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**INTERNET RESOURCES FOR QUALIFICATION UPGRADE,  
SCIENTIFIC, EDUCATIONAL AND PROFESSIONAL ACTIVITIES**

**Objective.** The article aims to familiarize with online resources, useful to librarians, scientists, teachers, and students. **Methods.** Overview of online resources for distance learning, qualification upgrade, scientific, educational and professional activities. **Results.** The description and characteristics of Internet resources for scientific, educational and professional activities is given. **Conclusions.** Distance learning is an important component of continuous professional development, a convenient modern format of professional improvement. The advantage of distance learning is the opportunity to learn at a convenient time and in any place. The use of modern Internet tools (including author identifiers) in your activities opens up new opportunities.

*Keywords:* internet resources; online resources; qualification upgrade; distance learning; distance learning courses

**Introduction**

The first attempt of distance learning is a course of shorthand by Isaac Pitman that was conducted by mail in England in the 1840s (Wikipedia, 2021). The advent of the Internet has given a new impetus to the development of distance education. “The physical ‘brick and mortar’ classroom is starting to lose its monopoly as the place of learning” (Nguyen, 2015, p. 309). Academic libraries have become increasingly active in integrating their electronic resources into educational programs of distance education (Owusu-Ansah, Rodrigues, & Walt, 2019), and open access promotes the democratization of knowledge, providing qualitative education in different part of the world (Costa & Santa Anna, 2019).

But in 2020 the world had to face the unexpected ordeal – the COVID-19 pandemic. The universities and academic libraries have to pass a test of readiness to provide their services in the remote mode. The survey conducted by E. Çimen, G. Gürdal, S. Çuhadar, and T. A. Çanak among the Turkish libraries revealed the problem. 61.9% of respondents indicated insufficient user training. Another 25% indicated a lack of qualifications and staff experience (Çimen, Gürdal, Çuhadar, & Çanak, 2020). Ukrainian librarians have faced similar problems (Kolesnykova, 2020a). It is the internet resources that can help overcome these obstacles.

## Methods

The world and Ukrainian Internet resources of free access and their use by the staff of the Scientific and Technical Library of Dnipro National University of Railway Transport named after Academician V. Lazaryan for professional activity and qualification upgrade are considered.

## Results and Discussion

There are many platforms, courses, etc. for self-development, increasing professional competencies.

**edX Portal** (<https://www.edx.org/>) provides access to 2964 courses and 287 programs created in 140 leading institutions in the world, such as Harvard, Stanford, Princeton, Peking universities, Microsoft, Massachusetts Institute of Technology and others. (Fig. 1).



Fig. 1. **EdX** Home page

The courses cover a wide range of topics (arts and culture, business and management, communication, computer science, humanities, etc.) and will be useful for librarians, scientists, teachers and students. For example, among the programs offered, Public Library Management program with a professional certificate by the University of Michigan or a course on Library Advocacy are of interest to librarians.

Google offers a variety of training programs for self-improvement, distance work and qualification upgrade at Digital Workshop (<https://learndigital.withgoogle.com/digitalworkshop-ua/courses>), where you can learn the rules of business writing (e-mail, notes, presentations or report), the art of public speech, etc. **Google Calendar** free digital tools (<http://calendar.google.com/>) allow planning your personal and collaborative activities with colleagues, and **Google Keep** (<http://keep.google.com/>) makes it possible to save notes, lists, etc. and share lists with colleagues. **Google Alerts** (<https://www.google.com/alerts>) allows creating various queries and adjust settings, once set up, this tool will send you email notifications as soon as Google finds new query results. **Google Docs** service (<https://docs.google.com/>) is an opportunity to create, share, and comment on documents in Google Drive. When creating

documents, bibliographies, etc. it is better to provide short links. **Cutt.ly** is one of the web URL shortener services. Other functions include saving the history of shortenings, generating a QR code, own characters in an abbreviated link, detailed statistics. **Google Forms** ([https://www.google.com/intl/en\\_en/forms/about/](https://www.google.com/intl/en_en/forms/about/)) allows managing event registrations, create a survey forms, and provide summary charts and graphs.

There are many useful videos for scholars, students and librarians on the popular **YouTube** video hosting service. It is stated in the scientific literature that YouTube is becoming a means of scientific communication about science and medicine (Allgaier, 2018). The resource also includes language courses, computer literacy videos, online webinars on Web of Science (<https://www.youtube.com/user/WOKtrainingsRussian>) and more.

In the process of research activity, scientists create a personal scientific image. Services such as **ORCID** (<https://orcid.org/orcid-search/search>) and **Publons** (<https://publons.com/about/home/>) make it possible to identify authors at the international level and track publications, citation rates, etc. In the ORCID researcher profile you can add information about yourself (place of study, work, research interests) and your publications. Publons allows tracking not only the list of publications and citation rates, but also reviewing and editing journals.

You can listen to free webinars on the use of the Scopus database after registration on the website of **BrightTALK** media company (<https://www.brighttalk.com/>): “Preparing for Scopus reporting” (<https://cutt.ly/aznrFIg>); “Correction of author and institution profiles in Scopus” (<https://cutt.ly/Yznr5th>); “Admin tool and Scopus usage statistics” (<https://cutt.ly/Qzns3wT>) (in Ukrainian), etc.

In Ukraine, there are also many resources to improve one’s professional level and gain new competencies. Among them, for example, the first distance platform of civic education from **VUM** (Open University of Maidan) – <https://vumonline.ua/> (Fig. 2), which expands opportunities for self-education.

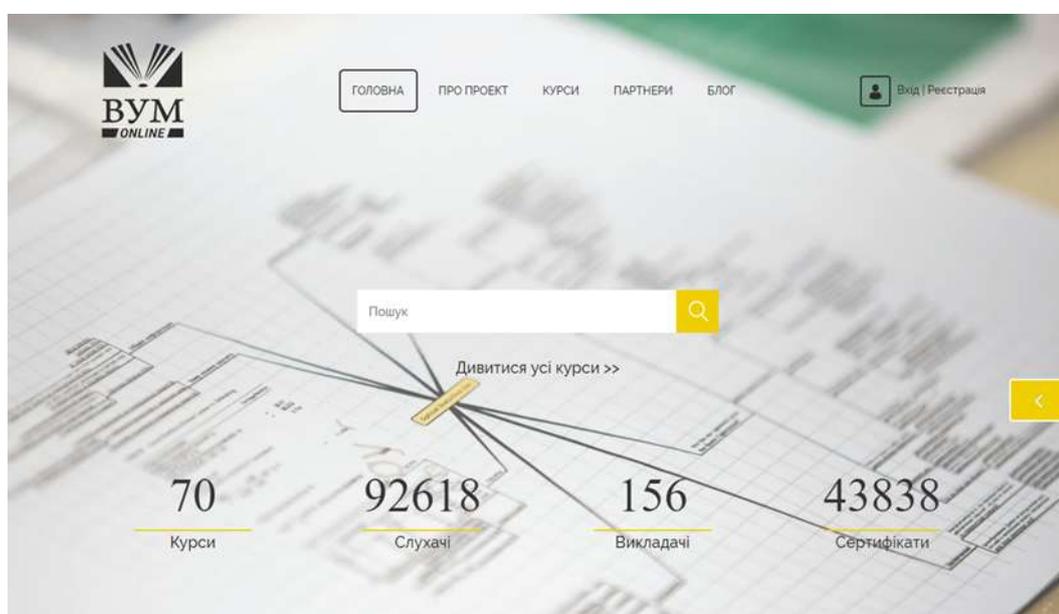


Fig. 2. VUM home page

For scholars, students and librarians, the following courses will be useful: **Digital security and online communication** (on effective and safe communication on social networks, etc.);

**Academic integrity at the university** (how to avoid plagiarism and how to create a virtuous environment in an educational institution); **Library – an open public space** (recommendations about the library rooms, new services and forms of customer service).

**Prometheus** (<https://prometheus.org.ua/>) is a Ukrainian public project of mass open online courses from leading teachers, universities and organizations of the world in various fields, which include issues of academic integrity (<https://cutt.ly/oQntNdL>), scientific communication, specialized search engines and databases, scientometrics and bibliometrics, etc.

**Unicheck** Ukraine online plagiarism check service provides services and conducts online webinars dedicated to improving the education quality (<https://unicheck.com/uk-ua/plagiarism-detection-solution>).

Another free educational resource is online digital literacy platform “Diia. Digital education” – <https://osvita.diia.gov.ua>. The skills acquired in these courses will be needed for work and study, professional and personal development. There is a video for both beginners and those who already have digital literacy skills.

In November 2020, the Ministry of Digital Transformation of Ukraine launched **Digigram** (<https://osvita.diia.gov.ua/digigram>) – a general-national test on digital literacy. Having answered 90 questions, you can get a certificate with the specified general level of digital literacy and a transcript for each competence (Fundamentals of computer literacy; Information and media literacy. Ability to work with data; Creation of digital content, etc.).

Kharkiv Regional Branch of the Ukrainian Library Association, V. G. Korolenko Kharkiv State Scientific Library regularly conducts **distance learning courses “Library in the digital environment,”** where you can get acquainted with new services and forms of work of the modern library (<http://moodle.d-academy.com.ua/course/index.php?categoryid=4>).

For qualification upgrade and self-development, it will be useful to participate in Internet conferences, seminars on librarianship of the Ukrainian Library Association (<https://ula.org.ua/konferentsii-seminary-treninhy>). The Section of University Libraries of the Ukrainian Library Association (ULA) in 2021 launched the Anti-School of University Librarians “From research. For research. About research.” These are monthly online meetings to share library experiences on information support for users, especially during distance work or study. The first meetings in the online format showed how necessary it was to exchange experience between different libraries, what issues are of the greatest interest to the community. The last classes are devoted to the creation and improvement of e-archives (repositories) of works by university scientists. In the spring of 2021, the *Section of ULA Public Library Workers and the Ministry of Digital Transformation of Ukraine* organized an online marathon “Digital Literacy of People and Communities” to discuss digital education and increase media literacy.

Using the following free access resources, each librarian can get acquainted with the achievements of colleagues, as well as share their own experiences:

**E-LIS** (<http://eprints.rclis.org/>) – is an international open access repository for academic articles in the field of library and information sciences. At present, there are about 22.5 thousand documents. It is constantly replenished with works of librarians from all over the world.

On the portal of the Vernadsky National Library of Ukraine in the section “Scientific Periodicals of Ukraine” (<https://cutt.ly/ZQkQhSu>) you can find professional issues of such journals as “Library Bulletin,” “Bulletin of the Book Chamber,” “Library Science. Record Studies. Informology,” “Information Technologies and Learning Tools” and many other interesting and relevant literature in electronic form.

**ScienceDirect** (<https://www.sciencedirect.com/>) – one of the largest online collections of published research. The collection of Elsevier Dutch publisher contains almost 12 million content elements of more than 3500 journals and more than 34000 e-books, reference books, scientific

collections. Scopus database was created in 2002 on the basis of ScienceDirect. Much of the collection is in the public domain.

**DOAJ (Directory of Open Access Journals)** (<https://doaj.org/>) – an online directory that indexes and provides access to high-quality peer-reviewed open access journals. The catalog indexes 5260387 articles from 15122 publications. Among them, at least 174 journals on library topics in different languages.

**Google Scholar** (<https://scholar.google.com/>) – the most popular search engine for scientific publications (articles, theses, books, abstracts, reports, etc.), which is of interest to users. Different categories of authors (scientists, universities, publishers, etc.) can create their own page with the ability to edit it, which provides information about research areas and interests, a list of their publications, see citation statistics, h-index. Publications are added automatically and manually.

To promote distance learning and online professional growth and self-education courses, libraries provide information about them on their websites. Information about such resources or online seminars is constantly published on **DNURT library website** (Fig. 3) in the News section (<https://library.diit.edu.ua/uk/>) and on the library's Facebook page (<https://www.facebook.com/diitlib>).

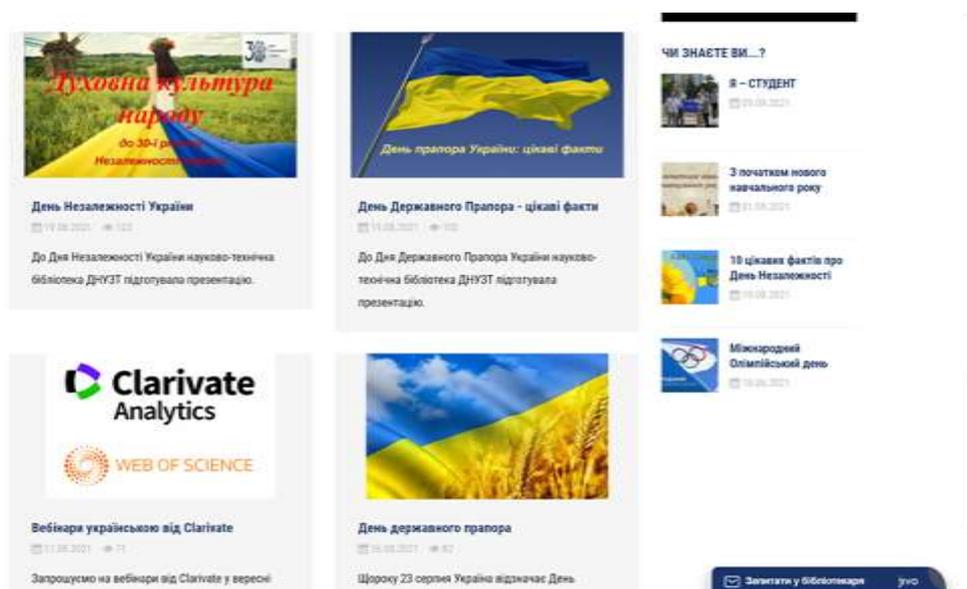


Fig. 3. Website of DNURT Library (News)

Library staff regularly study at various courses, webinars and participate in international meetings, Internet conferences, receive certificates of various courses offered on the Internet (Clarivate, BrightTALK, Elsevier). The employees also participate in various international conferences of the library and information community of Ukraine, Kazakhstan, Belarus, Latvia and others. Over the past ten years, library staff has published more than one hundred and fifty abstracts, articles in professional world and Ukrainian journals, conference proceedings and web conferences.

The DNURT library also creates and offers its educational resources. On the library's website (<https://library.diit.edu.ua/uk/page/video-uroki>) and on the YouTube channel (Fig. 4) you can find video tutorials how to register a scientist's profile in various scientometric systems, how to choose a journal to publish research results and how to submit an article to an open access

journal, how to search for scientific articles on the websites of electronic journals and repositories, how to edit and combine the author's profiles in the Scopus database, how to confirm the authorship of the scientist's publications list in the Web of Science system (<https://library.diit.edu.ua/uk/page/video-uroki>) (<https://www.youtube.com/user/diitlibrary>).

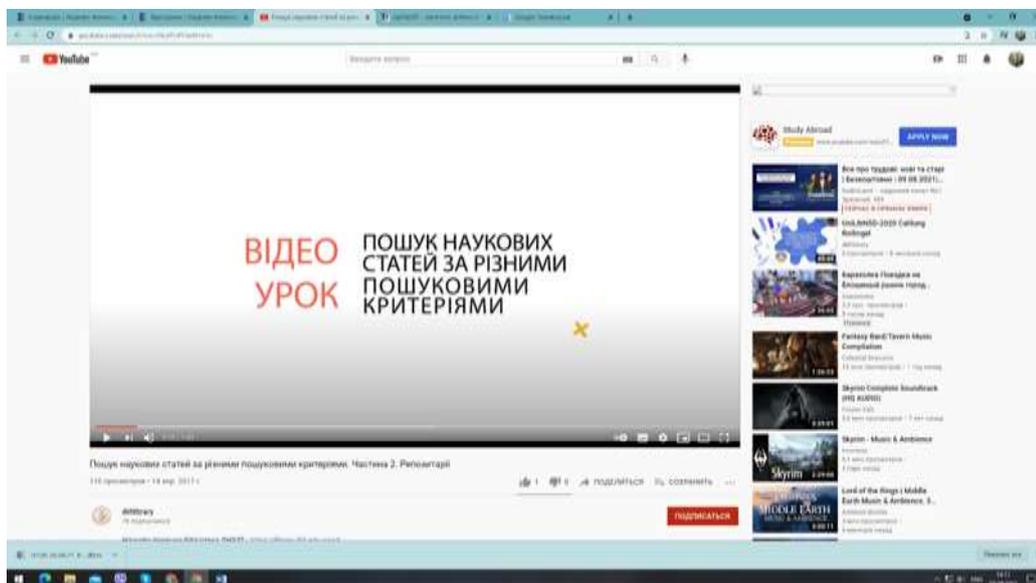


Fig. 4. Video tutorials on YouTube

For teachers, researchers, PhD students of the university the Scientific and Technical Library organizes trainings, seminars and webinars for successful scientific activity (“Information resources and services for scientists and librarians,” “Modern scientific communication. Resources and opportunities Web of Science,” “Scientific brand of the university and scientist,” “Working with the university repository. Self-archiving”, and others.). In the period of remote work during the quarantine, the library held an online-presentation “Academic integrity as the basis of university education” for library staff and a webinar “How to organize remote work of the university library staff under conditions of uncertainty?” (Kolesnykova, 2020a, 2020b).

In the conditions of pandemic and remote work, the library employees have mastered new forms of work for the organization of joint activities and communication. The capabilities of the Google Docs cloud office suite have been widely used. The main advantage of the program is that it allows access to the entered data from any computer connected to the Internet. For example, the library departments provided weekly reports on the work done. Each employee of the department, the director of the library and her deputy had access to this document. Video chats and meetings of colleagues on online platforms Zoom, Google Hangouts, Google Meet, Microsoft Teams, etc. were created to discuss working issues. This made it possible to choose a convenient option for the library team using home computers, laptops and mobile devices for communication (Savelieva, Savina, & Romanko, 2020). To post the missing works of scientists in the repository, some documents were stored in the Cloud, which made it possible to do this from home computers. Google Analytics analyzes the statistics of the audience of the library site and other library resources, provides data for the annual report. With the help of the Notification, information about the works of DNURT scientists, which are indexed by scientometric databases Scopus and Web of Science, is sent to the e-mail of the Scientific and Technical Library. Researcher ORCID and Publons, indicators of various databases (Scopus, Web of Science, Google Scholar, Index

Copernicus, etc.) allow you to track the results of academic activity of an individual scientist and the university. This data is used to supplement and update the local database of the university “Publication profile of university science,” when preparing a report on the scientific activities of the scientist or the university department and the eADNURT repository.

During the preparation and organization of seminars, the annual international conference “University Library at a New Stage of Social Communications Development” the Google Forms tool was used to create a participant registration form and questionnaire by topic. There is also a possibility to manage event registrations, create programs and conference pages, etc.

The direction of work on ensuring the quality of educational activities at the university is relevant. The library participates in organizing events to create a virtuous environment for DNURT university community, improves its skills through the webinars on the **Unicheck Ukraine** online plagiarism check service (“How to use the similarity report from Unicheck,” etc.). For the first time, about 350 qualification graduation theses were checked, and plagiarism reports were provided (Shytikova & Bondarenko, 2020). This service also checks the articles of scientists provided for publication in the university periodicals.

The use of acquired skills provides an opportunity to improve your professional competencies, provide a variety of quality services to library users for their scientific and educational work.

### Conclusions

Distance learning is an important component of continuous professional development, a convenient modern format of professional development. There are many courses on the Internet, different in subject, language and duration, which will deepen your knowledge and improve your skills (Yunakovska & Matveyeva, 2020). The peculiarities of work and study in hybrid formats gave impetus to the study and use of digital services in scientific, educational and professional activities of librarians. The use of modern Internet tools (including author’s identifiers) in the work opens new, wider opportunities, allows tracking, verifying and demonstrating the activities of any community, including libraries of the higher educational institutions. This is a great opportunity to learn something new, share your experience and be interesting and necessary for the users. ORCID is a digital identifier solving the problem of identifying authors at the international level. Publons is a tool for tracking publications, citations, reviews, and journal editing.

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## ІНТЕРНЕТ-РЕСУРСИ ДЛЯ ПІДВИЩЕННЯ КВАЛІФІКАЦІЇ, НАУКОВОЇ, НАВЧАЛЬНОЇ ТА ПРОФЕСІЙНОЇ ДІЯЛЬНОСТІ

**Мета.** Стаття має на меті ознайомити з онлайн-ресурсами, які будуть корисними бібліотекарям, науковцям, викладачам, студентам. **Методика.** Огляд онлайн-ресурсів для дистанційного навчання, підвищення кваліфікації, наукової, навчальної та професійної діяльності. **Результати.** Надано опис та характеристика інтернет-ресурсів для наукової, навчальної та професійної діяльності. **Висновки.** Дистанційне

**LIBRARY SERVICES FOR SCIENCE AND EDUCATION SUPPORT**

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навчання – важлива складова безперервного професійного розвитку, зручний сучасний формат професійного вдосконалення. Переваги дистанційної форми навчання – це можливість навчатись у зручний для себе час та будь-якому місці. Застосування в своїй діяльності сучасних інтернет-інструментів (в т. ч. ідентифікаторів авторів) відкриває нові можливості.

*Ключові слова:* інтернет-ресурси; онлайн-ресурси; підвищення кваліфікації; дистанційне навчання; дистанційні курси

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