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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



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

REPORT

Work Package 8: Exploitation and Dissemination

T 8.3: Joint Annual Report

Abbreviations and Acronyms

| | |
|----------|---|
| AI | Artificial Intelligence |
| ASCCA | The Academy of State Customs Committee |
| AZ HEI | Azerbaijan Higher Education |
| AZTU | Azerbaijan Technical University |
| BSU | Baku State University |
| COAR | Confederation of Open Access Repositories |
| DIRNA | Developing Research Capacity through Institutional Repository Network in Azerbaijan |
| EOSC | European Open Science Cloud |
| EU | European Union |
| FAIR | Findable, Accessible, Interoperable and Reusable |
| GSU | Ganja State University |
| ICT | Information and Communications Technology |
| ILE | Innovative Learning Environments |
| IR | Institutional repositories |
| IZTECH | Izmir Institute of Technology |
| JYU | University of Jyvaskyla |
| KU | Khazar University |
| 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

Khazar University project “DIRNA” is a winner in Erasmus+ 2022. Over the course of three years, the “Developing Research Capacity through Institutional Repositories Network in Azerbaijan” project (hereafter DIRNA) aims at building capacity in the context of research output management, focusing on eight leading AZ HEIs, via establishing Open Access Institutional Repositories Network: Khazar University (KU), Baku State University (BSU), Azerbaijan Technical University (AZTU), Academy of the State Customs Committees of the Republic of Azerbaijan (ASCCA), Ganja State University (GSU), Nakhcivan State University (NSU), Lankaran State University (LSU), Mingachevir State University (MSU). The European partners are: University of Jyväskylä (Finland), Izmir Institute of Technology (Turkey), Università degli Studi dell’Aquila-(Italia). The process of intense as well as comprehensive training, which is required to establish and then interlink the aforementioned repositories at each site, arrange the framework’s implementation, data entry and smooth management will represent the core of the DIRNA. Learning outcomes from the project-bound activities will be shared and disseminated in a variety of ways, including the initiation and then establishment of facilities and mechanisms to proactively assist other institutions in the country in setting up and managing their own repositories. In a significant addition, the DIRNA’s lenses will be on improving not only the visibility and the management of quality scholarly research, but also on supporting open access to research outputs, advocating, and fostering scholarly communication and coordination between the AZ HEIs across the country.

Khazar University is the main applicant and the coordinator of the project. All other DIRNA partners will participate in managing the project through looking after the activities within their segments of responsibility, while Khazar will assume the role of the main assistant-partner to facilitate all activities of the consortium. The partners will be involved in the preliminary-stage, and in the early-stage installation of pilot repositories and also in testing the repository data entrance and general management of the process.

The first management meeting of the Erasmus+ project DIRNA

On October 5-6, 2023, the first management meeting of the Erasmus+ project entitled DIRNA-development of research capacity through network of Institutional Repositories (Electronic Archives) in Azerbaijan coordinated by Khazar University was held.

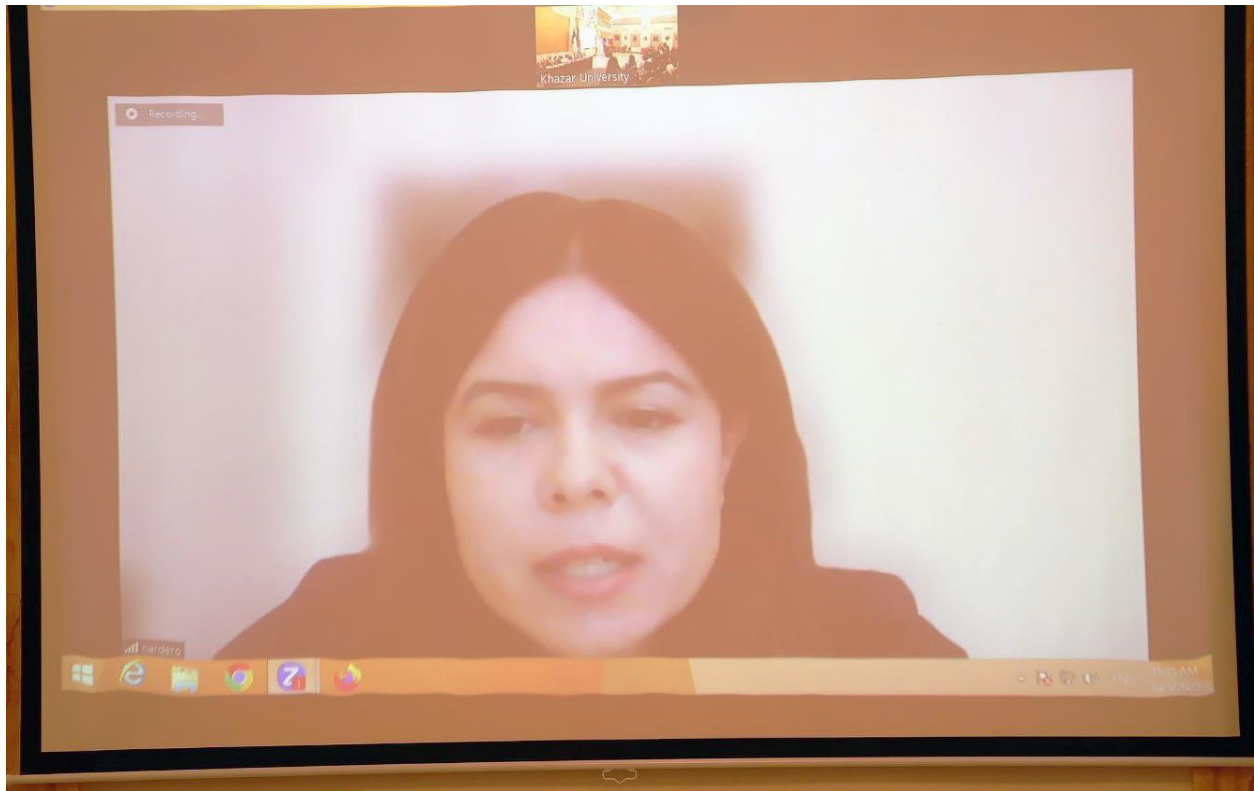
Partner universities from Azerbaijan (Khazar University, Baku State University, Azerbaijan Technical University, Academy of the State Customs Committee of the Republic of Azerbaijan, Ganja State University, Nakhchivan State University, Mingachevir State University, Lankaran State University) and Europe (Jyväskylä University-Finland, L'aquila – Italy, Izmir Institute of Technology (IYTE) – Türkiye) attended the meeting held at Khazar University.

The official opening part of the event began with the introductory speech of Prof. Acad. Hamlet Isakhanli, founder of Khazar University, Chairman of the Board of Directors and Trustees. Then the rector of the university, Assoc. Prof. Irada Khalilova, and the director of the Azerbaijan National ERASMUS+ office, Parviz Bagirov, spoke.

European Commission project coordinator Rosalba Nardelli joined the meeting online and wished success to the partner universities. The event covered presentations of partner universities as well. During the two-day meeting, the plan of work planned within the framework of the project, financial issues, the role and responsibility of each partner university in the project, potential risks and ways to solve them were discussed.









Turkish study tour in the framework of the Erasmus+ project DIRNA (Izmir, November 15-17, 2023)

Within the scope of the DIRNA Project, Izmir Institute of Technology hosted a study tour on **November 15-17, 2023**, with the participation of 16 people from 8 Azerbaijan Higher Education Institutions. The meeting aimed to share information about Open Science and Institutional Repository practices at the Izmir Institute of Technology and to support Azerbaijani Higher Education Institutions in developing their own applications.

The training started with the opening speeches of IZTECH Library Director and OpenAIRE Executive Board Member Gültekin Gürdal and IZTECH Vice Rector Prof. Dr. Alper Baba. Participants were given information about IZTECH and the IZTECH library. Also, library and campus tours were organized.

In the three-day study tour, after an overview of Open Science, information about the development of open science in Türkiye and the world was given. In addition, the development processes of Institutional Repositories in Türkiye and IZTECH were explained. OpenAIRE services, which are critical for Open Science, were one of the important topics of the training. [OpenAIRE](#) services were introduced to the participants, and information was given about how they can benefit from them in open science practices. In addition, after the presentation, in which general information about the [European Open Science Cloud \(EOSC\)](#) was shared, the [EOSC Portal](#) was introduced to the participants.

During the study tour, all aspects of [IZTECH Institutional Repository and Research Information System GCRIS](#), such as its features, technical infrastructure, administrator module, and data entry screens, were explained in detail, and practices were made. In the discussion session, where GCRIS developers also participated, questions about technical issues were answered. Thus, all important information about establishing an Institutional Repository Network in AZHEIs, which is the main purpose of the DIRNA project, was conveyed to the participants, and their questions were answered.

The importance of metadata quality, basic topics in research data management and COAR ([Confederation of Open Access Repositories](#)), Community Framework for Good Practices in Repositories presentations were also given to the participants. The study tour, which included intense and important issues, ended with a general evaluation.

During this tour the Azerbaijani participants got insight into various Turkish information technology achievements. Diverse program included theoretical and practical experiences of activities related to Institutional Repository base on the platform of GCRIS, European Open Science Cloud (EOSC), OpenAire, etc. In the final workshop and survey the participants reflected on their most important experiences during the study tour and the insights that could be transferred to their home institutions.



Survey among Azerbaijani researchers

In December 2023, a survey was conducted among employees of partner Azerbaijani higher education institutions regarding institutional repositories. EU partners helped AZ partners in preparing surveys to conduct assessment studies. A total of 66 respondents comprising library staff (digitization and e-resources units), teachers, researchers and IT specialists participated in this survey from the following seven AZHEIs: Ganja State University, Nakhchivan State University, Lankaran State University, Mingachevir State University, Azerbaijan Technical University, Baku State University, Academy of the State Customs Committee of the Republic of Azerbaijan. 63 of participators answered in Azerbaijani, and 3 answered in English.

45.2% respondents attended in the survey stated that they need training topics on “Publication of data in the institutional repository”, 59.7% on “Rules for working with the institutional repository”, and 43.5% on “Trainings on Publication of open access materials” in the DIRNA project. Within the framework of the DIRNA project, the respondents proposed the establishment, management and localization of the new open access institutional repository system in the partner higher education institutions, the implementation of educational measures that will eliminate the deficiencies in the universities related to the institutional repository, and the involvement of the staff who should conduct the work in trainings and seminars for the successful completion of the project.

Training At the University of L'Aquila (Italy, March 12-14, 2024)

On March 12-14, 2024, the University of L'Aquila hosted three-day training sessions, with the contributions of several academic experts and spokespeople coming from 8 Azerbaijan Higher Education Institutions, one delegate from the Turkish İzmir Institute of Technology, and one participant from the University of Jyväskylä, in Finland. The meeting aimed to share information, resources and expertise for implementing the Open Science and the Institutional Repository practices, and to support Azerbaijani Higher Education Institutions in developing and improving their own applications and services.

The training started with the institutional greeting from Prof. Benedetta Mattei, the Vice Rector for research and an opening speech by the Rector Consultant for International Affairs, Prof. Anna Tozzi, in which the training objectives as well as the further steps to undertake were well defined. Nowadays, Open Science is one of the fundamental factors of the international research community and it plays a critical and major role in many scientific domains. In light of this, the complexity of the concept of 'openness' was highlighted and it was reiterated how the ongoing transition concerning the way in which research is performed and knowledge is shared can be both positive and risky and therefore, it deserves a deeper study and analysis. The cycle of seminars begun with the initial contributions of Dr. Grazia Di Bartolomeo, Manager and Coordinator of the UnivAQ Library Area, and Dr. Antonella Di Nisio, Supervisor of the Library Sector. The two experts offered a broad insight on the UnivAQ library system and its role for Open Access pointing out the features, development and evolution of its databases, functional platforms, electronic resources, catalogues, and services. In particular, the participants received an in-depth training regarding the UnivAQ library system and the crucial role of its mission whose aim is to preserve, update and enhance the use of the University bibliographic and documentary collections ensuring the wildest and most transparent access to scientific information and resources. As underlined by Dr. Di Bartolomeo, it is necessary to train the participants on how information is made available and how users – and the scientific community in general - can freely access to the information through several tools, systems and services offered and developed by UnivAQ.

The second day gave our partners deeper understanding of the Open Science principles and elements offering technical information about the development of Open Science and its dissemination accessible to all levels of society. The first contribution, performed by the Associate Professor in Structural Engineering Angelo Aloisio, disclosed a critical analysis of the concepts of Open access and Open Science in research. The professor trained partners on Open Access referred to as the practice of making research publications freely available to everyone underlying how its core idea is to remove barriers to scholarly work and allowing anyone to read, share, download and use researches and articles. In this regard, it has been underlying the importance of an adequate understanding on the pros and cons of Open Access.

The third day of study tour, we saw the contribution of the Italian Professor, Francesco Tarquini, on Open Data and the attempts to make every step of the scientific research and process as open and transparent as it can be, so that data and outcomes can be freely usable to everyone. It examined the principles of open science, summarized in the acronym FAIR (Findable, Accessible, Interoperable, and Reusable) and how the adoption of these principles bring several advantages to the whole community, such as accelerate growth, social and economic innovation and responses to common goal issues, or further increase the sustainability of research and the reduction of potential frauds and data manipulations. It aims to make research more open to participation, revision or refutation, refinement and re-use, for the benefit of all.





Training at The University of Jyväskylä in Finland (Jyväskylä, April 22-24, 2024)

The study tour in Finland for the DIRNA project was organized in the course of three training days, from 22nd to 24th of April in 2024. The training included altogether 20 participants from the partner institutions: 14 from the Azerbaijani universities and 2 from each partner in Finland, Türkiye and Italy. Thus, the training provided invaluable opportunities for the project partners to build understanding of topics related to open access publishing, as well as the establishment and administration of institutional repositories. Because the study tour in Finland was the last training held outside Azerbaijan, the participants could also reflect the experiences related to the previous study tours, and identify differences and similarities as compared with their own institutions. The training also included a project meeting between the partners, in which the current topics related to the execution of the project were discussed.

The training included discussing the themes of digital well-being and the role of AI in education together with the personnel from the Faculty of Information Technology. Both topics have become increasingly important within the higher education context, especially during the recent years. Dr. Saana Mehtälä provided an introduction to the term ‘technostress’ (= stress related to technology use), as well as its implications to individuals’ leisure and work time. The participants had the opportunity to reflect on their own stressful experiences with ICT use, as well as the strategies to address the various challenges that arise in their everyday life. Together with Dr. Kati Clements, doctoral researcher Antti Ruonala gave a presentation on embracing the educational possibilities of AI, including practical exercises that helped the participants see what can be done using modern AI software. Finally, our collaborators in the Finnish Institute for Educational Research provided the participants with information about the Innovative Learning Environments (ILE) network and their projects related to education and technology.





Discussion of Summer School to be Held within DIRNA Project by Online

On May 3, 2024, the next online meeting of the DIRNA project "Developing Research Capacity through Institutional Repositories Network in Azerbaijan" was coordinated by Khazar University. Representatives of Khazar University and European partners Jyväskylä University (Finland), Università degli Studi dell'Aquila (Italy), Izmir Institute of Technology (Türkiye) participated in the meeting. The meeting was moderated by Raziya Isaeva, director of the University's Development Center. The next step of the project was the discussion of the summer school program to be held at Ganja State University. Head of Quality Assurance Center of Khazar University Ludmila Sotova, deputy director of Library Information Center Aytaj Misgarli also participated in the meeting.

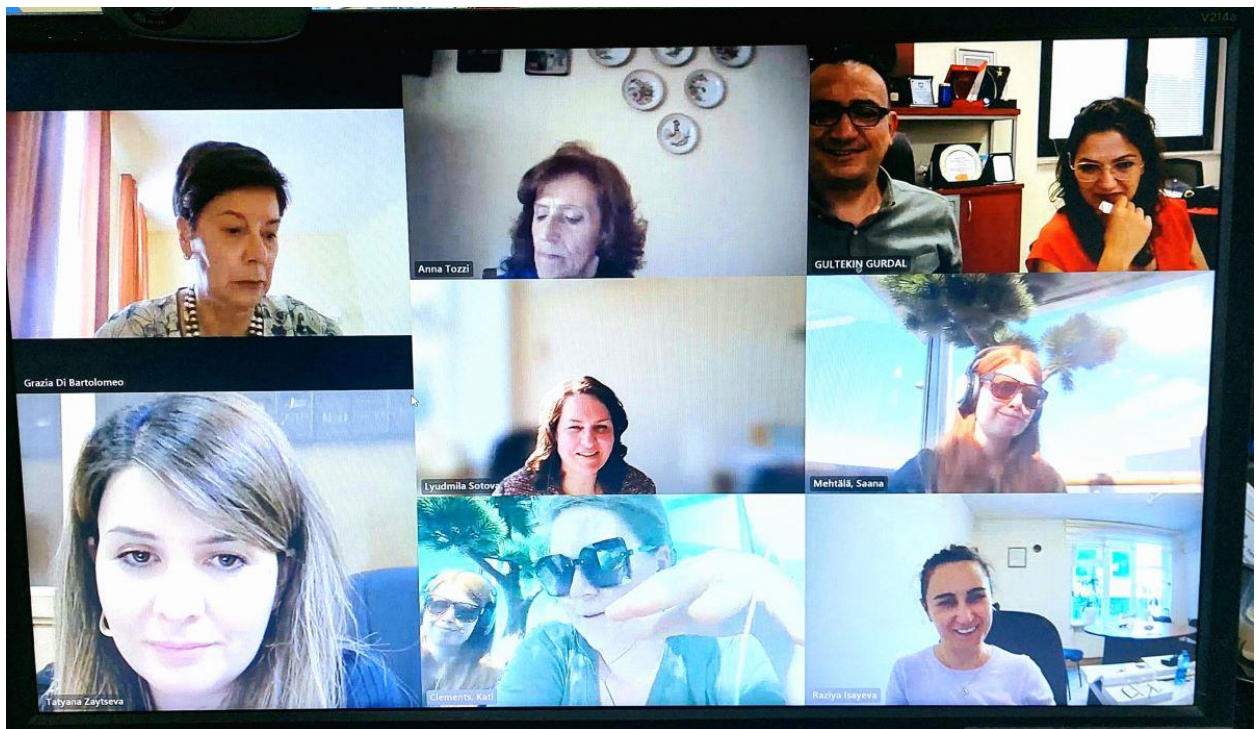
Gultekin Gurdal, the library manager from the Izmir Institute of Technology (Türkiye), presented a sample program for the summer school. Kati Clements from the University of Jyväskylä (Finland), along with Massimiliano D'Innocenzo and Anna Tozzi from Università degli Studi dell'Aquila (Italy), shared their proposals. The schedule for the next online meeting was set, and tasks to be completed before then were outlined.

The DIRNA project, spanning three years (2023-2026) and involving eight higher education institutions in Azerbaijan, aims to enhance the research capacity of universities by creating a Network of Institutional Repositories (Electronic Archives) accessible to all, and by managing research outcomes effectively.

On May 8, 2024, an online meeting was held within the framework of the DIRNA project. The meeting discussed the program of the summer school to be held in Ganja, the identification of the participants and the planning of the work to be done in the future. Representatives from the partner universities provided updates on their work, and the moderator suggested that this information be posted on the DIRNA website and SharePoint.

On May 20, 2024, the next online meeting was held representatives of partner European universities - European partners University of Jyväskylä (Finland), Università degli Studi dell'Aquila (Italy), Izmir Institute of Technology (Türkiye).

On June 3, 2024, an online meeting with Azerbaijani partner universities took place as part of the DIRNA (Developing Research Capacity through Institutional Repositories Network in Azerbaijan) project, coordinated by Khazar University.



Ganja Summer school

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.

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.



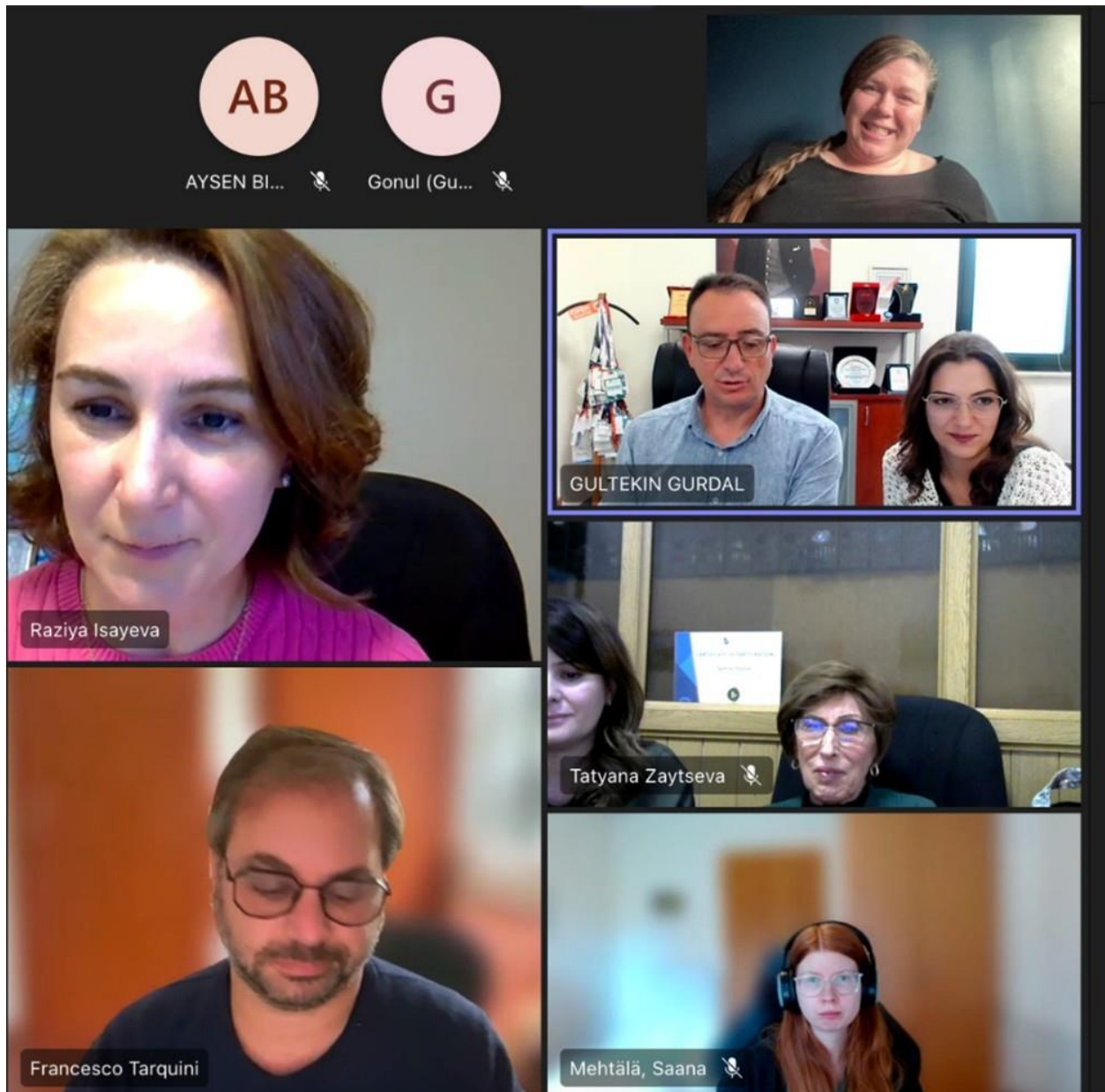






Online Meeting within the DIRNA Project Framework

On October 14, 2024, an online meeting was held between European partners - Izmir Institute of Technology (IZTECH), University of L'Aquila (UNIVAQ), University of Jyväskylä (JYU) - within the framework of the DIRNA project coordinated by Khazar University. During the meeting, Gültekin Gürdal, the library director of Izmir Institute of Technology, reported on the completed and upcoming work related to the "Quality Control" section, which is part of the 7th work package they are responsible for.



Training within the DIRNA project

On October 30, 2024, a training was held within the framework of the DIRNA project coordinated by Khazar University. The online training was conducted by Francesco Tarquini, a staff member from the University of L'Aquila (Italy).

Representatives from all partner universities of the DIRNA project participated in the training, including Baku State University, Azerbaijan Technical University, Academy of the State Customs Committee, Ganja State University, Lankaran State University, Nakhchivan State University, Mingachevir State University, Izmir Institute of Technology (Türkiye), University of L'Aquila, and University of Jyväskylä (Finland). The topic was "Challenges and Barriers in Inclusive Education."

During the webinar, the presenter provided explanations about education systems in Europe and inclusive education, as well as different types of barriers in inclusive education: structural barriers, physical barriers, social barriers, and attitudinal barriers. Additionally, participants were informed about potential barriers they might encounter in inclusive online education and ways to overcome them. Questions were answered at the end of the session.



DIRNA PROJECT
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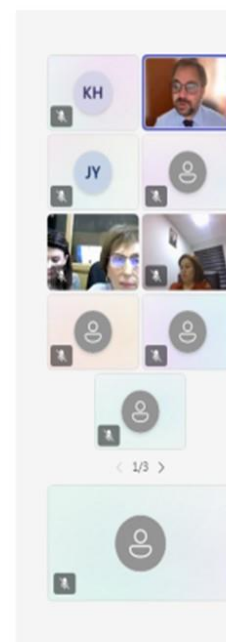
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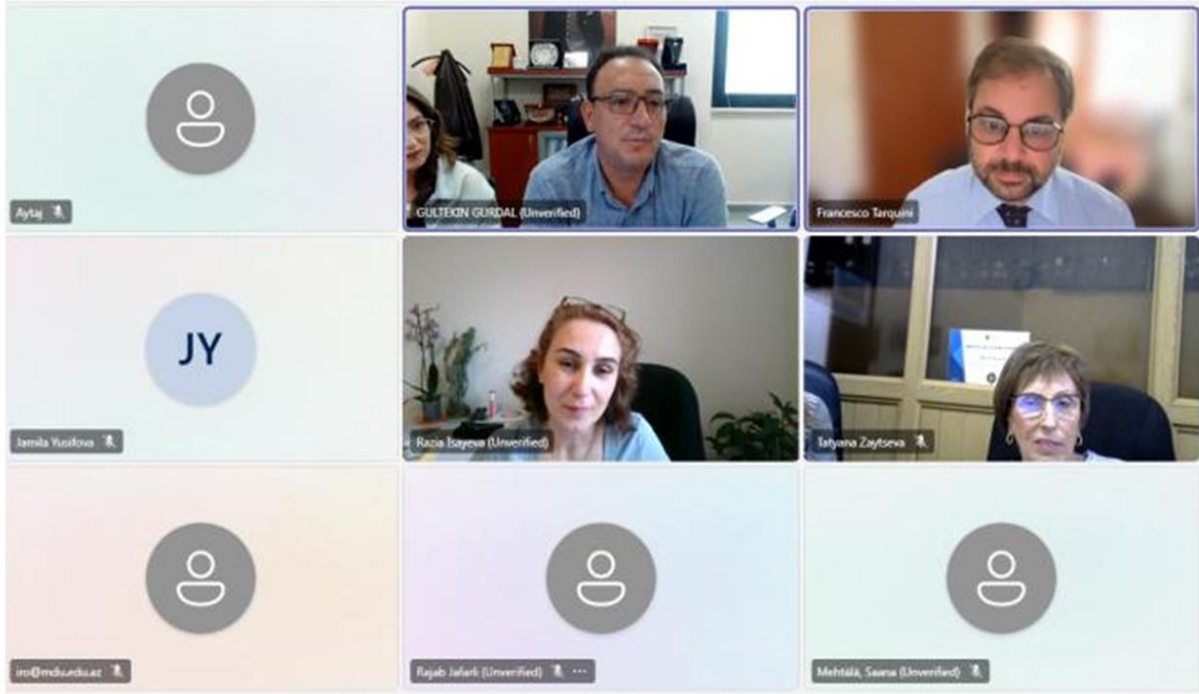


Developing Research Capacity through Institutional Repositories Network in
Azerbaijan
(DIRNA)

Challenges Or Barriers In Inclusive Education

Anna Tozzi & Francesco Tarquini
University of L'Aquila
On line Training
30th October 2024





DIRNA: Training on "Research Methods"

On November 27-28, 2024, a training on "Research Methods" was conducted within the framework of the "Developing Research Capacity through Institutional Repository Network in Azerbaijan" (DIRNA) project, which is coordinated by Khazar University and financed by the European Commission.

24 participants from 8 higher education institutions in Azerbaijan attended the training.

The first day of the training, organized at Khazar University, was led by Dr. Raziya Isayeva, Dean of the School of Economics and Management. She provided information about research design, ethical principles in research, and literature review.

On the second day, Associate Professor Javid Ojagi from the Department of Life Sciences gave information on topics including "Qualitative Research", "Scientific Method" (with examples), "Experimental Designs", and "How We Test Hypotheses in Science".





Event within the DIRNA Project: "Open Access and Science Diplomacy"

On December 4, 2024, an event titled "Open Access and Science Diplomacy" was held at Khazar University within the framework of the Erasmus+KA2 program project "Development of Research Potential through the Network of Institutional Repositories (Electronic Archive) in Azerbaijan" (DIRNA), where Khazar University serves as the coordinator.

The event was attended by rectors, pro-rectors, department and library directors from partner universities and other higher education institutions in Azerbaijan.

The official portion began with a speech by Prof. Academician Hamlet Isakhanli, founder and Chairman of the Board of Directors of Khazar University. Hamlet Isakhanli welcomed the guests and provided information about the project's significance and benefits. The opening speech was then given to Prof. Dr. Yusuf Baran, Rector of Izmir Institute of Technology (IZTECH, Türkiye).

Fatimah Valiyeva, Head of the International Relations Department, delivered a presentation about Khazar University.

Aytaj Misgarly, Deputy Director of the Khazar University Library Information Center, provided detailed information about the DIRNA project, its essence, purpose, activities, and the work done from its inception to the present, as well as its benefits for non-partner universities.

Rector of IZTECH Yusuf Baran's presentation on "Open Access and Science Diplomacy". The rector extensively discussed science policy, its essence, and its role in solving not just local but humanitarian problems, emphasizing the importance of principles of dignity, transparency, and openness.

IZTECH library director Gultekin Gurdal, in her presentation "Transcend the Boundaries of Your Research: Make a Difference with Open Access", discussed the possibility of scientific research being accessible to society beyond specific frameworks, the emergence of artificial intelligence in the scientific world, and its potential future role in scientific research.

During the event, Khazar University Rector Associate Professor Irada Khalilova and Yusuf Baran signed a memorandum of understanding.







Conclusion

During 2023-2024, important events, study tours, online trainings, and educational seminars were held within the framework of the ERASMUS + DIRNA project. The upcoming issues were discussed, and it is planned to establish an institutional repositories platform in each partner Azerbaijani university for the next year. 2024 was a very productive period during the project's activity.