



Grant Agreement number: 2017 - 3683 / --1 - 001  
Reference number: 585646-EPP-I-2017-1-ES-EPPKA2-CBHE-JR



# ARROW

Improvement of Research and Innovation skills  
**IN MONGOLIAN UNIVERSITIES**

**CBHE Virtual Fair**  
**27<sup>th</sup> October 2021**

Presenter 1  
Valentina Grasso  
University of Las Palmas de Gran Canaria,  
Spain

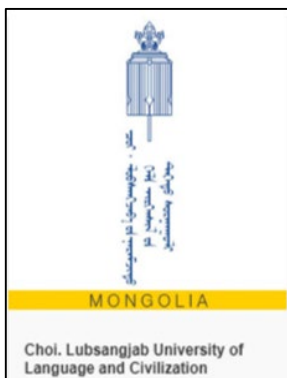
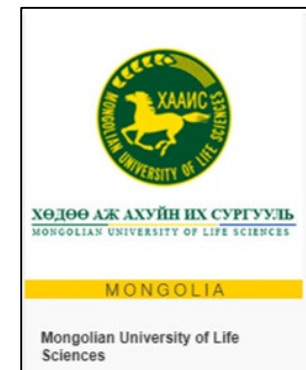
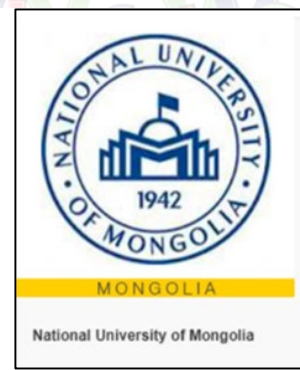
Presenter 2  
Prof. Tungalag Baljir  
Mongolian National University of Education,  
Mongolia



University of Las Palmas de Gran Canaria,  
**Spain** (Coordinator)  
Scientific and Technological Park  
Foundation of ULPGC, **Spain**

University of Szczecin,  
**Poland**

University of Porto,  
**Portugal**



**Mongolian Universities 11 +1:**  
7 public and  
5 private



General objective

Contribute to the promotion and strengthening of the scientific production and results visibility in Mongolian Universities

Specific objectives

Strengthening of the scientific results visibility

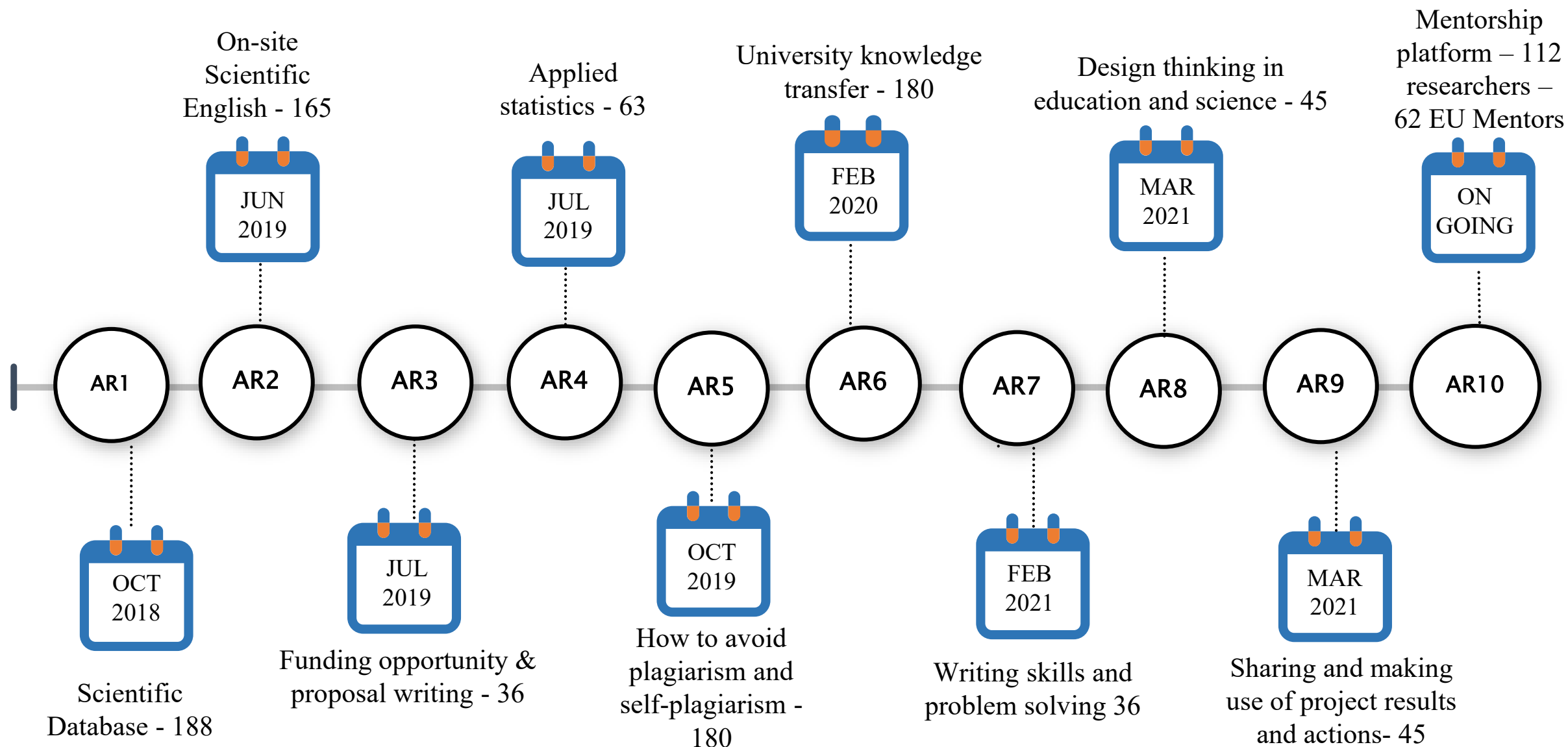


Increase the quantity and Improve the quality of Mongolian scientific publications



Reinforcement of 21<sup>ST</sup> Century soft skills  
(Problem Solving Capacity, Design thinking mentality, Team work, etc.)









As shown in the ARROW Situation Report [WP1], the 11 Mongolian Partner Universities were divided into three groups depending on the scientific production

Mongolian universities showed a heterogeneity as a result of the disparity in the size of the institutions, as well as in the fields of knowledge.

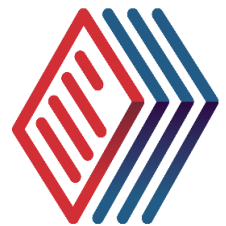
Also, 6 different areas of knowledge were identified as the most relevant in Mongolia



**Mongolia is one of the highest and driest countries in the world.**







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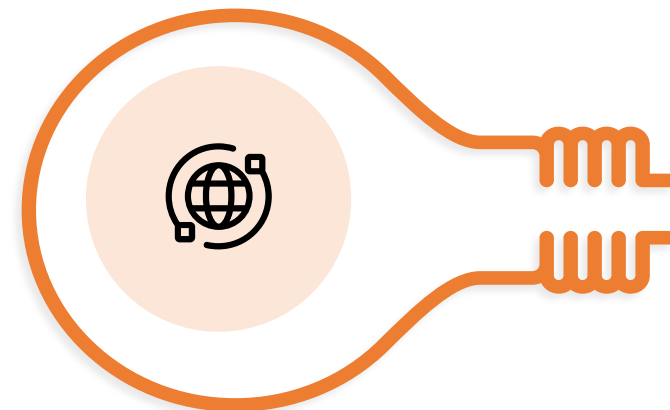


Knowing your  
weaknesses  
is as important as  
knowing your  
strengths

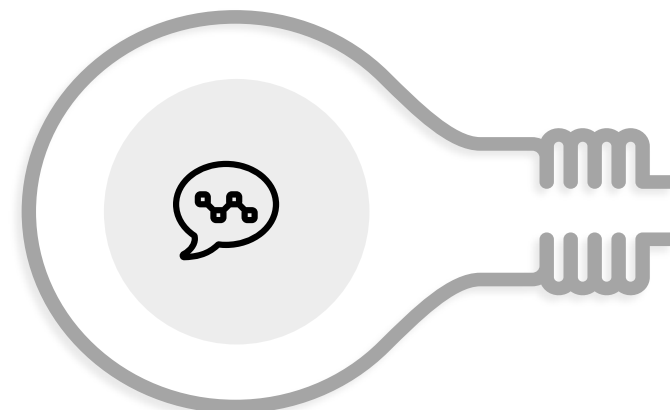
The Creative Commons

The motivation and willingness of  
human resources to collaborate  
The great motivation for  
improvement of the skills.

The need to join international  
research networks and to  
improve research  
cooperation in national and  
international projects



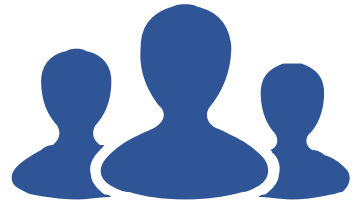
Not enough/adequate  
international research  
materials, equipment,  
licenses and access to  
scientific database



low level of English  
proficiency to publish  
scientific papers







Individual



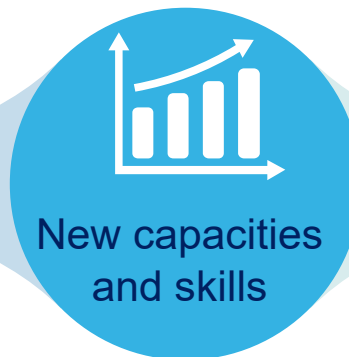
Increased  
cooperation  
among  
ARROW  
partners

Improved  
DATABASE  
And  
APPLIED  
STATISTICS  
knowledge

Up-graded  
Scientific  
English level

Raised  
awareness on  
Plagiarism  
and self-  
plagiarism

Improved  
SOFT SKILLS  
i.e. Problem  
solving  
capacity and  
Design  
thinking  
mentality



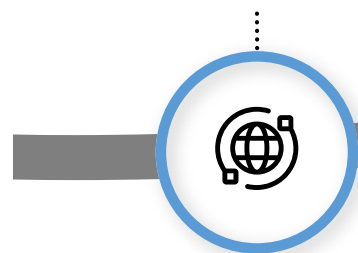


ARROW Network:  
Website and  
Mentorscientist  
platform

Higher number of  
Scientific publications  
and citations in  
Mongolian HEIs

Higher number of  
patents in Mongolian  
HEIs

Increased Results  
Visibility of Mongolian  
researchers





- Number of documents published (Scopus- April 2021)

Institution	2015	2016	2017	2018	2019	2020
Mongolian National University of Education (MNUE)	7	10	8	7	14	19
Mongolian National University Of Medical Sciences (MNUMS)	36	43	43	42	67	70
Mongolian University of Life Sciences (MULS)	13	23	27	21	17	41
National University of Mongolia (NUM)	90	89	106	159	157	170
University of the Humanities (UH)	3	2	4	2	0	0
Ulaanbaatar State University (USU)	0	0	0	6	4	2
University of Finance and Economics (UFE)	0	0	0	0	4	2





- Number of citations (including as co-authors) – Scopus-April 2021

Institution	2015	2016	2017	2018	2019	2020	2021
Mongolian National University of Education (MNUE)	38	41	49	62	70	127	72
Mongolian National University of Medical Sciences (MNUMS)	366	526	727	1041	1292	1612	599
Mongolian University of Life Sciences (MULS)	204	238	245	335	395	457	179
National University of Mongolia (NUM)	780	1021	1089	1335	1675	2219	923
University of the Humanities (UH)	3	11	31	48	29	38	24
University of Finance and Economics (UFE)	0	0	0	0	2	17	6



# REGIONAL & INTERNATIONAL IMPACT

- Stronger and better consideration of Mongolian researchers worldwide
- Internationalization of Mongolian HEIs
- Increased inter and intra-regional cooperation (bilateral, multilateral agreements signed)
- Increased number of scientific publications, citations and patents of Mongolian partners Universities (WoS, Scopus, ResearchGate, etc.);
- Increased number of documents submitted ISI-WoS + Scopus (SCImago)
- Increased interactions between EU and Mongolian academics and researchers
- Enhanced interest of Eu in Mongolia and viceversa





# LOCAL IMPACT



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## PlagScan



Creative  
scientific  
mindset and  
aspiration

Classrooms,  
research  
units, scientific  
halls, etc.  
have been  
equipped.

The challenges of  
research and  
training caused by  
the global  
pandemic have  
been overcome

The use of  
databases and  
applied statistics  
has improved the  
ability to conduct  
research.

**SPSS®**



12 UNIVERSITIES

# NATIONAL IMPACT



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Joint  
discussions &  
meetings

Very active  
Domestic  
network  
created among  
partners

Share  
knowledge &  
information

Present &  
Future  
collaboration

12 UNIVERSITIES



# CONCLUSIONS



ARROW project was a challenge to improve Mongolian research and innovation skills



At local level, as we stated above each individual partners benefited according to their own needs and demands.

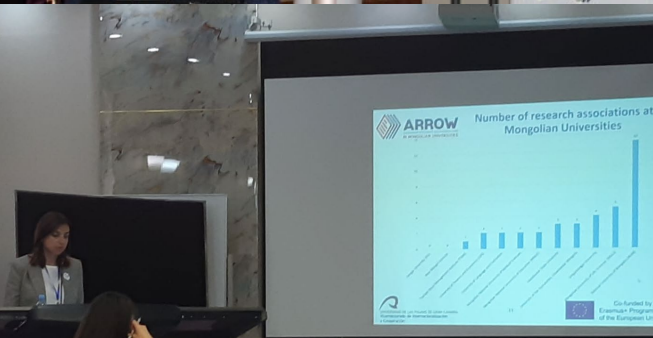
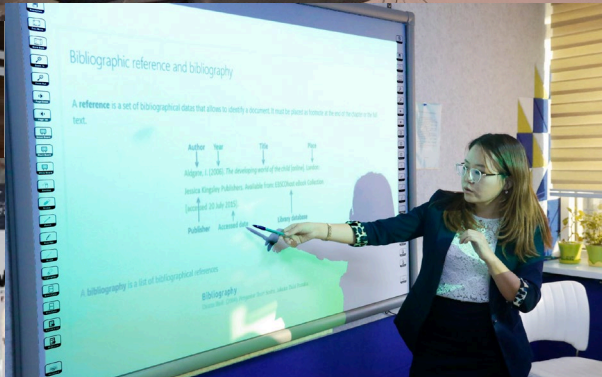


At the national level, the ARROW project was able to mobilize human resources for exchange ideas, knowledge and information.



At the regional level, the ARROW project opened a door to 12 partners HEIs to collaborate internationally and globally.





THANK YOU FOR YOUR ATTENTION

*Obrigada* *Dziękuję Ci*

*Gracias*

Баярлалаа

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