goes directly to it¹³. There is also a growing sensitivity for technology. Derrick de Kerckhove (McLuhan student) believes that we have already entered the phase of cognitive electricity, which results in the intensification of networking; we started living in the world of network terminals, slowly becoming themselves. Criterion for the use of cognitive technologies, including communication, is considered the criterion of advancement of civilization¹⁴.

⁹ Cf. I. Xie, K. K. Matusiak, *Discover Digital Libraries...*, op. cit., p. 49.

¹⁰ P. Celiński, *Kulturowe kody technologii cyfrowych*, Lublin 2011, p. 7.

¹¹ A. Radomski, R. Bomba, op. cit.

¹² P. Celiński, *Renesansowe korzenie cyfrowego zwrotu*, [in:] *Zwrot Cyfrowy w humanistyce...*, p. 13–36.

¹³ K. Krzysztofek, *Zwrot cyfrowy: ku pracy rozproszonej*, [in:] *Zwrot Cyfrowy w humanistyce...*, p. 37–56.

¹⁴ *Ibidem*, p. 46.

“The use of computers and the Internet – both in science and education – is one of the basic communications competences today”¹⁵, and one of the most important directions for the development of science and processes related to modern Internet is the process of digitization. Convert the content from analogue media to their digital counterparts¹⁶.

The role of digital libraries has gradually evolved to mediate between electronic sources of scientific information and users.

PEDAGOGICAL DIGITAL LIBRARY

Pedagogical Digital Library (hereinafter: PBC) of the Pedagogical University in Cracow was created in 2006 as a result of the need to create a virtual platform, to meet the needs of the new reader¹⁷. This venture was made possible thanks to cooperation of two university units: the Institute of Science of Information (previously the Institute for Information and Library Science) and the Main Library of the Pedagogical University¹⁸. The purpose of this initiative was to create the technical conditions for making electronic publications available in line with the new needs of the academic community. The attempt to safeguard and protect particularly precious and old works (primarily pedagogy) from physical damage and frequent wear and tear has played a significant role.

Among the many academic digital libraries (which together form Digital Libraries Federation¹⁹) PBC distinguishes itself by the specifics of the materials it develops and makes available. It was created within the Pedagogical University, so the main focus is on scanning and mass sharing of materials in the field of pedagogy and didactics. This is reflected in the thematic collections (groups of cataloged materials in the structure of the platform) that build the discussed digital library (more described later in this article).

PBC, similarly to other Polish digital libraries, aims to make available mainly Polish cultural heritage, including the most valuable work in the history of education, didactics and pedagogy, which are in their collections institutional libraries and the UP Main Library.

¹⁵ M. Wilkowski, *Wprowadzenie do historii cyfrowej*, Gdańsk 2013, p. 7.

¹⁶ *Ibidem*, p. 62.

¹⁷ PBC was created during the so-called the second wave of pioneers of digital libraries in Poland; before Europeana and at the time when a nationwide project called the Federation of Digital Libraries was launched.

¹⁸ The first PBC installation was made by prof. Władysław Marek Kolasa at the turn of 2005/2006. This was the first installation in Poland of Dlibra 2.0 on SUN Solaris machine. At that time, approximately 460 publications were also published.

¹⁹ Digital Libraries Federation – is another step in building a network of distributed digital libraries and repositories in Poland. The name of FBC reflects its character – this service is a collection of advanced network services based on digital resources available in Polish digital libraries and repositories running on the PIONIER network. These resources are co-authored by many academic and public institutions such as universities, libraries, archives, museums and research centers. The FBC service is maintained by Poznań Supercomputing and Networking Center affiliated to the Institute of Bioorganic Chemistry of the Polish Academy of Sciences, and its development is supported by the PSNC Digital Libraries. [online] <http://fbc.pionier.net.pl/>

Technology and the development of modern document presentation and retrieval technologies allows the library to publish text content (books, articles), but also graphical and audiovisual materials (photographs, maps, images, sound recordings and movies), thereby enhancing digital content competence of its readers. In addition, academics can store in PBC their own materials used in the lectures and classrooms like multimedia presentations, video clips and films²⁰. Librarians from university digital library work with students who provide suggestions for creating electronic copies of the necessary materials. The scanned original is then secured against destruction and its digital counterpart is massively used. A valuable initiative supporting the development of digital culture of readers are video lectures available on the PBC. The lecture by dr. Jerzy Jarosz inaugurated the series “Earth spinning planet”²¹. It was presented in the seminar Polarization of Knowledge, at the invitation of the Dean of the Faculty of Mathematics and Physics-Technical, prof. Władysław Błasiak. During the lecture dr. Jerzy Jarosz explained the complex physical issues²².

In addition to the digitized documents that make up the academic achievements of PBC’s staff (books, journal articles, conference materials), the “Learning Materials” collection contains “birth digital” documents that have been created specifically for the needs of teaching at various disciplines in the Pedagogical University like: lectures, multimedia presentations, animations, exercise instructions or literature lists.

A very important issue that accompanies the activities of every digital library related to cultural and scientific institutions (including PBC) is copyright²³. Valuable materials, which are not accessible via internet or have restrictions on how they can be accessed, can only be read at the library, from properly secured computer stations²⁴.

PBC – RULES OF OPERATION. DIGITIZATION PROCESS. PARTNERS.

In the early years of the PBC, the rules of digitization were established and were not different from the generally accepted standards. There are several stages

²⁰ Worth mentioning is the collection: “Didactic Materials – Chemistry”, which was created by the cooperation of the Library with employees of the Department of Chemistry and Didactics of Chemistry under the direction of prof. Jan Rajmund Paško. There were didactic materials from the lectures and exercises, as well as publications that were previously presented on the website of the company or the employees’ private websites.

²¹ The lecture available online to watch at: <http://pbc.up.krakow.pl/Content/2920/index.html>.

²² Dr. Jerzy Jarosz works at the Institute of Physics of the University of Silesia and he popularizes science as well. He received the prize of the Main Board of the Polish Physical Society of Krzysztof Ernst for outstanding achievements in popularizing science.

²³ Act on Copyright and Related Rights of February 4, 1994 (Uniform Text “Journal of Laws of the Republic of Poland” No. 80, item 904, as amended), Law on database protection (Act of 27 July 2001, published in “Journal of Laws of the Republic of Poland” No 128 item 1402.), Library Act (Act of 27 June 1997, published in Dziennik Ustaw of the Republic of Poland No. 85, item 539).

²⁴ In closed access, dissertations are published (under the Repository of the Pedagogical University, which contains scientific publications and other materials related to scientific activities of employees of the Pedagogical University. The UP Repository is an independent entity operating on principles other than the PBC; Doctoral dissertations are digitally prepared by the PBC, then made available under the Repository.

of digitization process: the selection of objects for digitization, scanning, graphic processing (using professional programs), publishing on the PBC properly prepared files, and digital archiving of all the material. Each of these steps sets out the rules that PBC associate are supposed to use. Some of them are constantly modified to achieve quality and functionality of the materials presented in a digital library.

When choosing scanned items, it is important to define the subject (only pedagogical content, sometimes the scope of the subject is broadened), their physical condition, legal status and lack of availability in the digital version. Damaged paper source can be digitized to protect against further destruction as a result of use. However, the Main Library of the Pedagogical University in Cracow (ML PU) does not have the possibility of proper maintenance of the materials to be scanned. Too damaged sources may not be suitable for digitization during which they may continue to deteriorate. The legal status of a scanned item is not always crucial; at present, publications with copyrights, due to the provisions of the "Act on Copyright and Related Rights of February 4, 1994", can also be digitized, but must remain in closed access. It was considered what should be included in a digital library because of its merits. These are most often the older items, issued before 1945, which according to ML PU regulations cannot be rented out of the library.

The resulting image files are of good quality while maintaining a relatively small size²⁵ (format TIFF – depending on the type of scanner, standard resolution is 300 dpi or slightly higher: 400 dpi). Increasingly diverse scanning equipment allows for more efficient digitization of various types of materials and reduced time spent on graphic processing of files.

Thanks to more advanced computer programs²⁶ and techniques of working, the processing time of digital images is constantly decreasing. During the graphic processing, cleans up unwanted elements in an image (spots hindering reading a text, mark pen). It is important not to remove the characteristics of the document or elements that may be used in the future for provisional research. At the end, if it is required, the files are scaled to the same size (width and height). From the prepared images presentation files on the PBC website (thumbnail and optimized PDF²⁷) are created. Most materials in the digital library are text documents supplemented with OCR.

Publishing in the digital library is associated with the preparation of the description adapted to the Dublin Core metadata standard. Also in this case they were established appropriate procedures and rules²⁸. The standard description in PBC, like most digital libraries, is about 15 parts. In addition to most of the core Dublin Core metadata elements²⁹, fields which were necessary for a more complete de-

²⁵ K. Sobkowiak, M. Uram, *Zasady digitalizacji obiektów dla potrzeb PBC*, Cracow 2008 [document for internal use].

²⁶ Currently, several programs are used for graphical processing depending on needs: freeware IrfanView and ScanTailor, and also paid Adobe Photoshop. To create PDF files with OCR is used ABBY FineReader version 12, which also has extensive graphics processing tools.

²⁷ PDF format has been used in PBC since 2014. Until then most of the items were prepared in less popular DjVu format. Currently, the process of converting DjVu files to PDFs is underway.

²⁸ I. a.: D. Witczak, *Zasady sporządzania opisów w bibliograficznych w formacie Dublin Core dla potrzeb Pedagogicznej Biblioteki Cyfrowej*, Cracow 2008 [document for internal use].

²⁹ *Dublin Core® Metadata Initiative* [online], 2017, <http://dublincore.org/documents/dces/> [accessed: 2017.08. 30].

scription were also added. They usually include information about the original from which the digital version was created. The most commonly used additional fields are: remarks (defects in the document or distinctive features etc.), place of issue, signature, location (which institution has an original in the collections) and access mode (information on how the user can use the limited resource access).

The last important step is the archiving of PBC collections. During the creation of a digital library recognized that in addition to source files and intended for presentation at the PBC, also graphic images will be archived. This will allow in the future generate new presentation files without having to re-digitalize. The methods of archiving PBC resources have changed with the development of the project. To better protect archived collections, they are now stored in two independent locations: on hard disc drives of Academic Computer Centre Cyfronet AGH and LTO magnetic tapes (in ML PU). There is still work on improving the way data is stored, mainly in terms of speeding up access to them.

The activities of Pedagogical Digital Library is associated with cooperation with other entities possessing the resources of teaching. These are mostly institutions from the Cracow area and organizational units of the Pedagogical University in Cracow, which do not have the opportunity to create their own digital resources³⁰. The largest and oldest partner is Pedagogiczna Biblioteka Wojewódzka w Krakowie³¹. Currently, the digital library has over 1700 items coming from there, which is about 1/3 of all resources. Institutions that co-create PBC are also: Książnica Pedagogiczna im. Alfonsa Parczewskiego w Kaliszu³² and Biblioteka Pedagogiczna w Skawinie³³. Important partners are also other units included in the organizational structure of the Pedagogical University of Cracow (archives, faculties and institutes libraries). They provided about 400 items to the digital library (over 7.5% of all resources). Initially, most of the materials from the cooperating institutions were scanned and prepared for publication by the PBC team. Today the digital library is responsible for placing and storing the resources of other institutions on the Internet.

COLLECTIONS OF PEDAGOGICAL DIGITAL LIBRARY

The resources of Pedagogical Digital Library is divided into collections. They are created based on the content or formal qualities of the material collected therein. The creation of such collections and subsets makes it easy to search all publications available in the digital library and to reach specific items³⁴. After reviewing the collections offered by the digital library, the reader is able to determine the profile

³⁰ A full list of entities with whom PBC cooperates is available on the Internet at: *Pedagogical Digital Library* [online], 2017, <http://pbc.up.krakow.pl/dlibra/keywordindex?startint=0&dirids=1&attId=25&attlist:valueindex=1> [accessed: 2017.08. 30].

³¹ *Pedagogiczna Biblioteka Wojewódzka w Krakowie* [online], 2017, <https://www.pbw.edu.pl/> [accessed: 2017.08. 30].

³² *Książnica Pedagogiczna* [online], 2017, <http://www.kp.kalisz.pl/> [accessed: 2017.08. 30].

³³ *Biblioteka Pedagogiczna w Skawinie* [online], 2017, <http://www.bibped.skawina.net/> [accessed: 2017.08.30].

³⁴ B. Kamińska-Czubała, D. Witczak, *Biblioteka cyfrowa w strukturze biblioteki akademickiej. Tendencje rozwoju Pedagogicznej Biblioteki Cyfrowej*, w: *Służą i chronią : 65 lat*

and type of material that it contains. In the digital library it is possible to create any number of collections according to the wishes of users³⁵. Major collections of digital library are usually created when it is set up. The library profile and the content collection policy are then determined. It is possible that after cooperating with the new institution, it will be necessary to add a new collection which, due to its specificity, does not correspond to the previously created collections. In this situation, a new collection is usually achieved requirements of newly digitized materials. Individual publications due to their formal or content characteristics may belong to several collections simultaneously. Such “clarification” facilitates their search. There are 11 collections in the Pedagogical Digital Library and they are: “Pedagogical University Scientific Publications”, “Textbook Museum”, “Thematic Collections”, “Special Collections”, “Pedagogical Journals”, “Didactic Materials”, “Cultural Heritage”, “Conference Materials”, “Dissertations”, „UP Archives” and “Miscellanea”. Some of them are subdivided into 2nd and 3rd subdivisions.

Fig.1. The Pedagogical Digital Library page with left-hand collections available

Source: <http://pbc.up.krakow.pl> [access: 2017.08.30]

Below is a description of the individual collections, including their subcollections:

– “Pedagogical University Scientific Publications” includes 441 publications that form the following subcollections: “Yearbooks” (mainly *Roczniki Naukowo-Dydaktyczne*, *Annales Academiae Paedagogicae Cracoviensis* and *Annales Universitatis*

Biblioteki Głównej Uniwersytetu Pedagogicznego w Krakowie. M. Piłypczak-Majerowicz, S. Skórka, D. Wilk (ed.), Cracow 2011, p. 88.

³⁵ B. Kamińska-Czubała, D. Witczak, *Nowe kolekcje w Pedagogicznej Bibliotece Cyfrowej*, „Konspekt. Pismo Akademii Pedagogicznej w Krakowie”, nr 3–4/2007 (30), p. 81.

Paedagogicae Cracoviensis), „Monographic works” (has been published since 1963, initially as *Prace Monograficzne Wyższej Szkoły Pedagogicznej*, since 1999 as *Prace Monograficzne Akademii Pedagogicznej*, and from 2008 as *Prace Monograficzne Uniwersytetu Pedagogicznego*³⁶), “Modern School”, “Entrepreneurship - Education”, “Argument” (it is a half-year-book in free access to philosophical topics published by the Institute of Philosophy and Sociology, UP in Cracow³⁷). In 2015 the Repository of the Pedagogical University was launched and most of the materials from the collection “Pedagogical University Scientific Publications” were transferred into it. At present, work is ongoing on the reorganization of this collection.

– The “Textbook Museum” is one of the key collections in the Pedagogical Digital Library. It collects historical textbooks for teaching subjects in different schools³⁸. It consists of 25 subcollections, which correspond to the teaching of subjects (astronomy, biology, botany, etc.). There are 478 digital publications available. This collection as one of the most important in PBC will be discussed later in this article.



Fig. 2. The most frequently reviewed publication in the collection “Museum of the Textbook”

Source: <http://pbc.up.krakow.pl> [access: 2017.08.30]

– “Thematic Collections” is an example of a collection in which 2, 3 or even 4 rows are available. It has the following breakdown: “Balickiana” (17 publications by professor Antoni Balicki - writer, theologian, didactic of the Polish language, lecturers of the State Higher School of Pedagogy in Cracow from 1948 to 195039), “Na-

³⁶ *Pedagogical Digital Library* [online], 2017, <http://pbc.up.krakow.pl/dlibra/collectiondescription?dirids=86> [accessed: 2017.08.30].

³⁷ *Pedagogical Digital Library* [online], 2017, <http://pbc.up.krakow.pl/dlibra/collectiondescription?dirids=97> [accessed: 2017.08.30].

³⁸ *Pedagogical Digital Library* [online], 2017, <http://pbc.up.krakow.pl/dlibra/collectiondescription?dirids=55> [accessed: 2017.08.30].

³⁹ M.Kania, *Antoni Euzebiusz Balicki – wykładowca krakowskiej PWSP*, „Konspekt. Pismo Akademii Pedagogicznej w Krakowie”, nr 2/2007 (29), p. 106–110.

tional Education Commission”, “School reports” (16 subcollections representing the individual cities from which the reports originate, there is a further division within Cracow for reports from individual schools), “School programs” and “Teki prof. Mariana Tyrowicza” (with 1 subcollection “XIX/XX century prints” - legacy of professor Marian Tyrowicz, historian, long-term lecturer of the Higher School of Pedagogy in Cracow, laureate honoris causa of this university⁴⁰).

“Special collections” consists of 57 items and is subdivided into sub-categories: “Video lectures”, “Educational animations” and “Catalogs”.

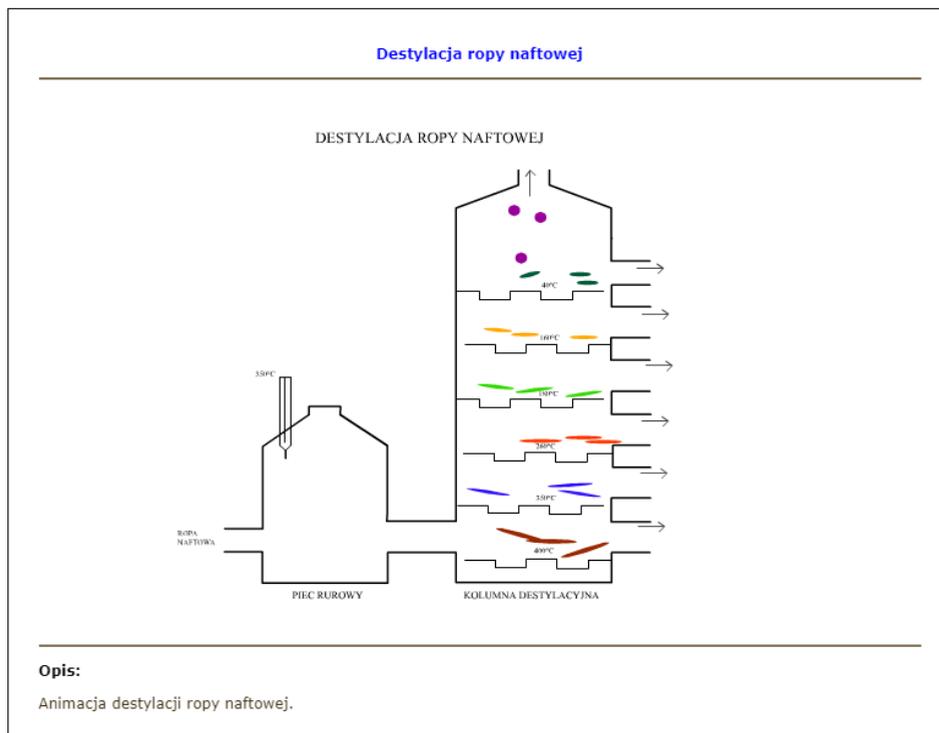


Fig. 3. Distillation of crude oil – an example of animation available in the Digital Pedagogical Library in the collection “Special collections”, the subcollection “Educational animations”

Source: <http://pbc.up.krakow.pl> [access: 2017.08.30]

– Collection “Pedagogical journals” includes 703 items. There are magazines such as: *Przegląd Pedagogiczny*, *Rodzina i Szkoła czy Głos Szkoły Zawodowej*,

– “Didactics materials” is divided into 26 subcollection, which correspond to most of the fields of study at the university⁴¹. There is a deeper division within certain subcollections (“Polish philology”, “Mathematics”, “Chemistry”, “Informatics” and “Environmental protection”).

⁴⁰ M. Wierzbak, *Teki profesora Mariana Tyrowicza w Bibliotece Instytutu Historii Uniwersytetu Pedagogicznego*, „Konspekt. Pismo Uniwersytetu Pedagogicznego w Krakowie”, nr 1/2013 (46), p. 182–186.

⁴¹ B. Kamińska-Czubala, D. Witczak, *Nowe kolekcje...*, p. 81.

– “Cultural heritage” collection includes books and periodicals published until 1945⁴². It is divided into 3 sub collections: “Old printed books”, “Books (1801–1945)” and “Journals”. In general, this collection contains 2235 publications. Among them are many books that come from the Main Library of the Pedagogical University. These items, because they are particularly valuable, are not rented out of the library. They can be used only in the Main Reading Room. The presence of these books in the Pedagogical Digital Library is not accidental. Digitizing these publications and placing them in the digital library makes them more accessible to readers.

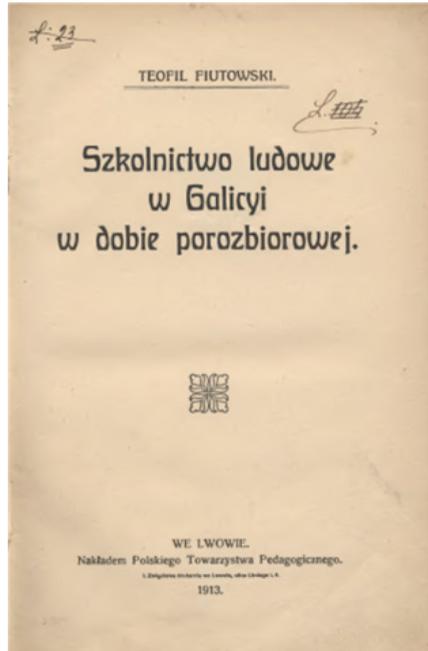


Fig. 4. Title page of *Szkolnictwo ludowe w Galicji w dobie porozbiorowej* Teofila Fiutowskiego – example of publication available in Pedagogical Digital Library in the collection “Cultural heritage”

Source: <http://pbc.up.krakow.pl> [access: 2017.08.30]

– The collection of “Conference materials” contains 168 elements and is a variety of materials (presentations, papers, catalogs of exhibitions, collective works, etc.), which come from conferences organized by the Pedagogical University.

– The “Dissertations” collection consists of only 2 elements. There were doctoral and habilitation theses of the staff of the Pedagogical University. Most of these materials were transferred to the Pedagogical University Repository.

– The “Archiwum UP” collection contains 23 items. These are mostly materials that come from the Archives of the Pedagogical University and are connected with the functioning of the Państwowe Pedagogjum w Krakowie.

– Collection “Miscelanea” consists of subcollections “Exlibris” and it is 11 items.

⁴² Ibidem.

In the Pedagogical Digital Library is also available a collection of eleven virtual exhibitions that have been prepared by the staff of the IT Service and the Digitization and Reprographics Department. 7 of them presents materials, whose authors are persons cooperating with the Central Library of Pedagogical University or employees of this institution. These are exhibitions: "Trees: presentation of photos from the collection of prof. Jan Rajmund Paśko", "Agata Rubiś: In the privacy of...: an exhibition of pastels", "Wanderer - Bilder von Piotr Jargusz", "Странник уличные картины Петра Ярыуша", "Viatoris w Teremiskach: Street paintings of Piotr Jargusz", "Viatoris Street paintings of Piotr Jargusz", "Art education in the Kresy: outdoor" (photographs by Piotr Jargusz, Jan Bujnowski and Agnieszka Nowakowska). The exhibition "Charm of the old cameras" presents a collection of bellows from prof. dr hab. Jan Rajmund Paśko from the Pedagogical University of Cracow⁴³. The exhibition "See more: exhibition of typhoid information and didactic equipment for people with sight and vision dysfunction" presents electronic equipment for the disabled and visual materials supporting the development of the blind and visually impaired. The equipment was presented at the Main Library of Pedagogical University in Cracow on October 19, 2009 by Altix⁴⁴. The exhibition "Valuable collections of the Main Library of Pedagogical University in Cracow (selection)" presents electronic versions of cover pages, interesting text fragments and illustrations from the most valuable publications available in the Main Library of the Pedagogical University. The exhibition "Old and modern Cracow: photography exhibition" demonstrates the past (the end of the 19th and the beginning of the 20th century) and contemporary (from 2013 and 2014) photographs of characteristic places in Cracow and presents them on a compilation basis. The originator of the project was Grzegorz Wajda. The scans of the photographs came from albums in the collections of the Main Library of the Pedagogical University. Contemporary photographs were taken by the staff of the Digitization and Reprography Department. During their performance, the authors sought to show the greatest similarity between historical and contemporary photographs (similar perspective, human cadre). Each photo was taken several times and then the best shot was selected. Not all places were able to be photographed because in some cases there were big changes in the land development around the place; as a result, taking a similar picture turn out to be impossible. All photographs were enriched with descriptions of the locations presented on them.

MUSEUM OF THE TEXTBOOK

The collection of the "Museum of the Textbook" has a special role in the Pedagogical Digital Library. This key collection of books contains historical textbooks for teaching subjects in different types of schools. The collection was divided into 25 smaller issues such as: elementary, chemistry, biology, mathematics, pedagogy,

⁴³ *Pedagogical Digital Library* [online], 2017, <http://pbc.up.krakow.pl/dlibra/exhibitions> [accessed: 2017.08.30].

⁴⁴ The exhibition "See more: exhibition of typhoid information and didactic equipment for people with sight and vision dysfunction" [online], 2017, <http://pbc.up.krakow.pl/dlibra/docmetadata?id=771> [accessed: 2017.08.30].

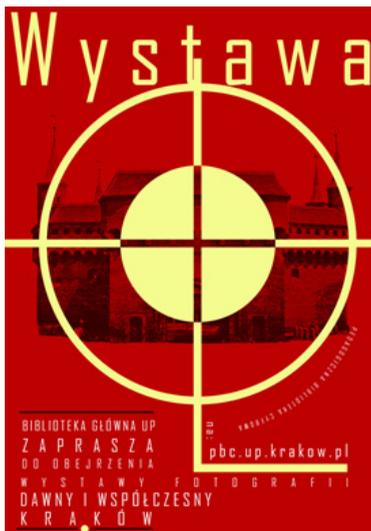


Fig. 5. Poster of the exhibition “Old and modern Cracow: photography exhibition”. Author: Barbara Krasieńska.

Source: <http://pbc.up.krakow.pl> [access: 2017.08.30]

nature, zoology and teacher manuals. Items placed in the collection can be an inspiration to conduct research on historical textbooks.

The collection gives access to valuable historical documents of invaluable value for Polish culture. It also poses “a challenge for teachers as promoters of thinking about the past in the perspective of the fate and deeds of the loved ones through values, common experiences and aspirations”⁴⁵. Thanks to the digitization of valuable objects, it will be possible to restore these often forgotten historical monuments to modern circulation. The systematic enlargement of the collection will allow researchers access to the treasury of materials that can be used for further historical research.

Among the many items available in the Museum of the Textbook collection are, among others publications by: Henryk Karol Gaertner – experts in Polish and Old Polish literature, respected educators and popularisers of science; Stanisław Szober – linguist and educator, author of numerous linguistic studies in Polish grammar, language and methodology; Antoni Małeckie – the author of many reprinted textbooks, including the most popular “Grammar of Polish Language” (published in 1863). Over the next fifty years this work has had as many as twelve editions, exerting a tremendous influence on raising the mother tongue culture in the schools of all three annexations.

The most popular publications in the Museum of Textbook are the *Elementarz dla I klasy szkół powszechnych wiejskich* of Marian Falski (1945), the *Zoologia czyli zwierzętopismo dla szkół narodowych* of Paweł Czenpiński (1789), and the *Śpiewnik szkolny na jeden, dwa i trzy głosy* (1920). [Fig. 6]

⁴⁵ B. Kamińska-Czubała, D. Witczak, *Cyfrowe mosty między przeszłością a przyszłością edukacji: kolekcje Pedagogicznej Biblioteki Cyfrowej*, „Konspekt” 2013, nr 4 (49), p. 83–87.

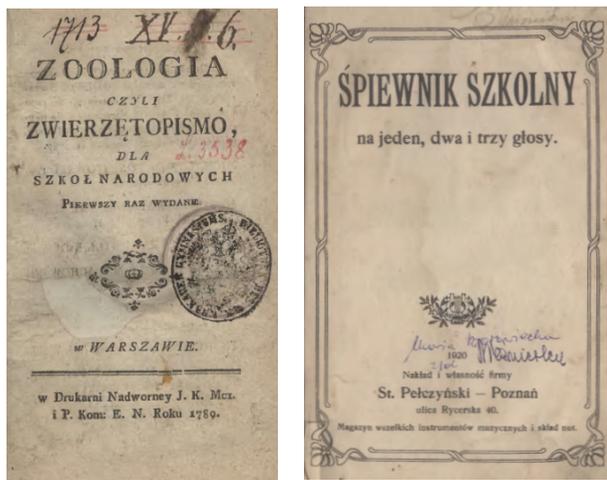


Fig. 6. The most frequently reviewed works in the collection “Museum of the Textbook”

Source: <http://pbc.up.krakow.pl> [access: 2017.08.30]

Currently the number of publications in the collection is about 500 volumes. This number is systematically increasing by searching for new entries in the Main Library’s storages as well as our cooperating faculty and institute libraries. The collection has also been greatly expanded as a result of receiving financial resources from the Ministry of Science and Higher Education for the Popularizing Science Activity in 2013 and 2016.

STATISTICS / PROJECTS / PLANS

By the end of the second half of 2017, there were over five thousand positions in the Pedagogical Digital Library. This number is gradually increasing. Total number of publications can be seen in the chart below [Fig. 7]. Significant decrease in the number of items visible at the end of 2015 was caused by the launch of the Repository of the Pedagogical University (<http://rep.up.krakow.pl>) and the need to adapt to new requirements. There was a migration of a portion of the resource to the academic repository. In the case of parts of materials, a bibliographic description with a link to the repository website is left in the PBC.

Increases in the number of publications, noticeable on the chart, were mainly related to the acquisition of financial resources from the Ministry of Science and Higher Education for the Popularizing Science Activity [Fig. 8]. In 2013, in accordance with Decision No 1086 / P-DUN / 2013, the Main Library of the Pedagogical University received a grant of PLN 147540 for two tasks: “Expansion Museum of the Textbook collection in Pedagogical Digital Library” and “Construction of a digital collection of Scientific Publications of the Pedagogical University”. During the task digitized 760 titles from both collections and put it into the PBC. The funds also allowed to purchase modern computers and specialized scanners. Further funding (Decision

No 533 / P-DUN / 2016) also allowed for the extension of the main collection. The amount of PLN 20967 has allowed to digitize and publish 110 titles.

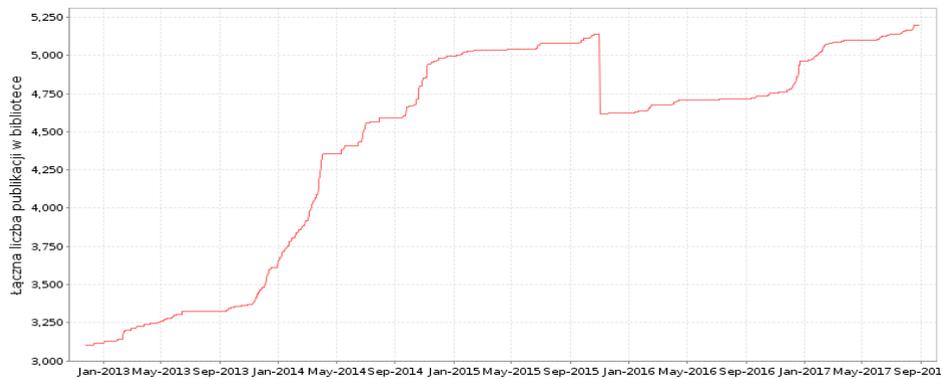


Fig. 7. Total number of publications in PBC

Source: <http://pbc.up.krakow.pl/stats/index.html> [access: 2017.08.30]

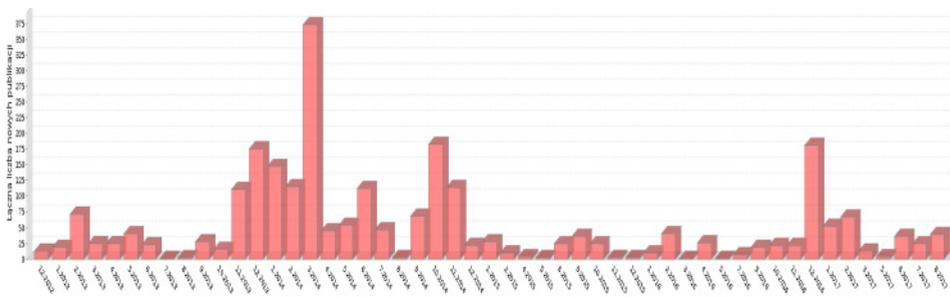


Fig. 8. Total number of new publications per month

Source: <http://pbc.up.krakow.pl/stats/index.html> [access: 2017.08.30]

Digital libraries meet the expectations of a new reader brought up in the age of new media. With the help of modern communication tools, they actively promote their activity on the web, creating a positive image of the university. New technological capabilities allow for new ways of archiving, reproducing, storing and distributing materials, contributing to a more effective way to reach readers. Responding to the needs of the “virtual” audience, they evolve themselves, becoming a part of the global digital e-community.

The PBC provides a publications of Polish cultural heritage in the field of widely understood pedagogy from the collections of the Main Library and faculty and institute libraries. By the end of August 2017, the total number of readers in the Pedagogical Digital Library was over 3.3 million. This number shows a great interest of users and the need to further develop digitization. It is necessary to maintain and increase cooperation with existing institutions as well as to seek new partners with interesting and valuable collections that could be placed in the PBC. It is also essential to raise funds (EU or ministerial) so that the collection of publications in

the Pedagogical Digital Library continues to grow and its offer is attractive both for the contemporary student, the lecturer and the researcher.

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PBC – the oldest pedagogical digital library in Poland

Abstract

The first part of the article focuses on the definition of a digital library and the history of digitization. In the main part of publication the authors presented the Pedagogical Digital Library (PBC) – its beginnings, the characteristics of the collections and the main assumptions. The next part of the article discusses the principles of PBC operation and explains the digitization processes used in the library. The rules of cooperation with other institutions in the matter of supplementing digital collections were also presented. Then the thematic collections comprising the PBC resource are exhaustively described. The focus was primarily on the key collection of the “Museum of the Handbook”. The last section provides basic statistics on the use of PBCs, discusses projects for the development of digital library and plans for the future. Characteristics were based on the website <http://pbc.up.krakow.pl> (collection layout, statistics, etc.), publicly available sources and on the authors' own experience.

Keywords: digital library, digitalization, Pedagogical Digital Library

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