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Developing Research Capacity through **I**nstitutional **R**epositories **N**etwork in **A**zerbaijan

DIRNA

101082124 - DIRNA
ERASMUS-EDU-2022-CBHE

Khazar University, Azerbaijan



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**Developing Research Capacity through Institutional Repositories Network in
Azerbaijan (DIRNA)**

REPORT

Work Package 4: Building Human Resources Capacity

T3.3 Delivering basic and intermediate training (Summer School)

Abbreviations and Acronyms

Aperta	Turkish International Data Archive
ASCCA	The Academy of State Customs Committee
AZTU	Azerbaijan Technical University
BSU	Baku State University
COAR	Confederation of Open Access Repositories
DIRNA	Developing Research Capacity through Institutional Repository Network in Azerbaijan
DOAR	Directory of Open Access Repositories
EOSC	European Open Science Cloud
FAIR	Findable, Accessible, Interoperable and Reusable
GSU	Ganja State University
IPR	Intellectual Property Rights
IR	Institutional repositories
IZTECH	Izmir Institute of Technology
JYU	University of Jyvaskyla
LSU	Lankaran State University
MSU	Mingachevir State University
NSU	Nakhchivan State University
OpenAIRE	Open Access Infrastructure for Research in Europe
UNIVAQ	University of L'Aquila

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Introduction

On July 29 – August 2, 2024, one-week summer school was held at Ganja State University with the participation of experts from Azerbaijan higher education institutions Khazar University, Baku State University, Azerbaijan Technical University, Academy of the State Customs Committee, Ganja State University (GSU), Nakhchivan State University (NSU), Lankaran State University (LSU), Mingachevir State University (MSU) and experts from EU HEIs L'Aquila University of Italy (UNIVAQ), Jyvaskyla University of Finland (JYU), Izmir Institute of Technology (IZTECH) of Türkiye. The participants were given an overview of the following topics: principles and advantages of open access, which can be achieved with the help of institutional repositories; the process of installing the institutional repository at the initial stage by the DSpace platform and the procedure for configuration changes; the necessary capacity (infrastructure and staff/services); motivation for the creation of Dspace.

Participants were also presented with an overview of reference models that would help improve the range of services and infrastructure required to effectively manage and maintain access to research results.

During the 5-day summer school, representatives of European universities delivered their experiences to participants of partner Azerbaijani higher education institutions.

DIRNA Summer School Narrative Report

Event: DIRNA (Developing Research Capacity through Institutional Repository Network in Azerbaijan) Summer School

Dates: July 29 - August 2, 2024

Location: Ganja State University, Ganja, Azerbaijan

Number of universities -11

Number of participants – 43 (see Appendix 1 for the list of participants)

Number of high-ranked representatives - 14

Theoretical Foundations (Day 1)

Monday, July 29, 2024

The summer school was officially hosted by Ganja State University. The first day of training began with the registration of university representatives. In order for the project to be more successful and useful in the future, two important meetings were held before the official opening of the Summer School, which were very important for political support. During the first meeting, the leaders of the partner universities – Rector of Khazar University Irada Khalilova, head of Development Office Razia Isaeva, rector of GSU Yusif Yusibov, Advisor to the BSU Rector for Digitalization and Information Technologies -Shabnam Safarova, International Affairs Vice Rector of AZTU- Fariz Mammadov, Head of Department for Education and Methodology of ASCCA- Islam Huseynov, Innovation and Science Vice Rector of NSU- Elsever Asadov, Head of the Science and Innovation Department of MSU -Vugar Mustafayev, Library Director of IZTECH - Gultekin Gurdal met in the 10-minute session and discussed the importance of the DIRNA project and how it can benefit the development.



Picture 1. Rectors and vice-rectors meeting to discuss DIRNA implementation Picture

After the meeting, the Rector of Khazar University, Associate Professor Irada Khalilova talked to local media about the DIRNA project, its importance and implementation. The same day the news was aired and captured extensive attention as other local media channels redistributed the same information. The same video is available through the YouTube channels of the local media.



Picture 2. Rector of Khazar University Irada Khalilova interviewed about the DIRNA project for the local media



Picture 3. Speech of the Rector of Ganja State University

The Director of the Development of Khazar University, Razia Isaeva, greeted the guests, participants, and hosts declared the Summer School open, and asked the Rector of Ganja State University, Professor Yusif Yusibov, to deliver a welcome speech. He made an inspiring welcoming speech and spoke about the importance of the DIRNA project and cooperation among the universities. He highlighted the successful implementation of the project and shared his and his colleagues' contentment with hosting the Summer School and having an opportunity to contribute to a regional impact on the project's outcomes.

Then the rector of Khazar University, Associate Professor Irada Khalilova greeted the participants, thanked the host and emphasized the importance of Open Science. She has provided her own experience of using Institutional Repositories (IR) and

Director of the Development Office of Khazar University Razia Isaeva spoke in detail about the goals of the DIRNA project, the collection of scientific and research works of Azerbaijani universities on one platform, the fact that in the future this project will be useful for other universities in Azerbaijan, and the experience of Khazar University in connection with electronic archive (DSpace) and obligations of university-partners.



Picture 4. Presentation by Razia Isaeva, Development Director, Khazar University

The day followed with the substantive presentation of Gultekin Gurdal from IZTECH on the importance of open scientific and institutional repositories. This session, held in Turkish, emphasized the role of Open Science in modern research and the important role of institutional repositories in making research results accessible. He has provided detailed information on the importance of Open Science, Institutional Repositories (IR) and details of DSpace, their implications, impact on Open Science and institutional improvements.



Picture 5. Presentation by the Director of the Library of the Izmir Institute of Technology Gultekin Gurdal

During the second part of the day, Anna Tozzi from UNIVAQ presented a comprehensive overview of the principles and benefits of open access and open science, while another UNIVAQ representative, Francisco Tarquini, took to the Internet to talk about the importance of open-access publications. This was followed by a detailed presentation by UNIVAQ, led by Grazia di Bartolomeo, Director of the Library Information Center, on open science policy and transformation agreements, which ended with a question and answer session on the first day of training with interesting discussions, The participants had the opportunity to gain a deeper understanding of the topics of the day.



Picture 6. Presentation by Professor Anna Tozi, Vice Rector, UNIVAQ, Italy



Picture 7. Presentation by Grazia di Bartolomeo, Director of the Library of UNIVAQ

Responsible Research and Data Management (Day 2)

Tuesday, July 30, 2024

The second day shifted focus towards responsible research practices and data management. JYU opened the day with a session on **Responsible Research & Innovation** and the selection of **Trusted Publishers** by Kati Clements. During the presentation, Kati Clements stated that in order for research in Finland to be ethically acceptable and reliable, it must be conducted in accordance with the Finnish Code of Scientific Research Integrity, compliance with the European Code of Scientific Research Integrity, and the main principles of integrity of scientific research in the Finnish code of conduct are reliability, honesty, respect and accountability.

This was followed by a discussion on **FAIR Data & Research Data Management**, providing a robust framework for managing research data effectively. In the next presentation, in accordance with the FAIR (Findable, Accessible, Interoperable and Reusable) international standard to ensure the maximum reusability of research data, JYU provided information on data management that ensures the search, availability, interaction and reuse of research data and metadata. It was reported that major sponsors, such as the Academy of Finland, also require metadata and, if possible, data published when funded to be reliable.



Picture 8. Presentation by Kati Clements, Research Coordinator, JYU

The afternoon included a session on the **European Open Science Cloud (EOSC) and its Applications**, which illustrated the integration of open science practices into European research infrastructure. In his next presentation, the trainer explained that the European Open Science Cloud, known as EOSC, aims to create a "Trusted information and services network" for science in Europe, which will improve the situation for researchers in many ways, namely: expand scientific research opportunities by providing access to a large number of data and research results from different fields and institutions and said that it will promote innovation by facilitating researchers to share information, collaborate and build on each other's work.



Picture 9. Summer School participants



Picture 10. Summer School participants 1

The day concluded with a session on **IPR - Ethics of Open Publishing, Copyright, and Legal Issues**, offering participants crucial insights into the legal aspects of open science. The presenter said that the credibility of scientific research and society's trust in research rely on respect for good scientific practice and ethical considerations. Research ethics is part of the responsible conduct of research. Ethics review covers the whole research process. Research ethics issues may relate to the research topic, methods and practices, or the research data. These issues include ethical governance procedures, informed consent, anonymity of subjects and withdrawal from research. In addition, they concern research permits granted and pending. Dedication to the principles of good scientific practice is primarily the responsibility of each individual researcher and research team, but the responsibility is also shared by the director of the research unit and the management of the organizations conducting research.

A cultural trip to Goygol Lake provided a relaxing break, fostering informal interactions among participants and speakers. The day ended with a warm welcome dinner at the Haci Kent, Gold Garden Restaurant, where participants had the chance to network and reflect on the day's learnings.



Picture 11. Goygol National Park

Technical Aspects of Institutional Repositories (Day 3)

Wednesday, July 31, 2024

The third day delved into the technical aspects of institutional repositories. Gültekin Gurdal from IZTECH presented on the **Features of Institutional Repositories (IRs)** and the **Selection of Repository Software**, covering the essential components and considerations for effective repository management.

Presenter Gültekin Gurdal talked about what academic universities and researchers want, the advantages and reliability of academic archives, how institutional repositories comply with FAIR requirements, Confederation of Open Access Repositories (COAR) - the international association that brings together repositories and repository networks, the politics of archival work in Turkey, the number of archives Directory of Open Access Repositories (DOAR), academic archive types - EPrint, Dspace, Fedora Commons, Invenio, Dspace7 and informed about its advantages.



Picture 12. presentation by Gültekin Gurdal

This was followed by a discussion on **Technical Requirements and Specifications** for setting up and maintaining institutional repositories. In his next presentation, Gültekin Gurdal explained in

detail the features, technical requirements, entities and relationships between entities, sections and subsections of Dspace 7.

Post-lunch, Aysen Binen from IZTECH conducted sessions on **Metadata Quality and OpenAIRE Guidelines** and **DSpace Data Entry Best Practices**. In this presentation, Aysen Binen spoke in detail about the features of the new generation of academic archives according to COAR, the application of quality metadata, standards, how to apply metadata in DSpace and Geris, organizations that ensure the quality of metadata – Dublin Core, Open Access Infrastructure for Research in Europe (OpenAIRE), COAR. She put forward her proposals for increasing visibility of metadata and institutional repositories. Copyright details Sherpa Romeo and Creative Commons.

These practical sessions equipped participants with hands-on knowledge of metadata management and repository entry practices.



Picture 13. Presentation by Aysen Binen, IZTECH

The afternoon concluded with an overview of **Research Data and IR: IZTECH Practices** by Begum Yavuz, highlighting best practices from IZTECH's experiences.

In her presentation, Begüm Yavuz spoke about the role of libraries in research data management, research - data storage strategy at IZTECH, obligations in data management, Zenodo system supporting researchers, long-term storage of data, Aperta (Turkish International Data Archive).



Picture 14. Presentation of Begum Yavuz, IZTECH

At the end of the training, an excursion to Nizami Ganjavi mausoleum and museum, Ganja Castle Gates-Archeology and Ethnography Museum Monument Complex, Imamzadeh tomb was organized for the partners under the organization of GSU.



Picture 15. Nizami Ganjavi mausoleum



Picture 16. Nizami Ganjavi mausoleum

Practical Training and Policy Development (Day 4)

Thursday, August 1, 2024

The 4th day of the summer school was dedicated to practical work. Participants engaged in **Submission to Repository Practice** sessions, focusing on practical skills for uploading and managing data within repositories using DSpace. The participants of the partner universities of Azerbaijan were given assignments by Turkish experts. Each university, as a team, demonstrated the knowledge they acquired during the training by uploading metadata to the system in accordance with FAIR requirements. Turkish experts reported the completeness of the information and the presence of minor deficiencies.



Picture 17. Group work and discussions

After lunch, the focus shifted to the development of **Internal Repository Policies**. This collaborative session, led by JYU, IZTECH, and UNIVAQ, involved creating and refining policies to guide repository management and usage within participants' institutions.

At the end of the day, at the suggestion of European experts, each Azerbaijani university was instructed to make a presentation on the "Open science policy" of their universities for the next day.



Picture 18. Practice day



Picture 19. Group photo

All the guests were given a dinner by GSU at the Kura river crossing of Samukh district.



Picture 20. Networking dinner after the hard-working day

Group Work and Conclusion (Day 5)

Friday, August 2, 2024

On the last day of the Summer school, Sharif Khurshudov gave an online presentation entitled "Managing Institutional Repository Digital Content: DSpace-CRIS".

The presentation provided information about the structure of the institutional repository, collections, registration, embargo, access permission. Among the institutional repositories intended to be implemented in partner universities within the project, it was emphasized that Dspace7 should be superior. Sharif Khurshudov's presentation was received with interest by the participants.

After Sharif Khurshudov's presentation, representatives of Azerbaijani universities - Aytaj Misgarli of Khazar University, Shukufa Aliyeva of BSU, Iltifat Ibrahimov of AZTU, Elvin Mejidov of ASCCA, Maryam Asadova of MSU, Aysu Rasulzade, who prepared a joint presentation of NSU and LSU, made a presentation on Open Access Policy for their universities. The presentations were welcomed by Turkish experts and recommended for future improvement.



Picture 21. Presentation by Aytaj Misgarli, deputy director of Khazar University's Library Information Center.



Picture 22. Presentation by Maryam Asadova, MSU



Picture 23. Presentation by Aysu Rasulzadeh, deputy director of the Library Information Center, NSU



Picture 25. Presentation by Elvin Mejidov, partner project manager of ASCCA



Picture 26. Presentation by Iltifat Ibrahimov, IT department, AZTU



Picture 27. Concluding speech by Razia Isaeva, Development Director, Khazar University

Ganja Summer School has ended successfully. In the end, all participants received a certificate of participation signed by Ganja State University.

The Summer School concluded with a reflection on the week's achievements and an overview of future steps. The program effectively combined theoretical knowledge with practical skills, fostering a collaborative environment for advancing research capacities through institutional repositories. The final day outlined the next steps for the coming months, including national meetings, events, and a series of Ministry-level discussions aimed at promoting a project idea for

sustainable

development.



Picture 28. Group photo



Picture 29. Khazar University team

Conclusion

The DIRNA Summer School successfully met its objectives of enhancing research capacity and promoting open science practices. By integrating theoretical knowledge with practical training, the event provided participants with valuable insights and skills to advance the development of institutional repositories in Azerbaijan. The collaborative spirit and diverse expertise contributed to a rich learning experience, setting a solid foundation for future advancements in the field.

The Summer School successfully facilitated a collaborative environment focused on enhancing responsible research practices and effective data management among participating universities. The series of meetings and training sessions underscored the importance of political support and shared knowledge in advancing the DIRNA project, particularly in the context of the FAIR principles.

The presentations highlighted critical aspects of research integrity, data management frameworks, and the technical specifications for institutional repositories, particularly DSpace 7. Participants gained practical skills in managing metadata and adhering to established standards, demonstrating a commitment to enhancing the quality and visibility of research outputs.

Moreover, the joint presentations by Azerbaijani university representatives on Open Access Policy indicated a proactive approach to integrating learned concepts into their institutional practices. The hands-on sessions not only equipped participants with essential skills but also fostered collaboration among institutions, laying a strong foundation for future initiatives in research integrity and data management.

Overall, the Summer School achieved its objectives of promoting responsible research and effective data practices, reinforcing the significance of international collaboration in academia. This initiative will likely have lasting benefits for the partner universities as they implement the knowledge and skills acquired during the training.

Appendix 1 The list of participants

No	Full name	University	Position	Signature
1	Yusif Yusubov	Ganja State University	Rector	
2	Irada Khalilova	KhazarUniversity	Rector	
3	Fariz Mammadov	Azerbaijan Technical University	Vice Rector for International Affairs	
4	Shabnam Safarova	Baku State University	Adviser to the BSU rector for Digitalization and information technologies	
5	Parvin Hajiyeva	Ganja State University	Vice Rector for International Affairs	
6	Islam Huseynov	ASCCA	Head of Department for Education and methodology	
7	Elsevar Asadov	Nakhchivan State University	Vice Rector for Innovation and Science	
8	Raziya Isayeva	KhazarUniversity	Director Development	
7	Vugar Mustafayev	Mingachevir State University	Head of Science and Innovation department	
9	Lyudmila Sotova	KhazarUniversity	Director Quality Assurance Center	
10	Aytaj Misgerli	KhazarUniversity	Deputy Director of Library Information Center	
11	Jamila Guliyeva	KhazarUniversity	Head of Library Acquisition	
12	Sabina Guluyeva	KhazarUniversity	Project manager	
13	Nijat Abdullayev	KhazarUniversity	Technical person	
14	Gultekin Gurdal	İzmir Institute of Technology	Library Director	
15	Gonul Kafali Can	İzmir Institute of Technology	Instructor	

No	Full name	University	Position	Signature
16	Begum Yavuz	İzmir Institute of Technology	Instructor & Data Steward	
17	Aysen Binen	İzmir Institute of Technology	Academic Repository Manager	
18	Massimiliano D'Innocenzo	University of L'Aquila	Project manager	
19	Grazia Di Bartolomeo	University of L'Aquila	Library Director	
20	Kati Clements	University of Jyväskylä	Research Coordinator	
21	Samuel Madtha	University of Jyväskylä	Doctoral Researcher	
22	Nigar İsmayılova	Baku State University	Director of Library	
23	Jamila Yusifova	Baku State University	Head of Metodical Work and Cooperation Department at Scientific Library BSU	
24	Sevinc Mammadova	Baku State University	Senior bibliographer	
25	Shukufa Aliyeva	Baku State University	Bibliographer	
26	Afsana Mustafazada	Baku State University	Specialist of the Technical and Software Department of the Information Technology Center	
27	Khayala Hajiyeva	Azerbaijan Technical University	Director, Library and Information Center	
28	İltifat Ibrahimov	Azerbaijan Technical University	Senior Consultant, Library and Information Center	
29	Inam Hasanov	Azerbaijan Technical University	Director, IT department	
30	Yegana Jafarova	Azerbaijan Technical University	Metadata specialist, Library and Information Center	
31	Elvin Mejidov	Academy of the State Customs Committee of the	Manager of Internatioal Cooperation and	

No	Full name	University	Position	Signature
		Republic of Azerbaijan (ASCCA)	Projects; Partner project manager	
32	Aysel Jafarzade	ASCCA	Bibliographer, Library Coordinator; Project Team Member	
33	Aslan Huseynov	ASCCA	Leading Specialist of Department for ICTs Application	
34	Mayis Eyniyev	Lankaran State University	Head of the Electronic University project	
35	Samira Ahmadova	Mingachevir State University	Coordinator of the international cooperation office	
36	Aida Mustafayeva	Mingachevir State University	Head of the Department of Information Technologies	
37	Maryam Asadova	Mingachevir State University	Teacher of the Department of Information Technologies	
38	Huseyn Asgarli	Nakhchivan State University	Head of Department	
39	Aysu Rasulzade	Nakhchivan State University	Deputy director of Library	
40	Ruslan Mammadov	Ganja State University	Head of Office	
41	Razim Aliyev	Ganja State University	Head of Office	
42	Vasif Hasanov	Ganja State University	Director of Department of Innovation	
43	Aishan Ahmadova	Ganja State University	Library Director	