UNIVERSITY of IOANNINA
SCHOOL OF EDUCATION
DEPARTMENT OF EARLY CHILDHOOD EDUCATION
LABORATORY OF NEW TECHNOLOGIES AND DISTANCE LEARNING

INTERNATIONAL CONFERENCE

INTERNATIONAL Ph.D PROGRAM: "ICT in Education: Applications in Natural, Social and Health Sciences"

September 1-3, 2023
Ioannina, Greece

Proceedings

This program is co-financed by the European Union (European Social Fund- ESF) and Greek national funds through the Operational Programme "Human Resources Development, Education and Lifelong Learning", "ESPA 2014-2020", in the context of the project "Support for Internationalization Activities of the University of Ioannina, ICT in Education: Applications in Natural, Social and Health Sciences" – MIS 5162213.

University of Ioannina, Greece.

Department of Early Childhood Education

Laboratory of New Technologies & Distance Learning

INTERNATIONAL CONFERENCE «*ICT in Education: Applications in Natural, Social and Health Sciences»* – Proceedings

1st - 3rd September 2023, Epirus Palace Congress & Spa Hotel, Ioannina Greece.

EDITED BY JENNY PANGE, Professor, University of Ioannina, Greece.

Text editing: Vassiliki Dimitroula, Nikolaos Ntaflos.

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ISBN | 978-960-233-300-6

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Evangelos Evangelou, Ass. Professor, University of Ioannina, Greece

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Introduction

Introduction

The internationalization of higher education plays a pivotal role in fostering academic excellence, research collaboration, and global knowledge exchange. This *Book of Proceedings* presents the outcomes of the conference **"ICT in Education: Applications in Natural, Social, and Health Sciences,"** held on **September 1-3, 2023, in Ioannina, Greece**. The conference was organized under the program **"Support for Internationalization Activities of the University of Ioannina, ICT in Education: Applications in Natural, Social and Health Sciences" – MIS 5162213,"** co-funded by the **European Union (European Social Fund – ESF) and National Resources** within the framework of the **Operational Program "Human Resources Development, Education, and Lifelong Learning 2014-2020" (NSRF 2014-2020).**

This volume brings together research and discussions on the evolving landscape of higher education, with a particular focus on PhD studies. One of the key themes explored is the role of Higher education in overcoming modern educational barriers. The integration of **Information and Communication Technologies (ICT), interdisciplinary methodologies, and innovative learning strategies** is emphasized as essential for empowering young scientists and enhancing their international academic experience. Special attention is given to the experience of the **University of Ioannina, Greece,** particularly the **Laboratory of New Technologies and Distance Learning**, in promoting international PhD programs.

Beyond academic growth, studying abroad offers numerous benefits, including **enhanced career prospects, opportunities for publishing in international journals, participation in global conferences, and collaborations with leading scientists**. Moreover, **international cooperation** in this PhD program enriches the **University of Ioannina** by fostering a diverse learning environment and strengthening global academic networks. Notably, this collaboration includes distinguished professors from **Klaipeda University, Lithuania,**

University of Zilina, Slovakia University of Foggia, Italy, De Montfort University, Leicester, U.K.

This publication serves as a valuable resource for **educators, students, and policymakers**, highlighting the transformative impact of internationalization in higher education.

We extend our sincere gratitude to the University of Ioannina and all contributors for their efforts, which continue to shape the future of international Ph.D studies for academic excellence.

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Program

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Friday, September 01, 2023

17.00-18.00	Registration	
18.00-18.30	**Jenny Pange**, Professor, Coordinator, Department of Early Childhood Education, University of Ioannina, Greece	Presentation of the International Ph.D. Programmes at the University of Ioannina, Greece
18.30-19.30	Welcome Reception	

Saturday, September 02, 2023

09.30-10.00	Welcome Addresses Opening Ceremony, Professor Anna Batistatou, Rector of the University of Ioannina Greece	
10.15-10.30	**Jenny Pange**, Professor, Department of Early Childhood Education, University of Ioannina, Greece	Program presentation "ICT in Education: Applications in Natural, Social and Health Sciences"
10.30-10.45	**Stephen P. D' Alessandro**, Executive Director Advenio eAcademy, Malta	International Cooperation Projects as a Basis for Postgraduate Studies
10.45-11.00	**Silvia Mangialardo**, Head of International Relations Office, Marche Polytechnic University, Italy	International Mobility Opportunities in the Adriatic-Ionian Region: the Erasmus+ Consortium "Uniadrion Italy"
11.00-11.15	**Maria Sakellariou**, Professor, Department of Early Childhood Education, University of Ioannina, Greece	Digital Learning Environment and Successful Higher Education. A research approach.
Coffee Break		
11.30-11.45	**Harilaos Zaragas**, Assoc. Professor, Department of Early Childhood Education, Head of the Department of Early Childhood Education, University of Ioannina, Greece	Technology in Sports Science
11.45-12.00	**Nikoletta Tsitsanoudis-Mallidis**, Assoc. Professor, Department of Early Childhood Education, University of Ioannina, Greece	Greek Diaspora and Doctoral Theses Focused on Greek Language
12.00-12.15	**Eugenia Toki**, Assoc. Professor, Department of Speech Therapy, University of Ioannina, Greece	Technology in Health Sciences

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12.15-12.30	**Ismini Vasileiou**, Assoc. Professor, De Montfort University Leicester, United Kingdom	Cyber as a Meta-Discipline: Education, Awareness, Training
Lunch Break		
13.30-13.45	**Liudmila Rupsiene**, Professor, Department of Pedagogy, University of Klaipeda, Lithuania	Diversity and Commonalities in International Dissertations
13.45-14.00	**Evangelos Evangelou**, Assoc. Professor, Department of Physics, University of Ioannina, Greece	The Use of Microcontrollers in Education
14.00-14.45	**Georgia Gardiakou**, Legal Advisor Education Sector, & **Nikos Fatseas**, Executive of Unit B.2.2, *Ministry of Development and of Investments, Special Program Management Secretariat ECB, E.Y.D. E.P. "Human Resource Development, Education and Lifelong Learning", Unit B2.2: "Management of Tertiary Education & Empowerment operations of the research potential"*	Workshop-Operational Programme «Human Resources Development, Education and Lifelong Learning 2014-2020» ESPA 2014-2020
Coffee Break		
15.00-15.15	**Dimitrios Panagiotou**, Assoc. Professor, Department of Economics, University of Ioannina, Greece	The Economic Impact of ICT on Firms and Economies
15.15-15.30	**Agostino Marengo**, Asst. Professor, University of Foggia, Italy	The impact of AI on Global Learning: A focus on international students
15.30-15.45	**Christos Michalakelis**, Asst. Professor, Department of Informatics and Telematics, Harokopio University of Athens, Greece, President of Study in Greece	Study in Greece and the New Era in the Internationalization of the Greek Universities.
15.45-16.00 ←	**Radovan Madleňák**, Professor Ing., PhD, Department of Communications, University of Žilina, Slovakia	Neuromarketing as an Innovative Approach for Learning Support →

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16.00-16.15	**Christina N. Banti,** Adjunct Lecturer, & **Sotiris K. Hadjikakou,** Professor, Laboratory of Biological Inorganic Chemistry, Department of Chemistry, University of Ioannina, Greece	Perspective Through the International Doctoral Studies Program in Biological Inorganic Chemistry of the University of Ioannina; New Materials for The Development of Innovative Non-Contaminating Contact Lenses
16.15-17.00	Hybrid Workshop: Professors Participating in the PhD Program : "ICT in Education: Applications in Natural, Social and Health Sciences "	
17.00- 18.00	Walking tour at the University of Ioannina	

Sunday, September 03, 2023

09.30-10.30	Poster Session*
10.30-11.00	Discussion - Closing Remarks
11.00-11.30	Coffee Break
11.30-12.15	Interaction Between Students and Professors Participating in the International Ph.D. Programmes of University of Ioannina
12.15-12.30	Award of Participation Certificates
12.30-13.30	Walking Tour at Ioannina City Center
17.00-18.00	Visit to the Museums of Ioannina City

Event Closing

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Eugenia Toki, Assoc. Professor, University of Ioannina, Greece
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***Poster submissions (Ao size) must be sent until 29 august 2023 to:** f.tatsi@uoi.gr, cc: e.tsavou@uoi.gr

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SCAN ME

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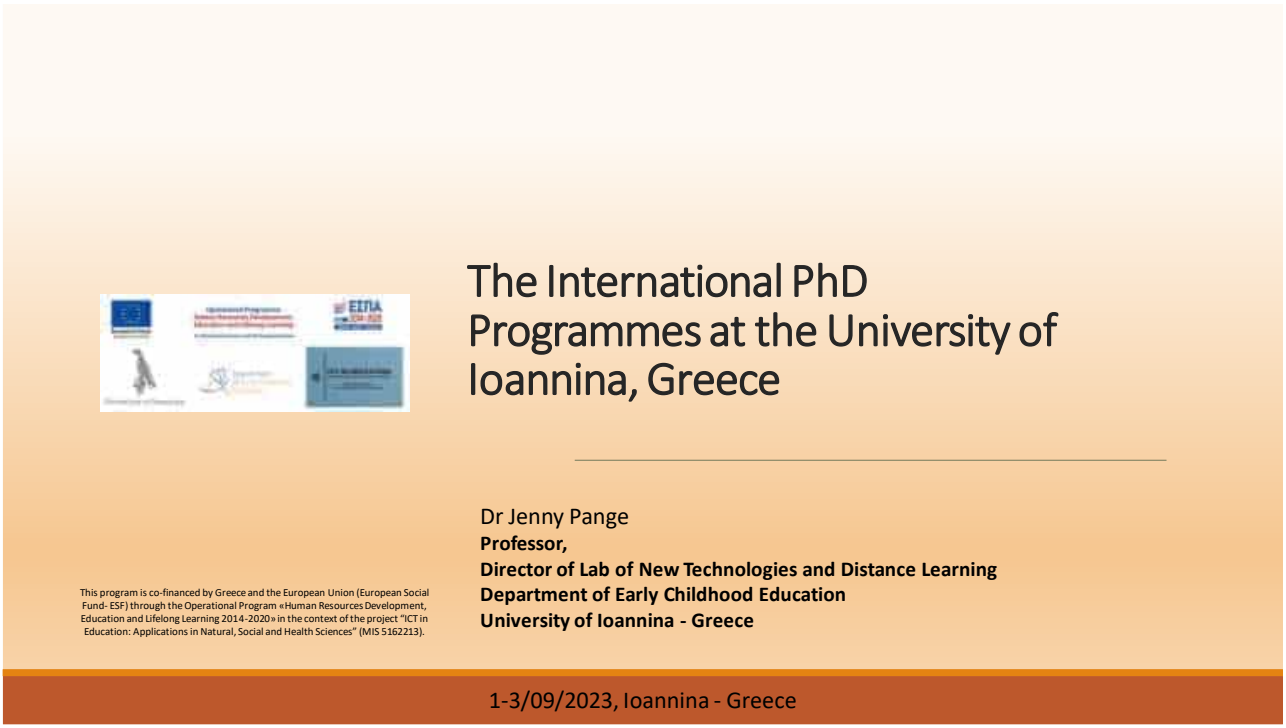

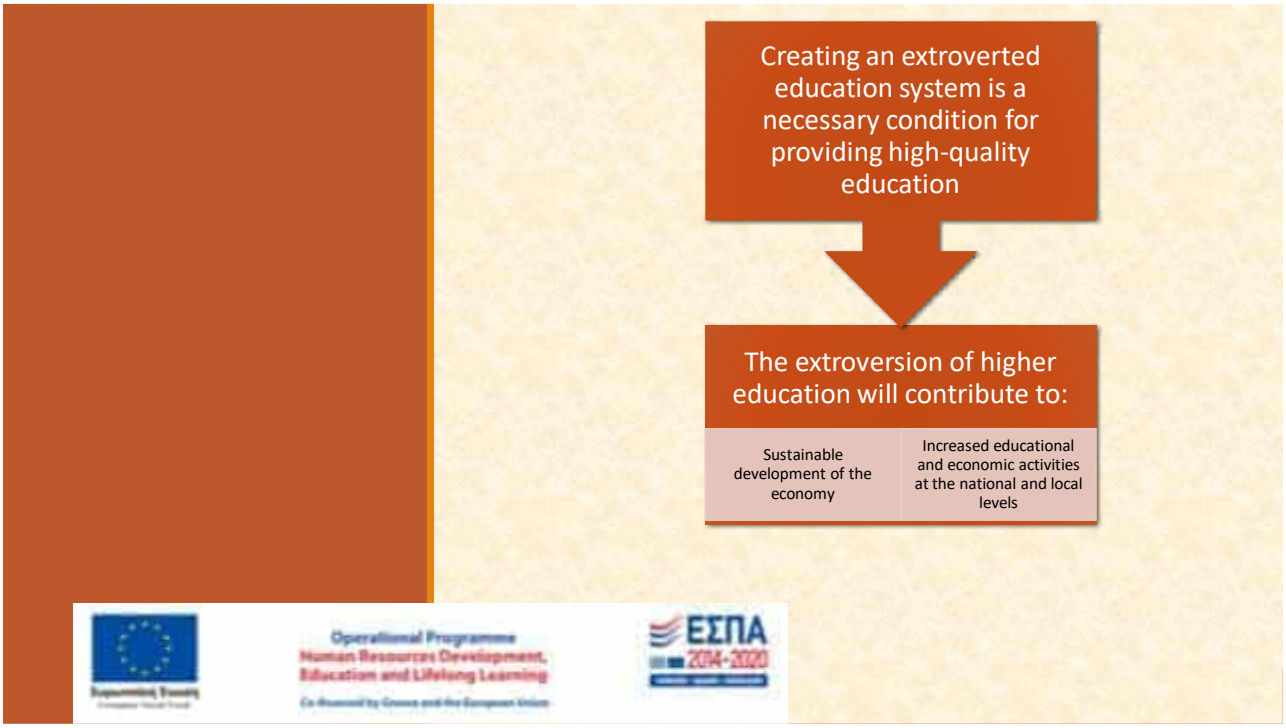

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The development of strategic alliances and the expansion of international educational and research collaborations of Greek universities will ensure:

- high quality education,
- international competitiveness of the studies,
- international recognition of degrees from Greece,
- high positions of Greek universities in the international rankings of HEIs

- Creation of workplaces that attract students from other countries,
- Improving the quality of education,
- Reversing the phenomenon of leakage of research potential abroad (from brain drain to brain gain)

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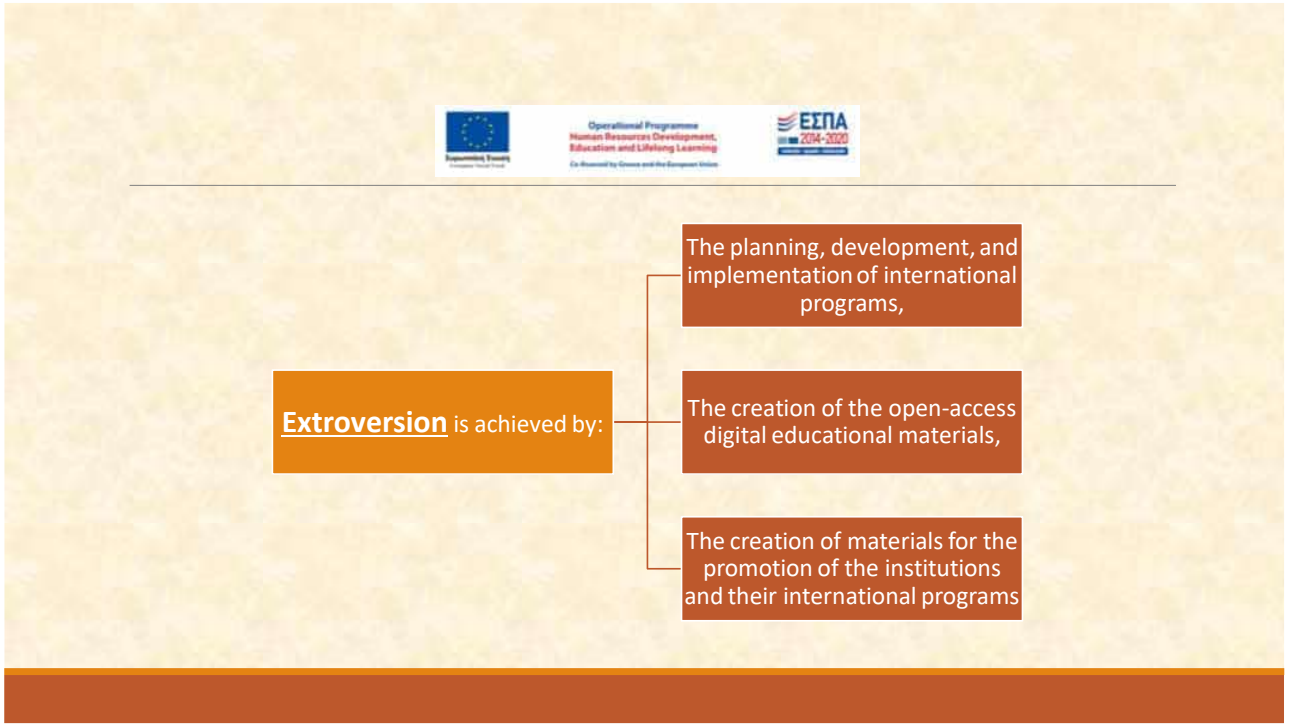

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Internationals doctoral studies

- Removing barriers to attract students from other countries,
- Providing the support to students to live in the country in a safe and organized manner,
- Supporting their successful integration into the educational environment of Greek universities

Support for internationalization of higher education programs from the University of Ioannina

- Creation of undergraduate Foreign Language Study Programs with or without collaborations with recognized Higher Education Institutions abroad in order to turn them into joint programs.

- Creation of Foreign Language Master's Programs of 2nd and 3rd cycle studies with or without collaborations with recognized Higher Education Institutions abroad in order to turn them into joint programs.

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The promotion and use of the scientific potential and infrastructure of ***the University of Ioannina*** will lead to:

1. International cooperation agreements,
2. Research by young scientists,
3. Collaborations with international and local professors,
4. Organization of student support services

5. Strengthening the international recognition of degrees from the University of Ioannina,
6. Improving its position in the international rankings of HEIs,
7. Participation or creation of joint international scientific associations,
8. Organization and participation in international meetings and conferences related to the objectives of their programs

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The most important reasons why students will prefer to obtain a diploma in Greece:

1. The international recognition of the University of Ioannina,
2. The increase of career prospects,
3. Their participation in the collaborations the University has with internationally renowned research centers,
4. The positive correlation between studies and employment,
5. Contact with Greek culture,
6. Increasing the self-confidence of the trainees

Support offices for international students

To ensure the **high quality of services** provided in the implementation of international programs,

Appropriate

support services will be created for the **safe stay** of students in Ioannina,

as well as for the process of their **integration** into the educational environment of the University of Ioannina.

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International certification of programs

To strengthen the **international competitiveness** and

recognition of the international programs of the University of Ioannina,

the quality assurance and

certification procedures for the international programs of Greek universities will be followed

by **recognized international certification bodies**.

Thank you for your attention!

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Program presentation "ICT in Education: Applications in Natural, Social and Health Sciences"

Jenny Pange

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Program presentation "ICT in Education: Applications in Natural, Social and Health Sciences"

DR JENNY PANGE

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DEPARTMENT OF EARLY CHILDHOOD EDUCATION

UNIVERSITY OF IOANNINA - GREECE

1-3/09/2023, Ioannina - Greece

THIS PROGRAM IS CO-FINANCED BY GREECE AND THE EUROPEAN UNION (EUROPEAN SOCIAL FUND- ESF) THROUGH THE OPERATIONAL PROGRAMME «HUMAN RESOURCES DEVELOPMENT, EDUCATION AND LIFELONG LEARNING 2014-2020» IN THE CONTEXT OF THE PROJECT "ICT IN EDUCATION: APPLICATIONS IN NATURAL, SOCIAL AND HEALTH SCIENCES" (MIS 5162213).

Introduction

Today, in the era of the development of ICT with

- intercultural cooperation,
- and the establishment of quality education,

distance no longer plays a dominant role.

Greece, with its rich culture and history, and advantageous geographical position, seeks to

- welcome guests from all over the world to share valuable knowledge,
- establish communications,
- and create innovations.

Picture from: https://en.m.wikipedia.org/wiki/File:Flag-map_of_Greece.svg

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Development of ICT and innovations

ICTs represent a critical area for research today.

New technologies are being used everywhere in formal education, and they address issues in natural, social, and health sciences.

Without the introduction of technology, not any PhD course can be delivered.

Innovation and technology are developing rapidly in Greece today.

The importance of technology will only increase against the backdrop of increasing technological progress.

(Source: https://data.oecd.org/greece.htm#profile-innovationandtechnology).

THIS PROGRAM IS CO-FINANCED BY GREECE AND THE EUROPEAN UNION (EUROPEAN SOCIAL FUND- ESF) THROUGH THE OPERATIONAL PROGRAMME «HUMAN RESOURCES DEVELOPMENT, EDUCATION AND LIFELONG LEARNING 2014-2020» IN THE CONTEXT OF THE PROJECT "ICT IN EDUCATION: APPLICATIONS IN NATURAL, SOCIAL AND HEALTH SCIENCES" (MIS 5162213).

Interdisciplinary approach of PhD programs

Modern science is based on the construction of interdisciplinary networks. Bridges built from one field of science to another

- allow researchers to open new horizons,
- expand the potential of research, and
- reach heights in previously unexplored issues.

The use of similar technologies in different areas allows researchers to

- find patterns and vulnerabilities,
- refine programs, and
- get valuable feedback from specialists in different subjects.

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Academic reputation of Greek universities

The academic reputation of Greek universities is highly valued in the world.

8 Greek universities *(National Technical University of Athens, National and Kapodistrian University of Athens, Aristotle University of Thessaloniki, University of Crete, University of Patras, Athens University of Economics and Business,* ***University of Ioannina****, Technical University of Crete)* were included in the overall global ranking of QS (Quacquarelli Symonds) for 2023-2024 and received high distinctions.

(Source: https://studyingreece.edu.gr/eight-greek-universities-among-the-worlds-top-universities/).

Picture from: https://studyingreece.edu.gr/eight-greek-universities-among-the-worlds-top-universities/

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University of Ioannina

"The University of Ioannina today is a public university characterized by comprehensive development, an outstanding institution with national and international recognition in research and education.

It contributes to the formation of responsible citizens who, through their ethics, education, and professionalism, can transform society and make our future better".

The University of Ioannina cooperates with 26 countries and participates in many international research and educational programs (Source: https://piro.uoi.gr/).

From these collaborations, the university gains invaluable experience and numerous communications with world-famous scientists (Source: https://piro.uoi.gr/).

(Source: https://www.uoi.gr/panepistimio/xairetismos-tis-prytaneos/)

Professor Anna K. Batistatou, Rector

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Laboratory of New Technologies & Distance Learning

The Lab was established in 2003 (Government Gazette 144/12-6-2003), at the Department of Early Childhood Education, School of Education, University of Ioannina, and serves

- main educational and research needs in the fields of ICT,
- educational programs using ICT,
- and scientific research (Methodology, Analysis and Results).

(Source: https://lab-ntodl.ecedu.uoi.gr/index.php/en/)

Lab of New Technologies & Distance Learning

Picture from: https://lab-ntodl.ecedu.uoi.gr/index.php/en/

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Scientific collaborations of the Laboratory of NT & Distance Learning

University of Foggia, Italy

University of Zilina, Slovakia

Klaipeda University, Lithuania

Vytautas Magnus University (Education Academy), Lithuania

Mykolas Romeris University, Lithuania

Kaunas University of Technology, Lithuania

University of Zadar, Croatia

University of Pecs, Hungary

Universidade de Aveiro, Portugal

De Montfort University Leicester, UK

Ivane Javakhisvili Tbilisi State University, Georgia

Alexandru Ioan Cuza University of Iasi, Romania

Usak University, Turkey

Yuri Gagarin State Technical University of Saratov, Russia

Higher School of Technology and Energy of Saint Petersburg State University of Industrial Technologies and Design, Russia

Source: https://lab-ntodl.ecedu.uoi.gr/index.php/el/2020-01-16-09-36-49/23-2020-01-18-21-40-13

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International PhD Candidates of the Laboratory

1) Xia Lianzhong Liu (China)

   PhD thesis theme: "The use of ICT in preschool education: A comparative study between Greece and China".

2) Alina Degteva (Russia) *(in process)*

   PhD thesis theme: "New Technologies and Distance Learning in Greek and Russian Universities".

3) Cooperation with the Universities of Klaipeda and MRU (Lithuania) for the evaluation of PhD theses of Ms. Aelita Skarbalienė and Egidijus Skarbalius.

THIS PROGRAM IS CO-FINANCED BY GREECE AND THE EUROPEAN UNION (EUROPEAN SOCIAL FUND- ESF) THROUGH THE OPERATIONAL PROGRAMME «HUMAN RESOURCES DEVELOPMENT, EDUCATION AND LIFELONG LEARNING 2014-2020» IN THE CONTEXT OF THE PROJECT "ICT IN EDUCATION: APPLICATIONS IN NATURAL, SOCIAL AND HEALTH SCIENCES" (MIS 5162213).

Non-scientific benefits of studying in Greece-UoI

Life experience

Cultural experience

Opportunity to learn Greek

High quality of life in the country

Affordable cost of living in the country

Pleasant Mediterranean climate

New acquaintances

Promotion of diversity

Travel Europe

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Conclusions

Studying at a Greek university has an undeniable advantage.

- This is experience gained in an economically developed country, located geographically quite conveniently and offering opportunities in the study of a strong scientific program.

By joining the Study in Greece programs, students become part of a strong scientific community whose scientific works promote their authors all over the world.

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Thank you for your attention!

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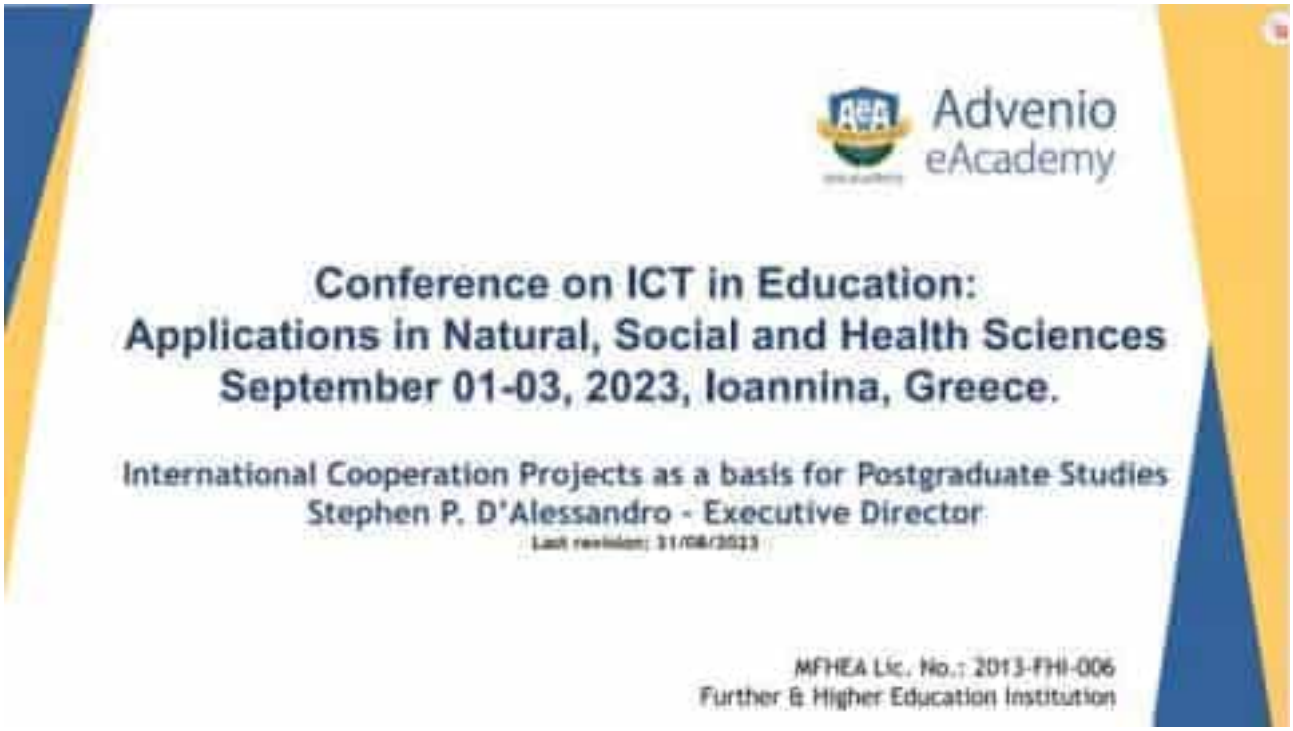
International Cooperation Projects as a Basis for Postgraduate Studies

Stephen P. D' Alessandro
Executive Director, Advenio eAcademy, Malta
sda@aea.academy

This program is co-financed by the European Union (European Social Fund- ESF) and Greek national funds through the Operational Program "Human Resources Development, Education and Lifelong Learning", "ESPA 2014-2020", in the context of the project "Support for Internationalization Activities of the University of Ioannina, ICT in Education: Applications in Natural, Social and Health Sciences" – MIS 5162213.



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Images: www.viewingmalta.com

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About Us:

- Advenio eAcademy is a Further & Higher Education Institution (HEI) based in Malta, (MFHEA Licence number: 2013-FHI-006 and in 2013 was the first HEI in Malta licensed to provide accredited online programmes.
- Advenio eAcademy is the awarding body for a range of online and blended learning accredited programmes in entrepreneurship, social entrepreneurship, SME Management and NGO Management.
- These programmes at EQF/MQF Levels 4 – 7 are offered independently or in collaboration with various partner Higher Educational Institutions, specialist firms and NGOs in Europe.

3

This program is co-financed by the European Union (European Social Fund- ESF) and Greek national funds through the Operational Program "Human Resources Development, Education and Lifelong Learning", "ESPA 2014-2020", in the context of the project "Support for Internationalization Activities of the University of Ioannina, ICT in Education: Applications in Natural, Social and Health Sciences" – MIS 5162213.

"Advenio eAcademy is committed to the design, development and implementation of quality, on-line and blended learning in Entrepreneurship, Social Entrepreneurship and related fields.

These initiatives support executives in the Small & Medium Enterprise (SME) and in the Non-Governmental Organisation (NGO) sectors.

Advenio eAcademy provides quality online programmes and courses to assist executives in running their organisations and in demonstrating their competence and professionalism through EU accreditations.

Advenio eAcademy develops local and international collaborations with Higher Education Institutions, professional bodies, NGOs and private sector firms, to develop customised elearning solutions to meet the requirements of specific market segments and user groups".

4

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About Us:

Advenio eAcademy has been lead partner on a number of Erasmus+ projects since 2017, including:-

(2017-1-MT01-KA203-026960);

Multiple Higher Education Institutions Masters in Entrepreneurship - MHEI-ME,

Master's Degree in Entrepreneurship; 2017-2019; Closed

(2020-1-MT01-KA203-074215),

Integrated RPL & APEL Level 6 Accredited Online Programme for Entrepreneurs - ARPEL4Entrep,

Bachelor's Degree in Entrepreneurship; 2020-2023; Closed

(2021-1-MT01-KA220-HED-000023290),

Social Entrepreneurship eLearning Programme for NGOs - SocEntrep4NGOs,

Undergraduate Higher Diploma in Social Entrepreneurship 2021-2024 Ongoing

5

This program is co-financed by the European Union (European Social Fund- ESF) and Greek national funds through the Operational Program "Human Resources Development, Education and Lifelong Learning", "ESPA 2014-2020", in the context of the project "Support for Internationalization Activities of the University of Ioannina, ICT in Education: Applications in Natural, Social and Health Sciences" – MIS 5162213.

Accredited Programmes offered:

- EQF/MQFLevel 5 - 90 ECTS credits
  - Undergraduate Higher Diploma in SME Management
  - Undergraduate Higher Diploma in Social Entrepreneurship
- EQF/MQFLevel6 with 180 ECTS credits
  - ARPEL4Entrep Bachelor's Degree in Entrepreneurship –
- Master's Degree in Entrepreneurship – EQF/MQF Level 7 with 90 ECTS credits

These online programmes are accredited by the Malta Further & Higher Education Authority (MFHEA) within the Malta & European Qualifications Frameworks

6

This program is co-financed by the European Union (European Social Fund- ESF) and Greek national funds through the Operational Program "Human Resources Development, Education and Lifelong Learning", "ESPA 2014-2020", in the context of the project "Support for Internationalization Activities of the University of Ioannina, ICT in Education: Applications in Natural, Social and Health Sciences" – MIS 5162213.

Integration of research with international projects

- Promote your area of expertise as a valuable addition to the project enhancing the credibility and reputation of the project
- Highlight your areas of competence and experience and their relevance to the international project
- Focus on the application of the project research opportunity to real-world cross border solutions that provide unique deliverables to the project

7

This program is co-financed by the European Union (European Social Fund- ESF) and Greek national funds through the Operational Program "Human Resources Development, Education and Lifelong Learning", "ESPA 2014-2020", in the context of the project "Support for Internationalization Activities of the University of Ioannina, ICT in Education: Applications in Natural, Social and Health Sciences" – MIS 5162213.

Integration of research with international projects

Continued

- Use the project research opportunity to collect and analyse cross border data to provide unique perspectives to your research study and the project
- Make yourself indispensable – be generous with your contributions and look for opportunities to work with and support different members of the project team
- Make yourself a key part of the project deliverables – plan for development of research study elements as part of the project underlying research as well as the dissemination activities

8

This program is co-financed by the European Union (European Social Fund- ESF) and Greek national funds through the Operational Program "Human Resources Development, Education and Lifelong Learning", "ESPA 2014-2020", in the context of the project "Support for Internationalization Activities of the University of Ioannina, ICT in Education: Applications in Natural, Social and Health Sciences" – MIS 5162213.

Integration of research with international projects

Continued

- Develop your area of expertise - move outside your comfort zone, seek to contextualise the research
- Develop your network of organisations operating in your field of study.
- Plan to use your involvement in the project as a platform for further study or work opportunities to develop your area of specialisation.

9

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Thank you for your attention.

- Contact details:-
  - Advenio eAcademy
  - URL: www.aea.academy
  - Email: sda@aea.academy

10

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International Mobility Opportunities in the Adriatic-Ionian Region: the Erasmus+ Consortium "Uniadrion Italy"

Silvia Mangialardo

Head of International Relations Office, Marche Polytechnic University, Italy

s.mangialardo@univpm.it

This program is co-financed by the European Union (European Social Fund- ESF) and Greek national funds through the Operational Program "Human Resources Development, Education and Lifelong Learning", "ESPA 2014-2020", in the context of the project "Support for Internationalization Activities of the University of Ioannina, ICT in Education: Applications in Natural, Social and Health Sciences" – MIS 5162213.

International mobility opportunities in the Adriatic-Ionian Region: the Erasmus+ Consortium «Uniadrion Italy»

Silvia Mangialardo
Head of International Relations Office
Marche Polytechnic University (Ancona – Italy)

International Conference
International PhD Programmes
Ioannina, 1-3 September 2023

Genesis of the Consortium

- **Network of relationships,** built and structured over more than 20 years
- **Institutional involvement** of partner universities
- Recognition of UniAdrion as a ***key implementer*** of the EUSAIR Action Plan, approved in 2014
- UniAdrion and its members have broad **experience** in the implementation of mobility and international cooperation projects in the Adriatic-Ionian area

This program is co-financed by the European Union (European Social Fund- ESF) and Greek national funds through the Operational Program "Human Resources Development, Education and Lifelong Learning", "ESPA 2014-2020", in the context of the project "Support for Internationalization Activities of the University of Ioannina, ICT in Education: Applications in Natural, Social and Health Sciences" – MIS 5162213.

WHAT IS UNIADRION?

The association of Universities of the Adriatic-Ionian area (UniAdrion) is a **non-profit international association open to Universities and Research centers from the Adriatic-Ionian basin**: Albania, Bosnia and Herzegovina, Croatia, Greece, Italy, Montenegro, North Macedonia, San Marino, Serbia, and Slovenia.

10 Countries
53 Universities
900K Students
49K Staff

UniAdrion is constantly growing, with new members joining every year

PURPOSES and ACTIVITIES

→ Collaboration between **Universities and Research centres** with the aim of **strengthening international cooperation** and favouring the progress of culture, science, training and research in the countries of Adriatic-Ionian basin

→ The association operates **in favour of European integration and EU widening,** improving safety standards and respect of the law, promoting equal opportunities for men and women and spreading the culture of peace

→ The association support the **implementation of the Strategy for the Adriatic-Ionian Region (EUSAIR)**, approved by the European Council in 2014.

OUR ACTIVITIES

- training courses
- post-graduate diplomas
- summer schools
- joint research projects
- international conferences
- surveys
- databases for didactic initiatives and scientific research

This program is co-financed by the European Union (European Social Fund- ESF) and Greek national funds through the Operational Program "Human Resources Development, Education and Lifelong Learning", "ESPA 2014-2020", in the context of the project "Support for Internationalization Activities of the University of Ioannina, ICT in Education: Applications in Natural, Social and Health Sciences" – MIS 5162213.

Members (53)

UniAdrion

ALBANIA (7)
Agriculture University of Tirana
Catholic University of Tirana (Lady of Good Counsel)
University of Elbasan
Luarasi University
University of Medicine
Shkodra University "Luigj Gurakuqi"
University of Tirana
University of Gjirokaster
CROATIA (3)
University of Split
University of Zadar
University of Reijka
BOSNIA AND HERZEGOVINA (6)
University of Banja Luka
Džemal Bijedić University
University of East Sarajevo
University of Mostar
University of Sarajevo
University of Zenica
GREECE (4)
University of Ioannina
Agriculture University of Athens
Ionian University
University of Patras
MONTENEGRO (3)
University of Montenegro
Mediterranean University of Montenegro
University of Donja Gorica
NORTH MACEDONIA (1)
University of St. Kliment Ohridski
University of Goce Delcev, Stip

SAN MARINO (1)
University of San Marino

ITALY (19)
Marche Polytechnic University
University of Bari
University of Basilicata
University of Chieti - Pescara
University of Urbino
University of Bologna
University of Camerino
University of Macerata
University of Messina
University of Molise
University of Perugia
University of Padua
University of Ferrara
University of Milan - Bicocca
University of Salento
University of Teramo
University of Trieste
University of Udine
University of Cà Foscari
SERBIA (4)
University of Belgrade
University of Niš
University of Novi Sad
University of Arts in Belgrade
SLOVENIA (3)
University of Ljubljana
University of Maribor
University of Primorska

...new members join UniAdrion every year

Organization

UniAdrion

President
Prof. Dragan Ljutić
Rector University of Split
CROATIA

Past President
Prof. Jusuf Duraković
Rector of University of Zenica
BOSNIA-HERZEGOVINA

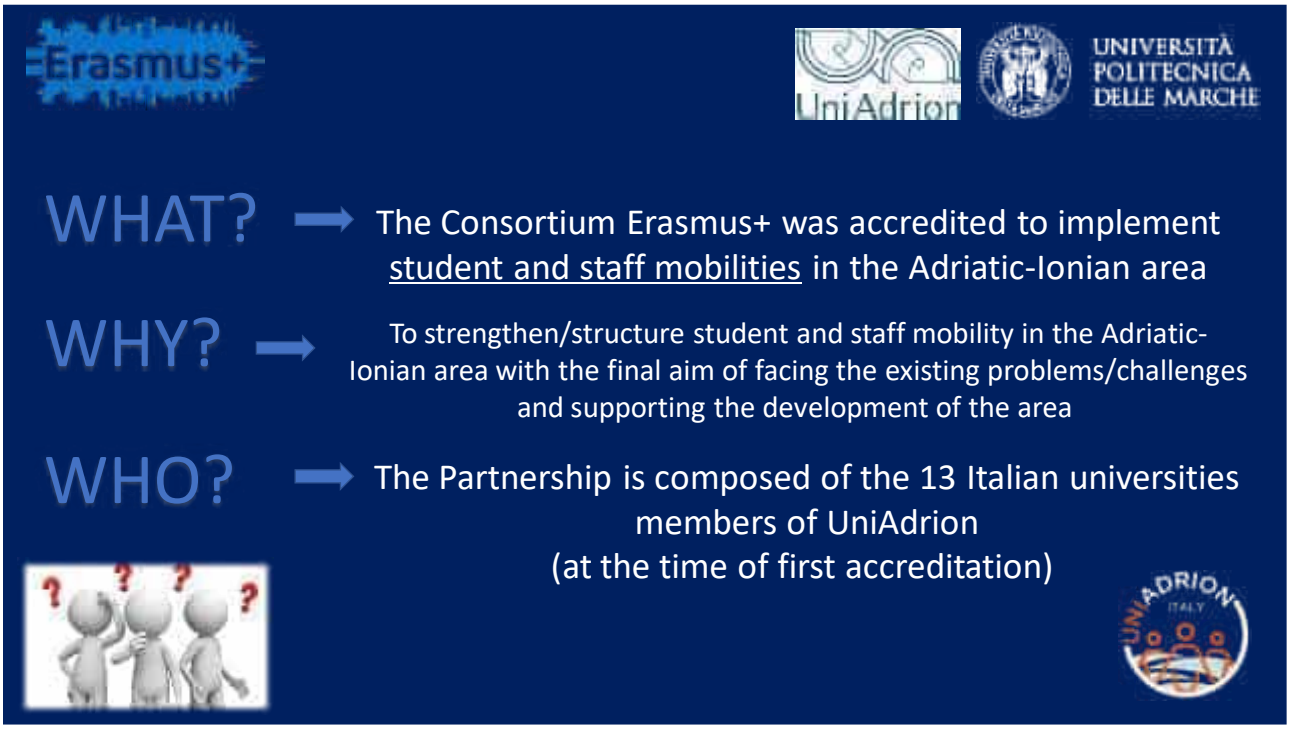
Secretary General
Prof. Andrea Perna
Polytechnic University of Marche
ITALY

Future President
Prof. Anna K. Batistatou
Rector University of Ioannina
GREECE

General Assembly (Rectors from each University)

Governing Board (one istitution representing each country)

This program is co-financed by the European Union (European Social Fund- ESF) and Greek national funds through the Operational Program "Human Resources Development, Education and Lifelong Learning", "ESPA 2014-2020", in the context of the project "Support for Internationalization Activities of the University of Ioannina, ICT in Education: Applications in Natural, Social and Health Sciences" – MIS 5162213.



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2015

The Erasmus+ Programme extended the mobilities to extra EU countries (Partner Countries)

Italian universities started to implement student and staff mobilities with extra EU countries from the Western Balkans and to submit projects to acquire funds, which are granted on a competitive basis

Main critical issues:

- **NO structured mobility** (Patchy mobilities)
- **NO continuity** (Funds not granted every year to the same universities over the period 2015-2020)
- **NO awareness** (Why mobilities to Albania and not to the USA? Why could mobilities in the Adriatic-Ionian area be important?)

The Erasmus+ Consortium «Uniadrion Italy» is an Erasmus+ project - Key Action 1: **Learning mobility for individuals**

Erasmus+ Call 2020

KA108 → submitted request for the Consortium ACCREDITATION

KA103 → submitted request for student and staff MOBILITY SCHOLARSHIPS Programme Countries

KA107 → submitted request for student and staff MOBILITY SCHOLARSHIPS Partner Countries

Croatia, Greece, Serbia, Slovenia

Albania, Bosnia-Herzegovina, Montenegro

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The Consortium is composed of the 13 Italian universities members of UniAdrion (at the time of first accreditation)

1. Marche Polytechnic University (**Coordinator**)
2. University of Bologna
3. University of Camerino
4. University of Ferrara
5. University of Macerata
6. University of Messina
7. University of Milan – Bicocca
8. University of Padua
9. University of Teramo
10. University of Trieste
11. University of Udine
12. University of Urbino
13. University of Venice Ca' Foscari

Geo-political changes in the Adriatic-Ionian area

2000 → «Ancona Declaration»
strengthening regional cooperation helps to promote political and economic stability, thus creating a solid base for the process of European integration

1999/2000 → the 3 Fora of civil society started to operate in the area

2014 → The European Council officially recognized the third European macro-region: *work together on the areas of common interest for the benefit of each country and the whole region*

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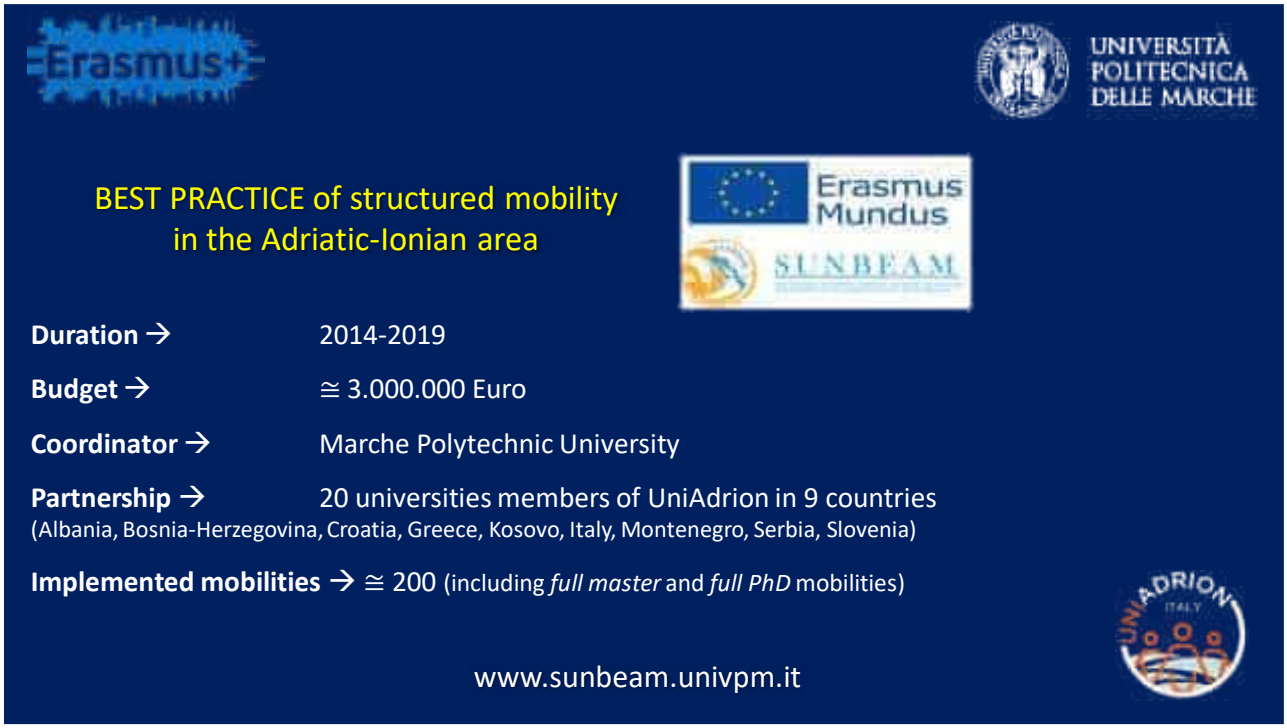

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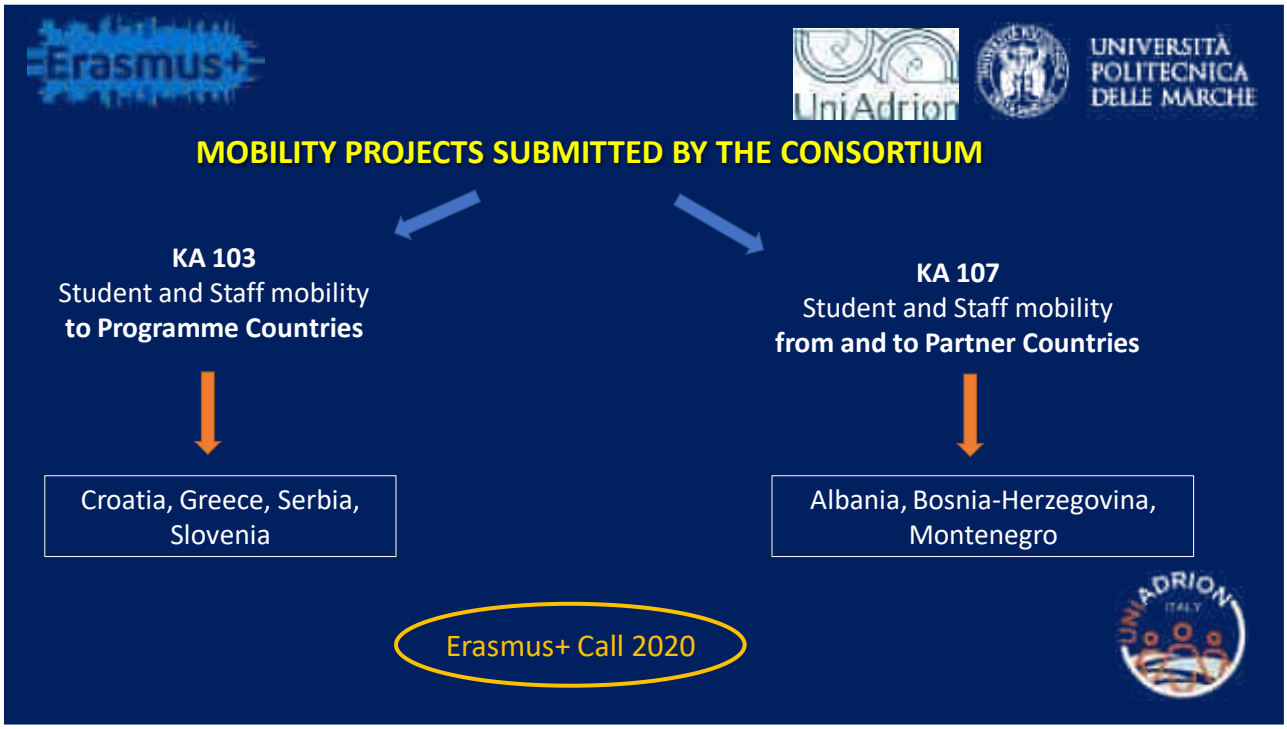

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DURATION OF THE PROJECTS

- **KA 103** → 24 months → End of activities → ~~31 May 2022~~
- **KA 107** → 36 months → End of activities → 31 July 2023

Communication by the Italian National Agency dtd 15 January 2021

KA103 projects referring to the Erasmus+ Call 2020 have been extended till **31 May 2023**

APPROVED BUDGET

KA 103 → 224.960,00 €

KA 107 → 845.300,00 €

This program is co-financed by the European Union (European Social Fund- ESF) and Greek national funds through the Operational Program "Human Resources Development, Education and Lifelong Learning", "ESPA 2014-2020", in the context of the project "Support for Internationalization Activities of the University of Ioannina, ICT in Education: Applications in Natural, Social and Health Sciences" – MIS 5162213.

N. OF GRANTED SCHOLARSHIPS

KA103

ACTIVITY	N. OF PARTICIPANTS
SMP - Student mobility for traineeships	40
SMS - Student mobility for studies	40
STA - Staff mobility for teaching	40
STT - Staff mobility for training	40
Tot.	**160**

N. OF GRANTED SCHOLARSHIPS

KA107

	ALBANIA	BOSNIA-HERZEGOVINA	MONTENEGRO	Tot.
SMS - Student mobility for studies – Outgoing	25	25	12	62
SMS - Student mobility for studies - Incoming	25	25	12	62
STT - Staff mobility for training – Outgoing	7	7	7	21
STT - Staff mobility for training – Incoming	7	7	5	19
STA - Staff mobility for teaching – Outgoing	7	7	7	21
STA - Staff mobility for teaching – Incoming	7	7	5	19
SMP - Student mobility for traineeships – Outgoing	7	7	7	21
SMP - Student mobility for traineeships - Incoming	7	7	7	21
Tot.	**92**	**92**	**62**	**246**

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KA107 - Involved universities

ALBANIA:
- University of Tirana
- European University of Tirana
- Agricultural University of Tirana

BOSNIA-HERZEGOVINA
- "Dzemal Bijedić" University of Mostar
- University of Sarajevo
- University of Banja Luka

MONTENEGRO
- University of Montenegro

After 2020…

New Erasmus+ Programme 2021-2027

=

New accreditation

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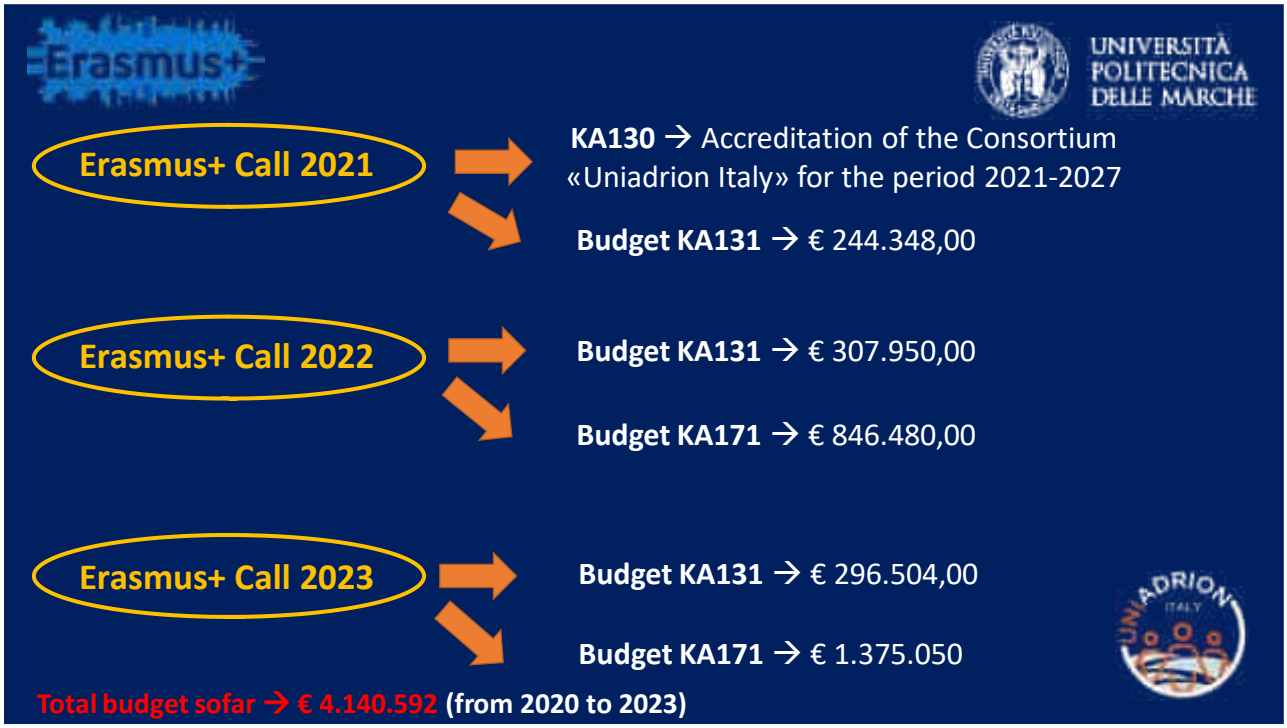

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STUDENT MOBILITIES

Calls already published or to be published soon…

- Mobilities for study
- Mobilities for **traineeships** (also in connection with other projects funding traineeships, such as AI-NURECC PLUS, WESTERN BALKANSHIP)
- Mobilities for thesis preparation
- Mobilities for PhD students

STAFF MOBILITIES

Calls to be published soon… with a specific focus on:

- **STA – Mobility for Teaching**
- **STT – Mobility for Training** → Staff Weeks
  - **Bologna** → June 2022
  - **Podgorica** → March 2023
  - **Tirana** → June 2023
  - **Bosnia-Herzegovina** → July 2023
  - **Marche** (Ancona-Urbino-Macerata-Camerino) → July 2023

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KA103/131 FOREIGN PARTNERS are invited to:

- Incoming mobilities from Italian partners of the Consortium → accept requests for amendments* of existing Erasmus Inter-Institutional Agreements in terms of number of available places and/or new fields of study/sudy cicles
- Outgoing mobilities to Italian partners of the Consortium → disseminate information about the Consortium among your own students/staff
- Collaborate with the Consortium to better exploit its potential and to achieve its objectives
- **Coordinate with the institutions in your own country to explore the possibility of duplicating the Consortium in your country**

*Amendments do not need to result in the signature of a new agreement, they may be done even via informal email

KA107/171 FOREIGN PARTNERS are invited to:

- Incoming mobilities from Italian partners of the Consortium → accept requests for amendments* of existing Erasmus Inter-Institutional Agreements in terms of number of available places and/or new fields of study/sudy cicles + open new Agreements if necessary
- Outgoing mobilities to Italian partners of the Consortium → select students/staff according to the number of available scholarships and disseminate information about the Consortium among your own students/staff
- Collaborate with the Consortium to better exploit its potential and to achieve its objectives

*Amendments do not need to result in the signature of a new agreement, they may be done even via informal email

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Digital Learning Environment and Successful Higher Education. A research approach.

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Digital Learning Environment and Successful Higher Education. A Research Approach

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Abstract

Technological progress has brought digital transformation in the educational sector, as in all areas of our lives. Space and time limitations in teaching and learning processes have been overcome with digital transformation in the field of education. Online environments allow educators to teach and interact with their students, providing them with a variety of learning opportunities only if they are effective, flexible, properly designed and have defined goals. In this research, the views of 376 university student teachers of the Department of Early Education of the University of Ioannina, were investigated on issues related to distance education in Higher Education during the period of Covid-19. University student teachers answered questions about the educational methods and digital materials used by their professors, the provision of equal opportunities for participation and engagement in the course. The results of this research have highlighted university students' satisfaction with the quality of the provided teaching but have also stressed the lack of interaction both among students and between students and their professors and the difficulties in the exams. An effective online teaching and learning is related to the development of the student, as well as with the supportive and productive interactions that mediate between students and teachers, but also between students. The introduction of innovative and alternative ideas in the field of education is considered imperative, with the aim of enhancing the intended results in the educational process, at the same time as utilizing technology and providing instruction using it.

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Keywords: Digital Learning Environment, Higher Education

1. Introduction

Technological progress has brought digital transformation in the educational sector, as in all areas of our lives. Space and time limitations in teaching and learning processes have been overcome with digital transformation in the field of education. Students can access the information sources they need via the Internet (Yilmaz et al., 2020). Online environments allow educators to teach and interact with their students, providing them with a variety of learning opportunities. Online environments in order to be effective, they must be flexible, properly designed and have defined goals (Bozkurt & Sharma, 2020). Distance learning and teaching it implies a specific process that it is obvious in roles, abilities and professional development approaches (Ní Shé et al., 2019).

In Higher Education, distance/digital learning seems to play a special role, which also affects other forms of learning, such as blended learning (combination of distance and live teaching with the use of technologies) and traditional teaching and learning. Distance learning in university institutions can be implemented in a variety of ways. Several studies have compared face-to-face instruction (live traditional instruction) with online learning and/or blended/blended learning to try to determine which of these formats provides the highest learning outcomes, creates more satisfied students, or has the highest course completion rate. This type of research is student-oriented and attempts to highlight the positives and negatives of each teaching model from a learning perspective. However, in addition to these studies, several researchers have shown interest in professional education and training of teachers and have focused on factors that influence learning experiences in distance learning, online learning and blended/blended learning (Nortvig et al, 2018 · Oliveira et al, 2018). Some factors that seem to have a decisive effect are: a) the presence of the teacher in online learning environments, b) the interactions between students, teachers and teaching content and c) the combination of online and offline activities, as well as the combination between activities related to Universities and Internships (Nortvig et et al., 2018).

According to the literature review, a large number of studies aim to determine whether computer-based learning in the form of distance/ distance learning, blended/blended learning or hybrid learning is better than traditional learning (face-to-face/ through live teaching), in terms of learning outcomes and student satisfaction. Researchers, educators, and educational decision makers are eager to explore and implement the format that will bring about the best outcomes for both students and educational institutions (Nortvig et al., 2018 · Pellas & Kazandis, 2015).

The framework, which identifies the critical elements for a 'successful higher education' in a digital environment (Garrison et al., 2000: 87) emphasizes that learning is the result of the interaction of three factors: a) the social factor, which is related to the ability of the participants to interact emotionally with a community, to create a collaborative environment and develop

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interpersonal relationships, b) the cognitive factor or the extent in which participants are able to construct meaning through sustained reflection and communication in a community of inquiry and c) the educational factor, which is related to planning, facilitation and direction of social and cognitive processes, with the aim of substantial learning results (Garrison et al., 2000· Anderson et al, 2001). A general pedagogical framework, an explicit scaffolding of learning activities (via platform podcast or webinars), the appropriate use of digital media, the practical assessment tasks and communication between students and teaching staff is vital to the learning experience of students in a learning environment (Tomas et al., 2015).

The active presence of the teacher combined with the quality content of the courses can facilitate the successful involvement of students in online courses (Moore, 2014 · Swan & Shih, 2014). It has been shown that the successful presence of the teacher in online courses can be achieved in several ways, such as: a) through regular communication with students, b) continuous feedback and c) critical dialogue shaped by the teacher (Gray & DiLoreto, 2016). Students must interact online with the professor, with other students attending the course and with course content, so that the requested interpersonal communication that takes place in regular classrooms can also be achieved outside the traditional context (Martín-Rodríguez et al., 2015 · Southard et et al., 2015). Such interaction, which produces the same results as real-life interaction, can only be achieved in a supportive learning environment, in which teachers combine audio, video, synchronous and asynchronous discussions, hands-on activities, and other online tools to engage interest. of students (Gray & DiLoreto, 2016).

According to Hall & Villareal (2015), educators should promote the active participation of students in the educational process, encourage interaction both between students and between students and teachers, but also enhance the cooperation of participants who attend an online lesson. To achieve such a goal, educators should provide opportunities for students to put into practice the theory they have studied and discuss the practical dimensions of the profession, which they may not have understood well online (Hall & Villareal, 2015 · Sidebotham et et al., 2014). In general, teachers are recommended to be readily available to students both online and in person, in order to avoid feelings of isolation (Hall & Villareal, 2015 · Hunt, 2015 · Israel, 2015).

2. Methodology of the research

2.1 Purpose of the research

The aim of this study is to formulate the important parameters related to distance education and e-learning in higher education and to draw useful conclusions about the attitudes, knowledge, opinions and skills of students during the pandemic period (covid-19).

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2.2. Research Sample

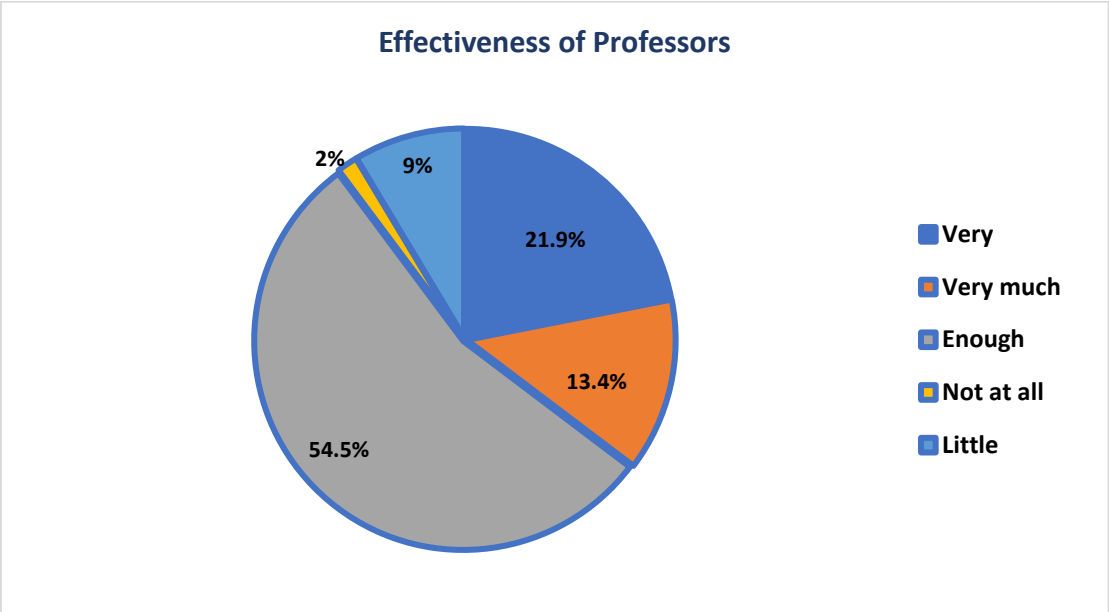
In this research, the views of 376 student teachers of the Department of Early Education of the University of Ioannina, were investigated on issues related to distance education in Higher Education during the period of Covid-19. Student teachers answered questions about the educational methods and digital materials used by their professors, the provision of equal opportunities for participation and engagement in the course.

2.3 Research tools

A survey research through a questionnaire was considered to be the appropriate method of data collection to record the perceptions of a representative sample of students of the Department of Early Childhood Education on the issues of distance education for children with special educational needs and/or disabilities. After an in-depth study of the relevant literature, a questionnaire with "open" and "closed" type questions was formulated.

2.4 Presentation of the survey results

Do you think that your teachers were effective in the education provided?



Quality Results: Teacher effectiveness in distance education

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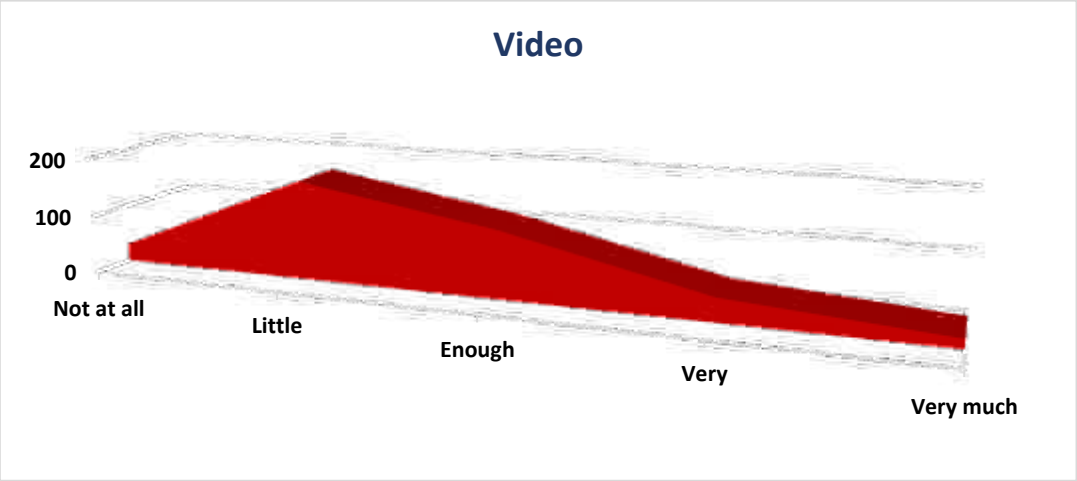
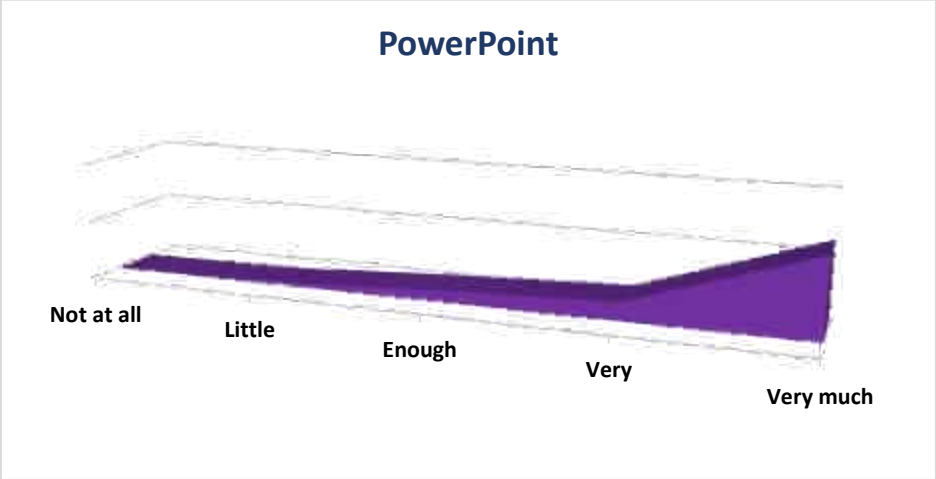
According to the majority of students 54.5% (N: 204), the professors were quite effective in the provided education, very for 21.9% (N: 82), very much for 13.4% (N: 50), little for 9% (N: 32), whereas only 1.6% (N: 6) answered not at all.

Indicate to what extent your teachers used the following instructional methods more in distance education compared to face-to-face instruction.



The vast majority of participating students (N: 170) stated that their professors used a little video in distance education, compared to face-to-face teaching.



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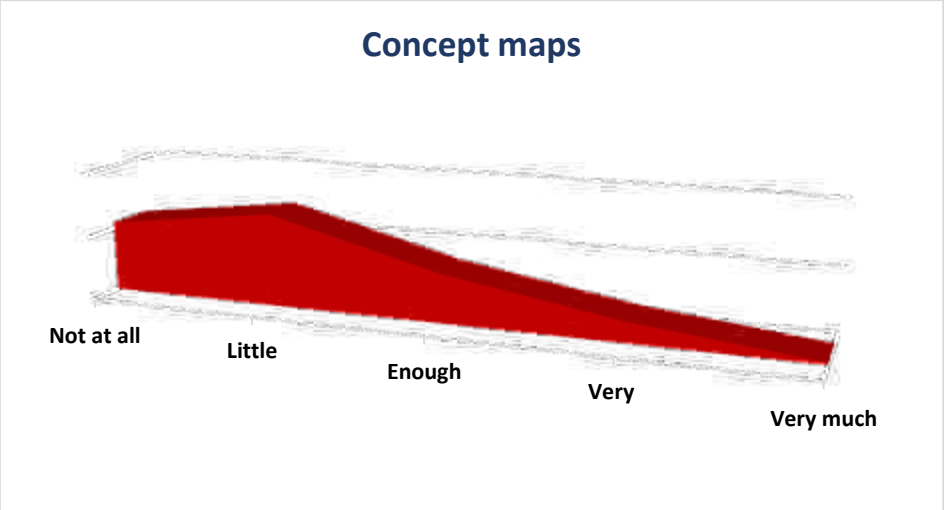
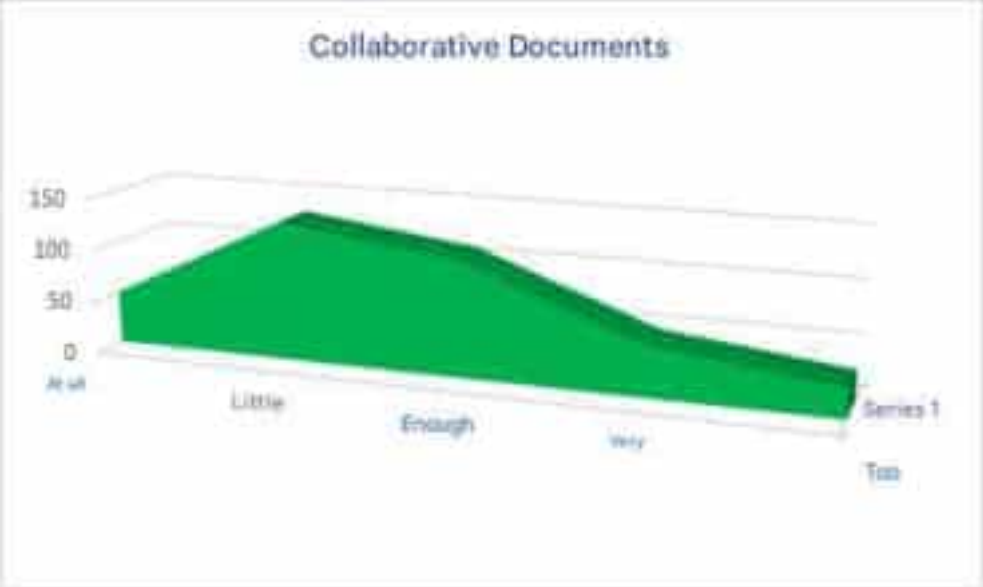
71.9% (N: 266) of students stated that their professors used very much PowerPoint in distance learning during the Covid-19 period.



The majority of students (38.9%) (N: 144) mentioned that their professors used less concept maps in distance learning during the Covid -19 period, while 29.7% (N: 110) mentioned not at all.



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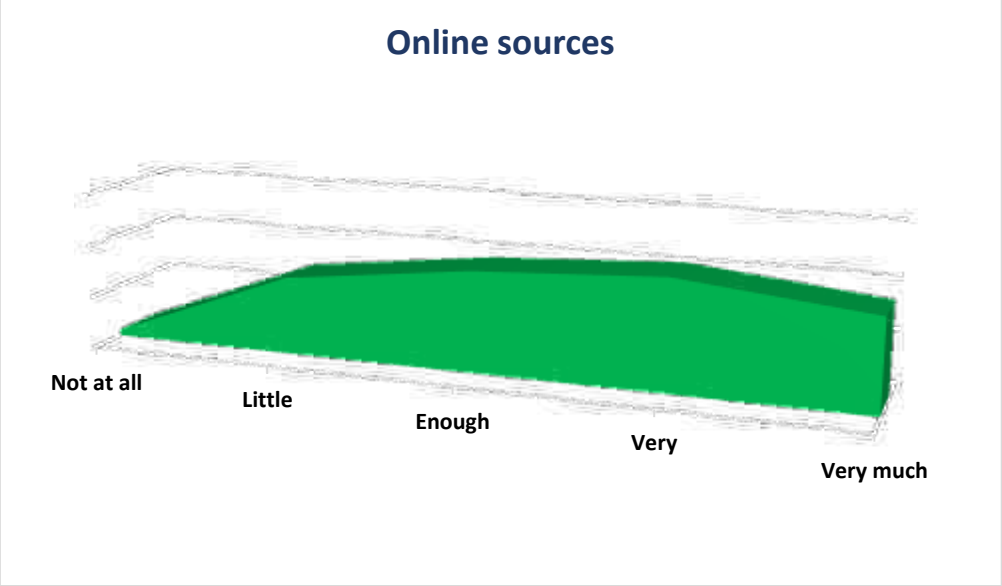
Collaborative documents were used less by professors in distance learning according to 35.7% of students (N: 132), enough according to 29.8% (N: 110), not at all for 13.5% (N: 50), very for 12.3% (N: 48) and very much for 7.6% (N: 28).



The majority of students (N: 106) mentioned that online sources were used very in distance learning by professors, 96 of them (N: 96) stated enough, 88 (N: 88) very much, 74 (N: 74) little and only 6 students (N: 6) mentioned not at all.

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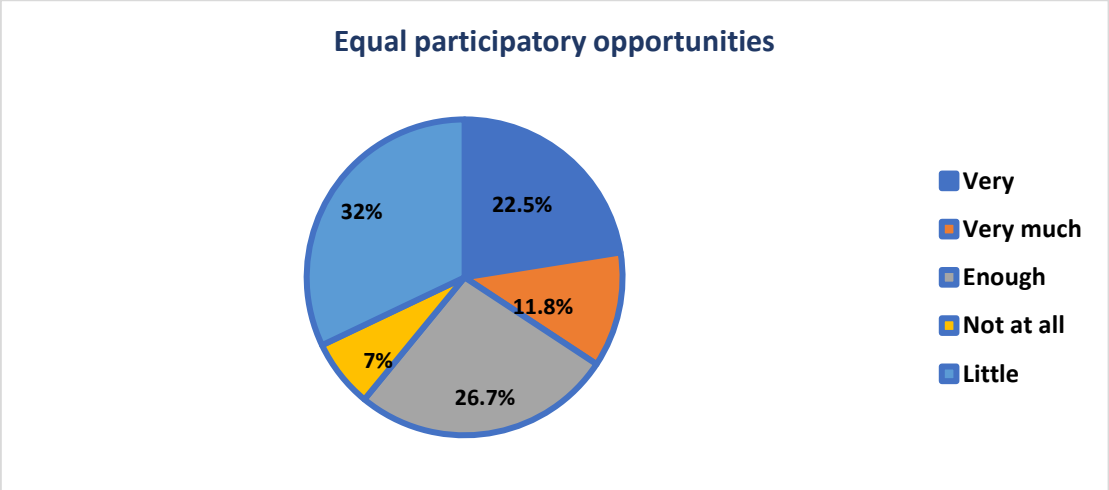
118 student teachers (N: 118) stated that work groups were used very by professors in distance learning, 121 (N: 121) enough,76 (N: 76) very much, 60 (N: 60) little and only 8 students (N: 8) stated not at all.

Did you feel in the online course, as in conventional teaching, that you had equal opportunities to engage and participate in the course?



The majority of students 32% (N: 122) stated that they had little equal opportunities of engagement and participation in the online course, such as conventional teaching. 26.7% (N: 100) stated enough, 22.5% (N: 84) very, 11.8% (N: 44) very much and 7% (N: 26) not at all.

In addition, students point out some important advantages of distance education, such as the lack of space and time restrictions, in the case where the university they attend is far from their place of residence or work. Some more negative points mentioned by students about distance education that mainly concern the examination process are consistent with the data of other investigations (Yilmaz, Ustun, & Yilmaz, 2020). Thus, their increased anxiety is reported, troubleshooting internet connection problems during exams, the ease of copying in exams, the minimum time sometimes to complete the exams, as well as being discouraged or demotivated by getting low marks on an exam (Yilmaz et al., 2020).

A significant number of opinions in an open-ended question record the difficulty of distance education and the desire of students to return to the conditions of live teaching. Specifically, they state:

"*In the beginning things were easier, but little by little we are tired of the situation and we would like real-life training for more substantial training", "E-learning is useful but impersonal. Given the particular circumstances, the lessons were done in the best way, of course, life teaching*

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cannot be compared", "It is important that the university semesters were not lost. Otherwise, distance education can be useful in terms of time and it gave me the opportunity to attend several courses, but due to the pandemic I was deprived of my acquaintance with the university environment, professors and fellow students. I think the professors tried to teach us as much as possible and gave their best to understand the material at hand. I hope we come out unscathed from this unprecedented situation we are living in and quickly return to our daily lives", "Something important worth mentioning is the fatigue from spending too much time in front of a computer screen in order to attend all the lessons", "The from a distance it might have been a solution for the first quarantine which was 2-3 months but now that we have been in this situation for almost a year it has become tiring, it has alienated, it has created health and psychological problems. Personally, many times I thought of giving up because I was tired of the situation and I can't perform as I used to", "Distance education when it is not by choice and at the same time happens during a pandemic period where people are already under pressure and burdened psychologically to a great extent, does not it is nothing more than a highly soul-destroying process that we simply have to undergo in order to continue our work and vision. I hope that the whole situation is addressed soon so that we can return to the auditoriums, interact with our teaching staff and friends and above all be actively involved in our learning", "Distance education cannot replace living education", "I consider that the university I attend has done a remarkable job to offer students the right to learn, in these unfavorable conditions that we are experiencing. The quick response and adaptation to distance education and the continuous effort to improve its use, are for me positive elements in an environment where the difficulties are increasing. Of course, the experiences and opportunities we would have had if the lessons were for life cannot be compared. For example, an undergraduate course of my department could not take place, as an experiential approach is required and thus, I did not have the opportunity to attend a very interesting course, which would have offered enough knowledge and experiences", "E-learning at a glance we would say that it works satisfactorily. As a student, even though I have managed to pass all the courses, I am not 100% confident about my knowledge and skills. I don't think the evaluation method is objective. The part of socialization affects our psychology quite a bit. It would be good to encourage more interaction and discussion. In general, entering a classroom and teaching a lesson in the future seems almost a scary experience as not only have I not been able to go to my school, let alone see how the kindergarten works. I hope the schools will open soon."

However, some students point out the positives of distance education and seek its implementation in the future. In particular, the following views were expressed:

"The best learning is at a distance for many reasons that exist in many families such as health problems, financial reasons, etc.", "I hope that distance education will be implemented forever to make it convenient for everyone such as us who have vulnerable groups to family and financial problems", "I find distance education very easy and convenient and I would like it to be provided as an option in the future, even when universities open normally", "I would like it to continue so that we are all safe".

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Analysis and Interpretation of research results

The students who participated in our survey rated the quality of the distance learning provided as good, as they also declared themselves satisfied with the teaching provided by their teachers, a finding which is consistent with the results of the research of Özgöl et al. (2017). Collaborative documents are underutilized and this is a major problem of distance learning, as the degree of communication and interaction between students and between students and teachers is limited compared to traditional teaching (Burdina, Krapotkina & Nasyrova, 2019). An effective online teaching and learning is related to the development of the student, as well as with the supportive and productive interactions that mediate between students and teachers, but also between students (Carrillo & Flores, 2020). The use of interactive video in the teaching process should have been greater, as it emphasizes the individualization of teaching and the personal pace of each student, the flow of teaching is prescribed and provides the opportunity for immediate feedback. Combined with the use of the conceptual map, students are actively involved and involved in learning, constructing concepts and meanings themselves, as sterile and traditional memorization is lifted.

In addition, when cooperative learning is utilized with learners working in small groups, learning outcomes are maximized, since learning constitutes, according to social constructionism (Vygotsky, 1978), a social and cooperative activity. Therefore, the reformation and reframing of the official Analytical Programs in a direction of upgrading the quality of both live and distance education, is a demand of the modern competitive and demanding post-modern era. The introduction of innovative and alternative ideas in the field of education is considered imperative (Luna, 2015), with the aim of enhancing the intended results in the educational process (Khairova, Toktarova, 2016), at the same time as utilizing technology and providing instruction using it.

Inequalities in the education system and in wider society are exacerbated in times of emergency, such as the one with the pandemic. It is therefore very important that all programs, digital or otherwise, work together to support young people and schools. A holistic vision will work better than a piecemeal approach. While formulating a plan for equal access to technological media would help, it is important that the approach is more holistic and long-term. We should not just focus on issues of digital inequalities in relation to issues of access, but instead see them as an important opportunity to support, to shape and design an inclusive digital future for all, for a society in which social law prevails.

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Conclusion

Distance education as an "emergency" solution may in the future enhance access to education for rural or remote communities or people with mobility and other health problems that prevent them from lifelong learning. The flexibility provided through the capabilities of technology and asynchronous learning can promote blended learning and teaching forms, which can then bring significant benefits to the educational process (Murphy, 2020). It is therefore suggested that university institutions strengthen distance education practices and reform their curricula in order to effectively respond to emergency situations, moving directly from live to distance teaching (Toquero, 2020). It is important to continue the public reflection of the university community in the direction of educational transformation, in order to ensure equal access and provision of opportunities through correct and effective digitization, for all interested members, as well as to take care of the vulnerable categories of learners.

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Technology in Sports Science.

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This program is co-financed by the European Union (European Social Fund- ESF) and Greek national funds through the Operational Program "Human Resources Development, Education and Lifelong Learning", "ESPA 2014-2020", in the context of the project "Support for Internationalization Activities of the University of Ioannina, ICT in Education: Applications in Natural, Social and Health Sciences" – MIS 5162213.

Technology in Sports Science

Modern Electronic Technologies and Sports Activity

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INTRODUCTION

Technology has transformed sports in many ways, from improving athletic performance and reducing injuries to developing new forms of sports activities through digital and interactive platforms. Research in this area continues to evolve, opening up new possibilities for both professional athletes and amateurs.

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PURPOSE AND RESEARCH METHOD

The study of the contribution of new technologies to the enhancement of sporting activity and how it is achieved.

The method used is the bibliographic review. First, an electronic search of relevant published articles was carried out and then a critical analysis was carried out.

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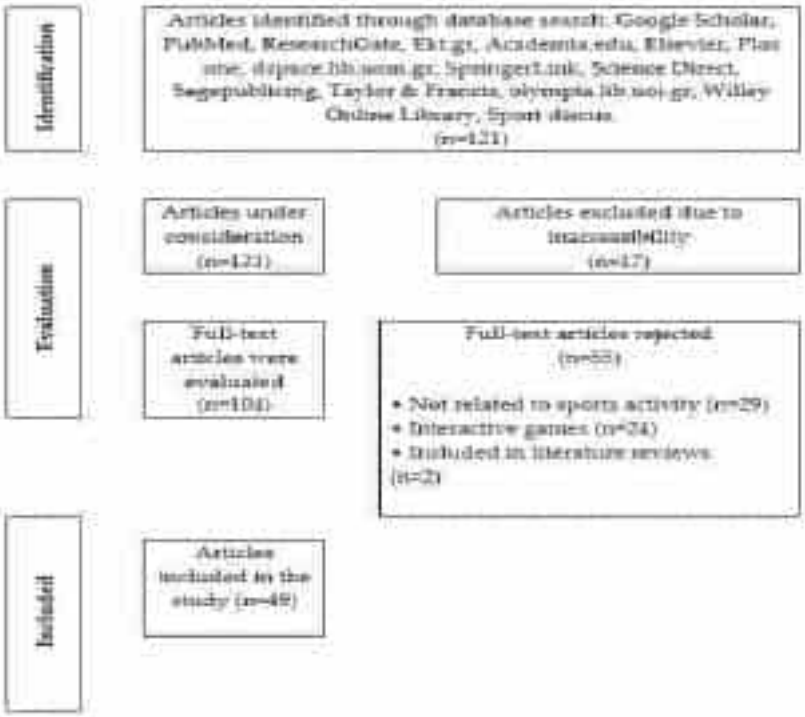

The PRISMA technique was used.

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RESEARCH RESULTS ON MOTION SENSORS, INTERNET OF THINKS AND SPORTS ACTIVITY

- Systematic review of the use of smart sensors in sports science, with a focus on injury prevention, sports performance assessment, and training optimization (EH Chi (2008); V Camomilla, E Bergamini, S Fantozzi, G Vannozzi, 2020; R De Fazio, VM Mastronardi, M De Vittorio, P Visconti, 2023; J Zhao, Y Yang, L Bo, 2024).
- Systematic review on the use of sensors in the analysis of real-time kinematics of athletes (M Rana, V Mittal, 2020).
- Data analysis from multiple sensors for biomedical and sports applications (JJA Mendes Jr, SL Stevan Jr, 2016).
- Study of the use of sensors in analytical learning for the recognition of sports movements, daily and sports activities (YL Hsu, SC Yang, 2018; G Pajak, P Krutz, J Patalas-Maliszewska, 2022).
- Requirements and capabilities of wearable sensors for sports performance and recent technological developments (SLP Tang,2015; ABaca, P Kornfeind, J Exel, 2022).

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RESEARCH RESULTS ON ARTIFICIAL INTELLIGENCE AND SPORTS ACTIVITY

- Presents the Connection of AI to the Internet and how it affects sports training and movement data analysis (AC Nunes Rodrigues, A Santos Pereira, 2020; Y. Zhang, W. Duan, L.E. Villanueva, S. Chen, 2023).
- Development and testing of an AI algorithm for recognizing sports activities through biometric data analysis (S. Bezobrazov, A. Sheleh, S. Kislyuk, 2019; S. Wei, P. Huang, R. Li, Z. Liu, Y. Zou, 2021).
- Study of the use of AI to optimize weight training, using sensor data to adjust exercise intensity (H. Novatchkov, A. Baca, 2013; T. Liu, D. Wilczyńska, M. Lipowski, Z. Zhao, 2021).
- Review of the uses of AI and machine learning in sports, from injury prediction to tailored performance analysis (F.J.J. Reis, R.K. Alaiti, C.S. Vallio, L. Hespanhol, 2024).
- Bibliometric analysis of trends in artificial intelligence research in sports (C. Dindorf, E. Bartaguiz, F. Gassmann, 2022).
- Use of support vector algorithms (SVM) in the evaluation of sports training(F. Kong, Y. Wang, 2019).
- Use of robotics and AI for posture analysis and monitoring of sports activities (C. Xiaochun, 2025).

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RESEARCH RESULTS ON VIRTUAL REALITY (VR) & SPORT ACTIVITY

Virtual reality (VR) is having a significant impact on sports, offering new possibilities for training, injury rehabilitation, and improving fitness. Through simulations and interactive systems, athletes can improve their performance, develop strategies, and train in low-risk environments.

- Studies examining psychological preparation and brain activity monitoring (Balkó, Heidler, & Edl, 2018), and the role of VR in the rehabilitation of athletes after injuries, especially in cases of anterior cruciate ligament (ACL) repair, (Gokeler, Bisschop, Myer, & Benjaminse, 2016).
- Systematic review of how VR can enhance physical activity and athletic performance (Kuleva, 2023).
- Review of the use of gamification in VR for sports purposes and increasing user motivation (Nor, Sunar, & Kapi, 2020).
- Analyzes how VR is applied to athlete training and improving training methods (Putranto, Heriyanto, & Achmad, 2023), motor skills and strategy (Neumann, Moffitt, Thomas, & Loveday, 2018).
- Study showing how VR training can accelerate learning of complex sports movements (Pastel, Petri, Chen, & Wiegand Cáceres, 2023).
- Study on the use of VR and computer vision in correcting sports postures during training (Zhu, Shao, Zhang, & Gao, 2022).

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RESEARCH RESULTS ON AUGMENTED REALITY (AR) & SPORT ACTIVITY

Using smart glasses, sensors and interactive applications, AR improves movement learning, increases motivation and enables new forms of athletic activity (Minaya-Isique, & Gamboa-Cruzado, 2024; Zhang, & Huang, 2020; Liu, Sathishkumar, & Manickam, 2022).

Augmented reality (AR) offers innovative solutions in sports, enhancing training, fitness and motivation of athletes (Omarov, Omarov, & Azhibekova, 2024).

From training and injury rehabilitation to creating interactive experiences for the audience, AR is transforming the way we interact with sporting activities (Doskarayev, Omarov, & Omarov, 2023).

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CONCLUSIONS - DISCUSSION

The relationship between modern electronic technology and athletic activity is a rapidly evolving field, with applications that affect both the performance of athletes and the experience of spectators. Modern technologies have led to improved data analysis, more accurate fitness tracking, and more effective injury recovery. Additionally, virtual and augmented reality are changing training and interaction with the sport.

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Greek Diaspora and Doctoral Theses Focused on Greek Language

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This program is co-financed by the European Union (European Social Fund- ESF) and Greek national funds through the Operational Program "Human Resources Development, Education and Lifelong Learning", "ESPA 2014-2020", in the context of the project "Support for Internationalization Activities of the University of Ioannina, ICT in Education: Applications in Natural, Social and Health Sciences" – MIS 5162213.

"Greek Diaspora and Doctoral Theses Focused on Greek Language"

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In recent years, we have developed at the University of Ioannina a very strong network of collaborations with Universities abroad, which is also oriented towards the Greek diaspora. The network of these partnerships includes a. strengthening doctoral studies in the English language, b. selection of doctoral theses topics focused on the Greek diaspora, and c. a series of collaborations organizing summer schools.

One of these doctoral theses is that of Mrs. Eleni Karalis, journalist and staff member of the Hellenic expatriate and diaspora service of the Greek Public Radio and Television. The thesis is entitled "Greek language, homogeneity and mass media: The language as a communication tool and means of education of the Greek homogeneity through the media, their organizational and administrative framework". The aim of the thesis is to examine the evolution of the Greek language in Greek diaspora where land mainly through its presence in the mass media.

In the context of the work, an attempt will be made to research the expatriate mass media as the language is a communication tool and a means of education of the Greek expatriate through the mass media. Their organizational and administrative framework, their evolution over the years and their prospects will be analyzed.

Also, the way in which the expatriate mass media influence the spread and rescue of the Greek language will be sought, as well as how they contribute to the education of third and fourth generation Greeks.

In addition, there will be a brief description of education in the expatriate community and a presentation of the perspectives. The possible factors that can affect the learning of the Greek language by continent will be analyzed and, at the same time, the difficulties and problems will be studied. Finally, ways and practices in which expatriate mass media can be utilized in an educational/pedagogical context will be proposed.

In addition to the level of research, we attempt to cultivate a close connection with the Greek diaspora, universities and research centers, in which leading Greeks abroad are active and flourishing. In this context, we are organizing the 10th International Summer University "Greek language, culture and media", in Boston. Specifically:

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The Social Issues, Mass Media and Education Laboratory of the Department of Early Childhood Education, School of Education of the University of Ioannina, the Maliotis Cultural Center at Hellenic College in Boston, and the American Hellenic Educational Progressive Association (AHEPA),
with the participation of:

- Ecumenical Patriarchate, Greek Education Department,
- Greek Orthodox Archdiocese of America, Department of Greek Education,
- Boston University Philhellenes,
- The University of Chicago, Center for Hellenic Studies,
- Instituto de Letras at the Rio De Janeiro University, Modern Greek Studies Program of Setor de Grego,
- Study in Greece
- National Gallery – Alexandros Soutsos Museum,

organize the 10th International Summer University "Greek Language, Culture, and Mass Media." The project is scheduled to take place in Boston, from May 28 to June 2, 2024, at the Maliotis Cultural Center (campus of Hellenic College at 50 Goddard Avenue) in Brookline. The program will be held under the auspices and with the support of the General Secretariat for Greeks Abroad and Public Diplomacy of the Ministry of Foreign Affairs. The 10th International Summer University will have the special title: "*The dissemination and teaching of the Greek language in the Greek-American community*".
Indicative topics:

- Teaching Greek abroad. Exploring the unique aspects of teaching the Greek language in international Greek schools.
- Addressing Educators' Language Mistakes: Strategies for handling language and communication errors made by educators and students.
- Engaging Second- and Third-Generation Greek Students: Best practices for fostering interest in Greek language and culture among second- and third-generation Greek students living abroad.
- Refreshing Greek. Intensive teaching to revitalize and enrich vocabulary.
- Promoting partnerships between Greek schools in the States and Greek universities to develop collaborative programs and offer Greek language courses taught by Greek academics and graduates of the Greek language and culture.
- Improving the communicative skills and the communicative presence of educators in the classroom, in social life, in public and private spheres.
- Exploring the use of technology and artificial intelligence to enhance the educational process.
- Assessing the role and contributions of Modern Greek Studies Programs and Chairs in the United States in spreading the Greek language.

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A tradition of extroversion

Following 9 years of renowned success for the program, the tradition of fostering extroversion and synergies with prominent international institutions in education, culture, and mass media continues. It is reminded that, in the previous years, the International Summer University “Greek Language, Culture, and Mass Media” has been supported by the Center for Hellenic Studies in Greece (CHS-GR) of Harvard University, the Hellenic Representation of the European Parliament, the Association of European Journalists (Greek department), the Orthodox Academy of Crete, the French Department of the Club de la Presse Européenne in Paris, the Centre Culturel Hellénique in Paris, the Instituto De Letras in Rio De Janeiro University, the Department of Media, Communications, Creative Arts, Language and Literature, Faculty of Arts of Macquarie University, the Macquarie Greek Studies Foundation in Sydney, and many more. Directors and journalists of diaspora mass media in America, Europe, Australia, Asia, and Africa will participate in the 10th International Summer University. Moreover, academics and researchers, intellectuals and artists from Greek and foreign universities and research centers will join the program, which will be offered for free. The program is addressed to journalists, undergraduate and graduate students, PhD holders, educators, and it accepts a number of professionals with relevant interests, in the framework of lifelong learning. Certificates of attendance and educational material will be provided to the participants.

The presence of mass media in Greece and in the diaspora

The following organizations support the program as communication sponsors: ERT, ERT 2, ERT3, ERT WORLD, the First Program 105.8, the Voice of Greece, ERTFLIX and the Parliament Channel. Real FM, Real News, and real.gr, along with CNN GREECE, serve as media sponsors, as well. The project also benefits from communication sponsorship from diaspora media, including GreekReporter.com, and greeknewsusa.com, Grecian Echoes, and the Hellenic Public Radio of New York COSMOS FM. In 2024's TV spot stars the well-known presenter, Nikos Aliagas, who has made a significant career in French television and has been honored with important awards both in France and in Greece.

In addition, we are going to publish electronic and printed language manuals and proceedings of the conference activities, which will be addressed to the diaspora, such as for example a "Small Manual" for teaching the Greek language, which will be available online for free from the website of The Social Issues, Mass Media and Education Laboratory of the Department of Early Childhood Education of School of Education of the University of Ioannina.

With all the above actions and a series of others that for reasons of economy we do not mention, we aspire to be connected as closely as possible to the Greek diaspora in research and teaching, and to produce productive results both in the field of the Greek educational community and abroad.

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Technology in Health Sciences

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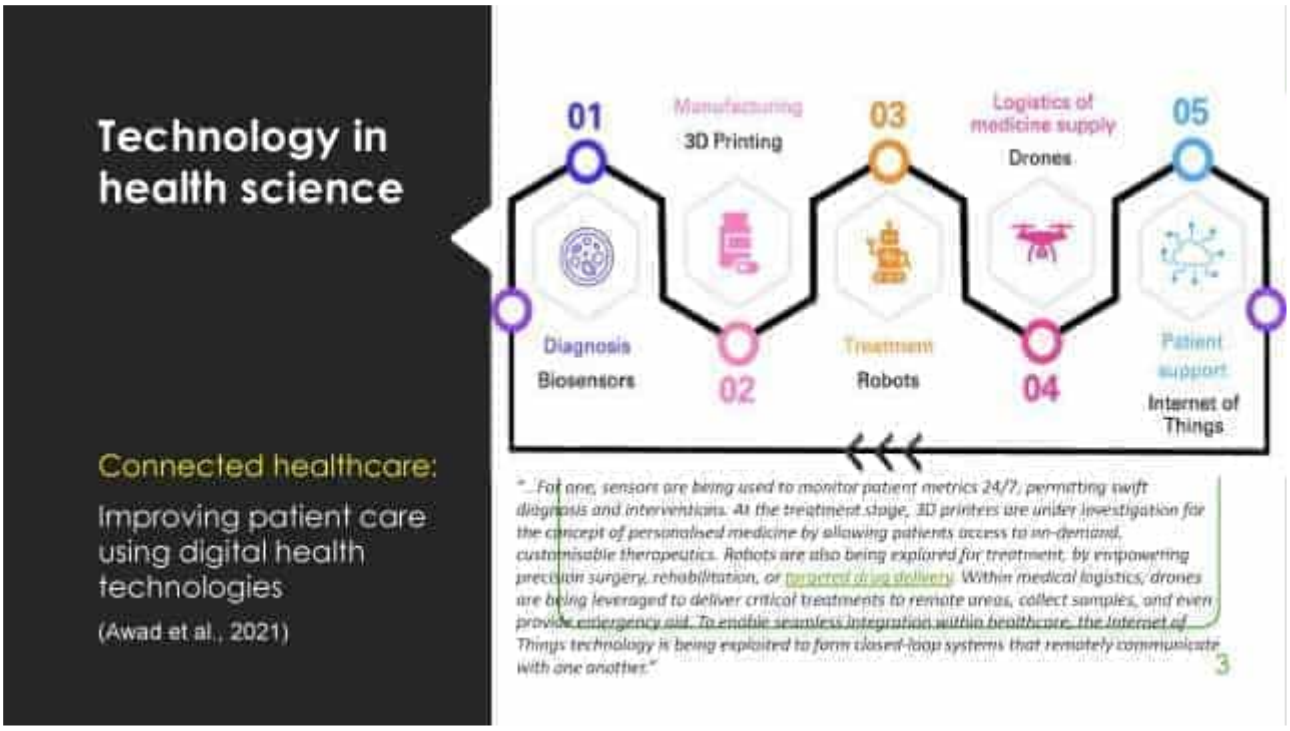

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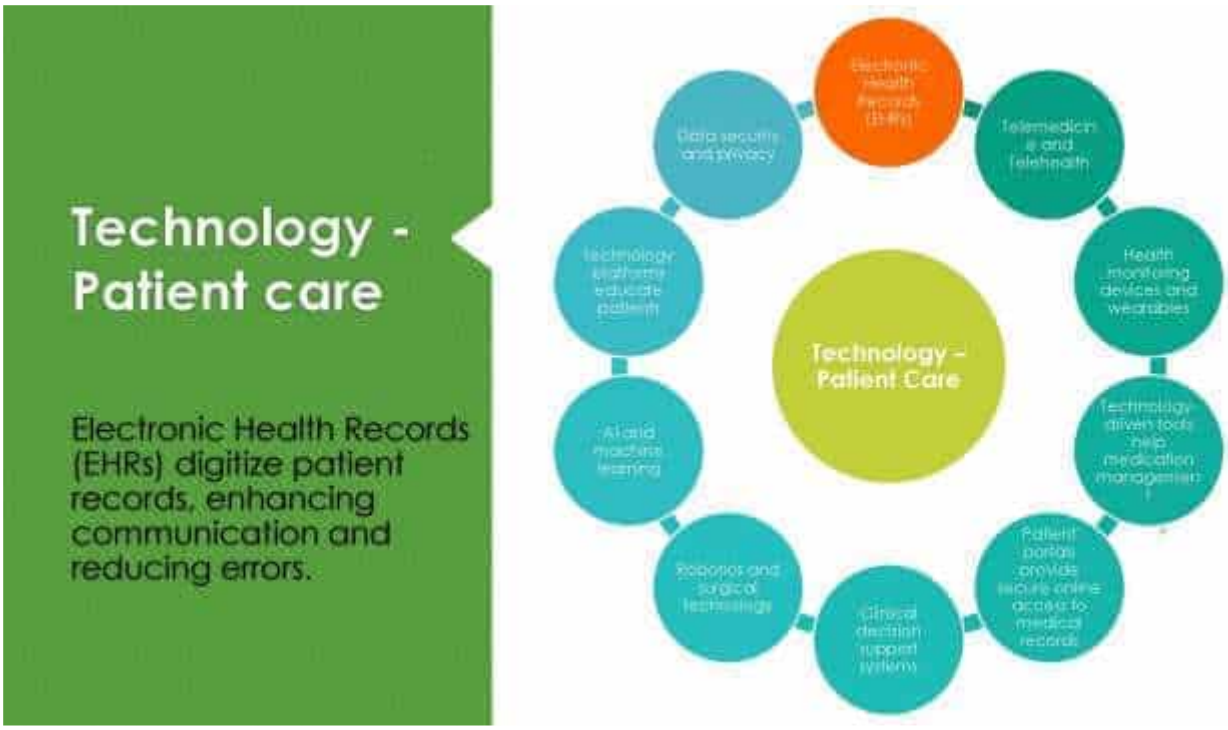

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Technology - Patient care

Telemedicine and Telehealth enable remote consultations, particularly beneficial for patients in rural areas or during public health emergencies.

Technology - Patient care

Health monitoring devices and wearables allow patients to monitor their health metrics, enabling remote monitoring of chronic conditions.

This program is co-financed by the European Union (European Social Fund- ESF) and Greek national funds through the Operational Program "Human Resources Development, Education and Lifelong Learning", "ESPA 2014-2020", in the context of the project "Support for Internationalization Activities of the University of Ioannina, ICT in Education: Applications in Natural, Social and Health Sciences" – MIS 5162213.

Technology - Patient care

Technology-driven tools help patients adhere to their medication regimens, reducing missed doses and improving treatment effectiveness.

Technology - Patient care

Patient portals provide secure online access to medical records, scheduling appointments, and communication with healthcare providers.

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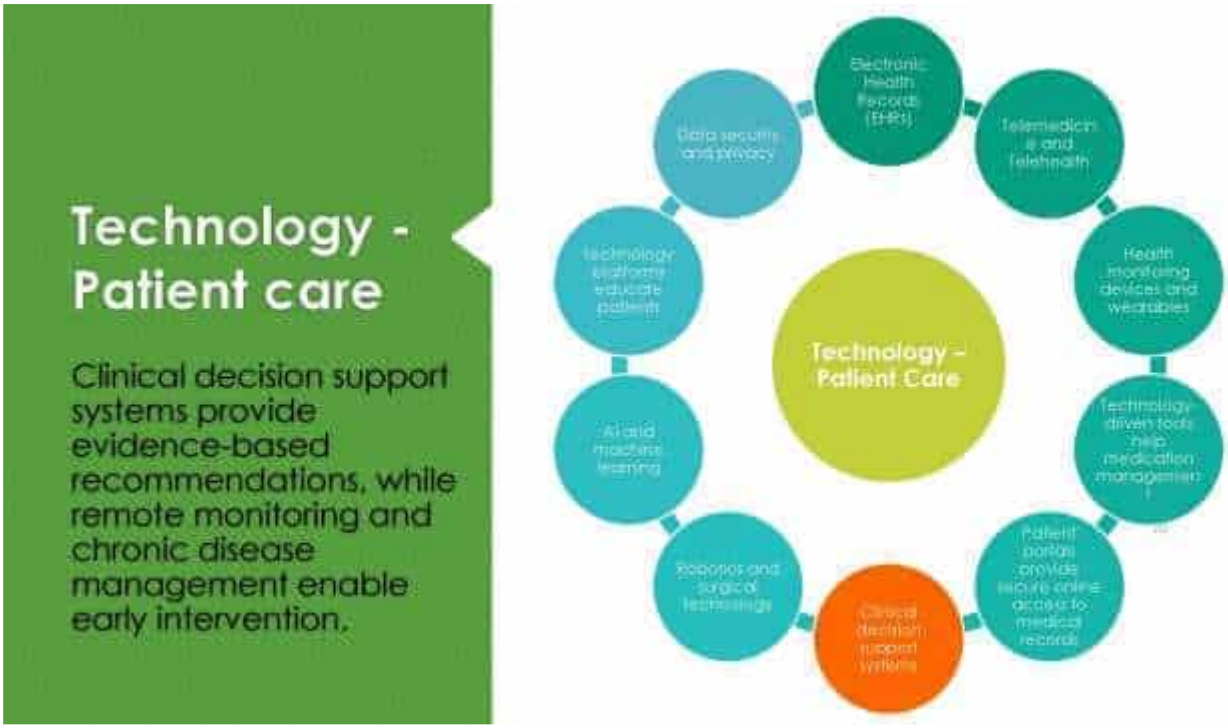

Operational Programme
Human Resources Development, Education and Lifelong Learning
ΕΣΠΑ 2014-2020

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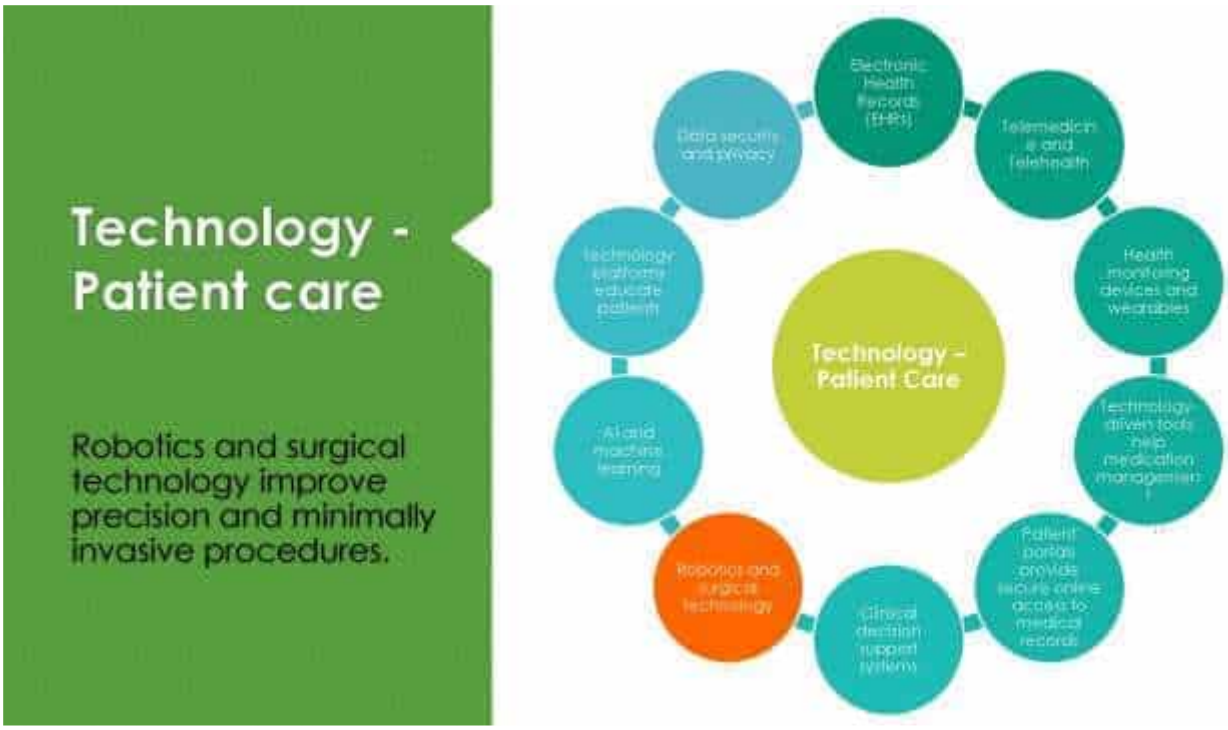

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Technology - Patient care

AI and machine learning analyze vast datasets for diagnosis, predicting patient outcomes, and identifying medical imaging patterns.

Technology - Patient care

Technology platforms educate patients about health conditions, medications, and lifestyle choices, and streamline administrative processes.

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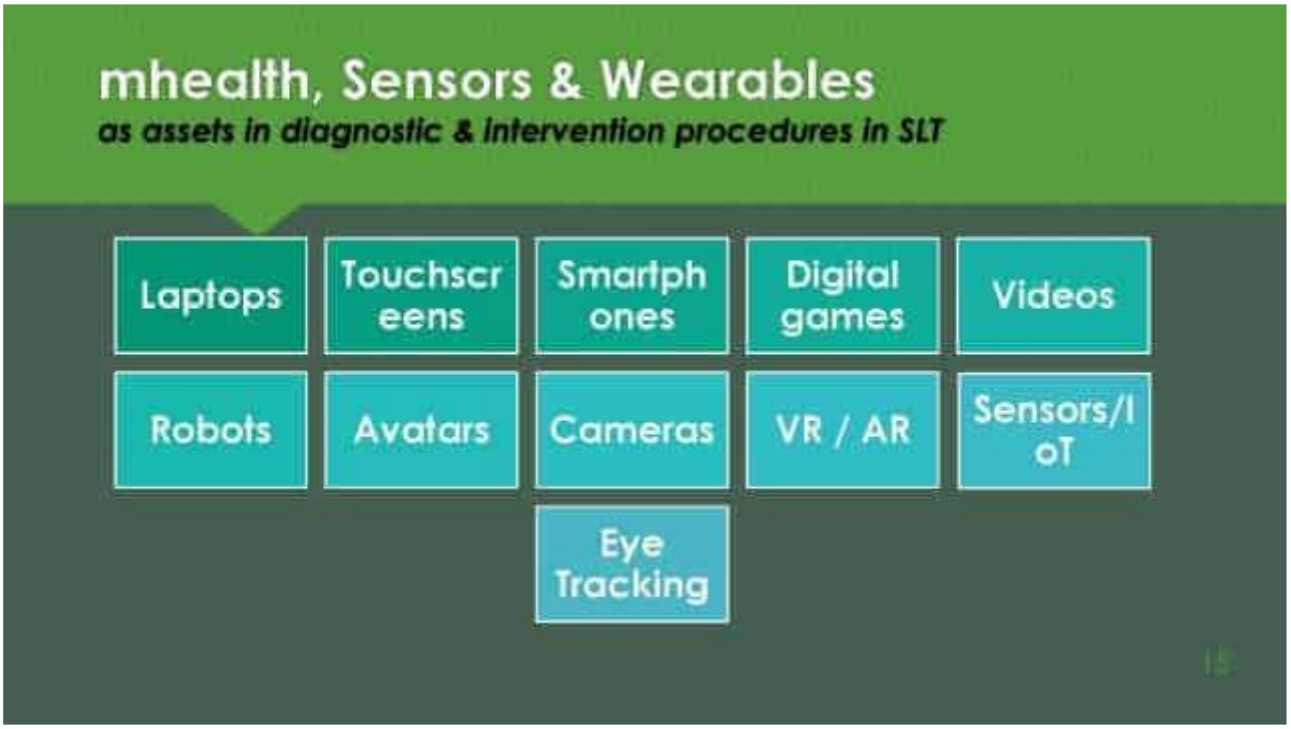

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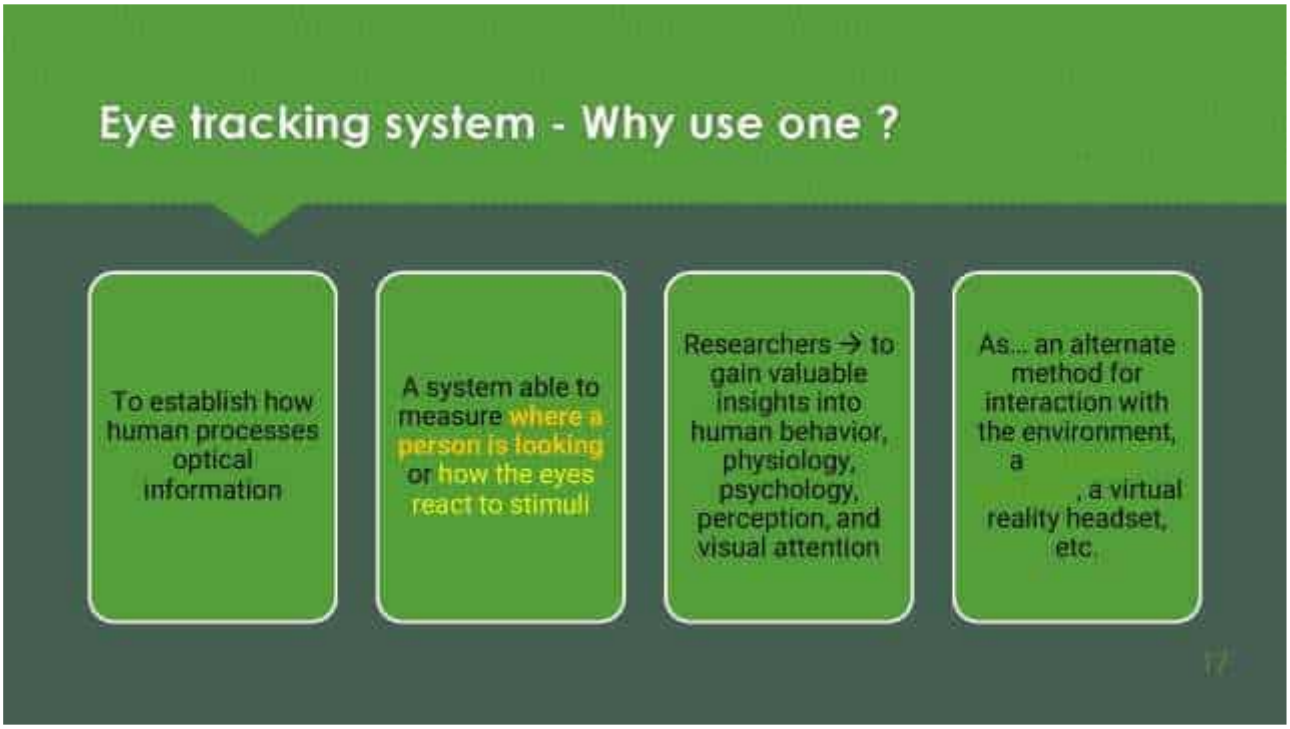

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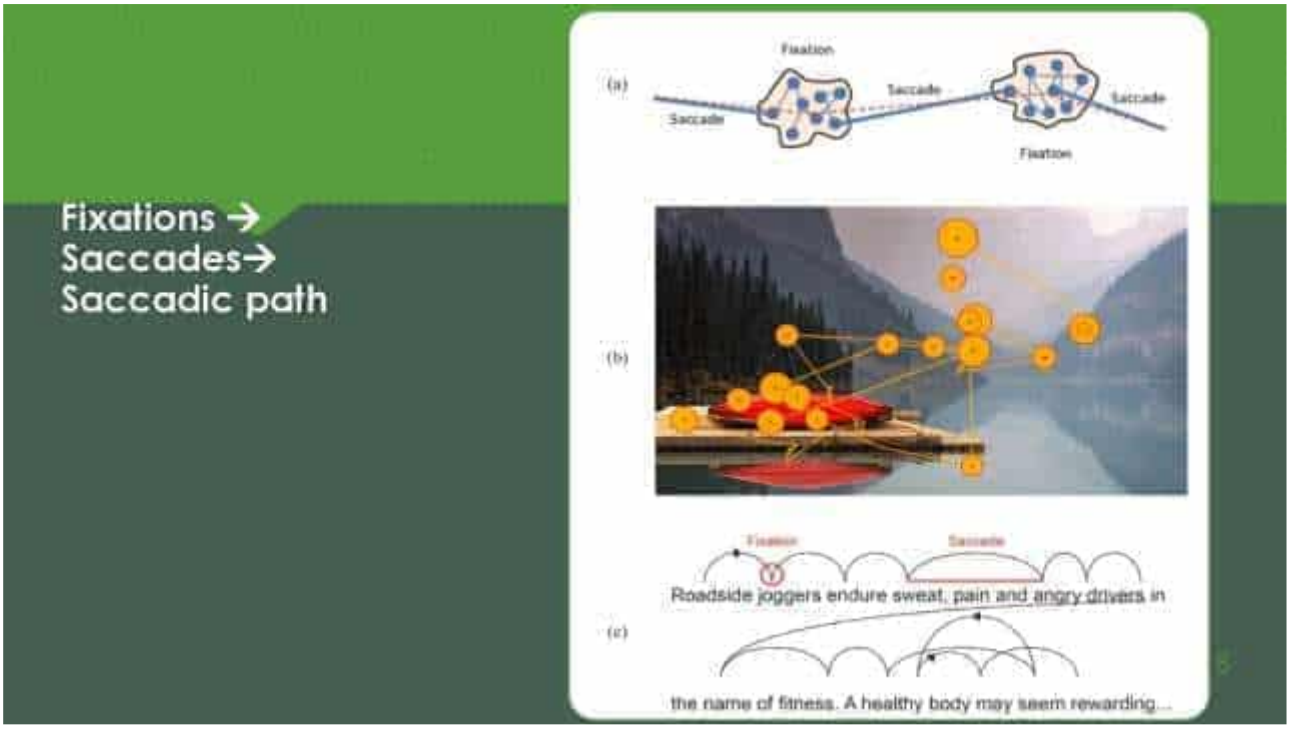

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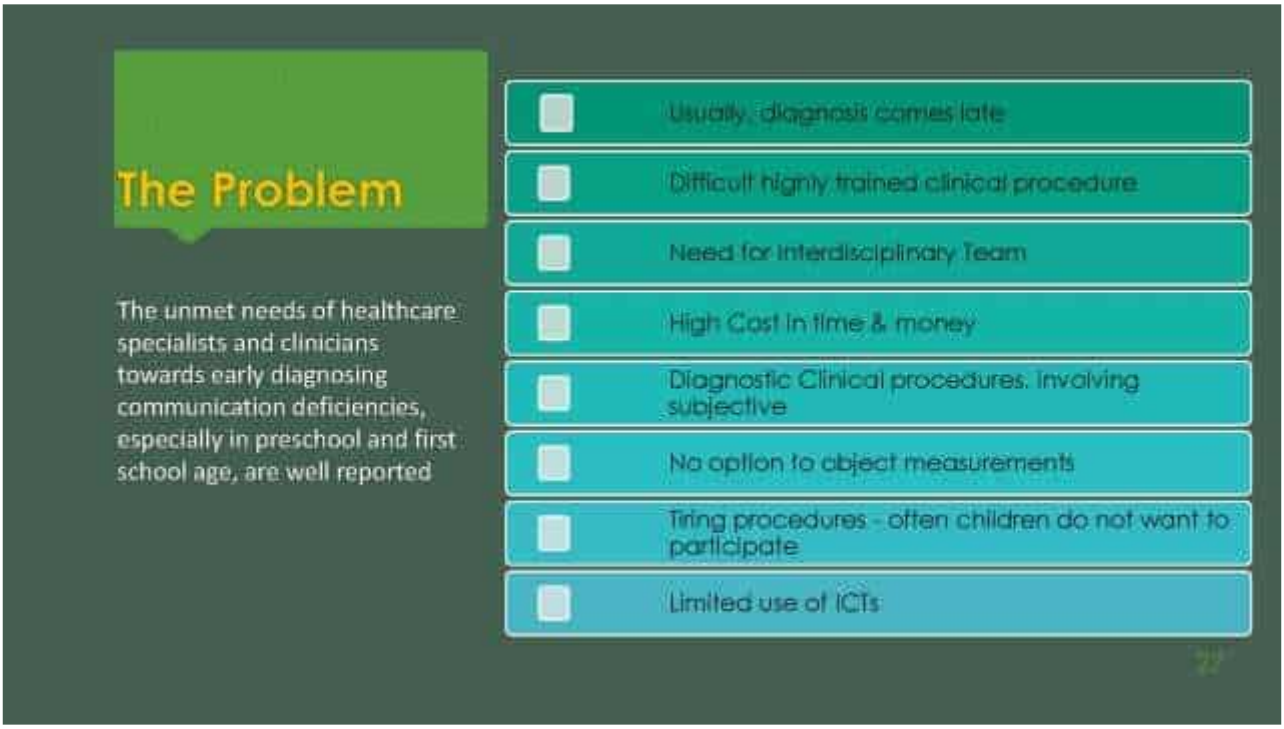

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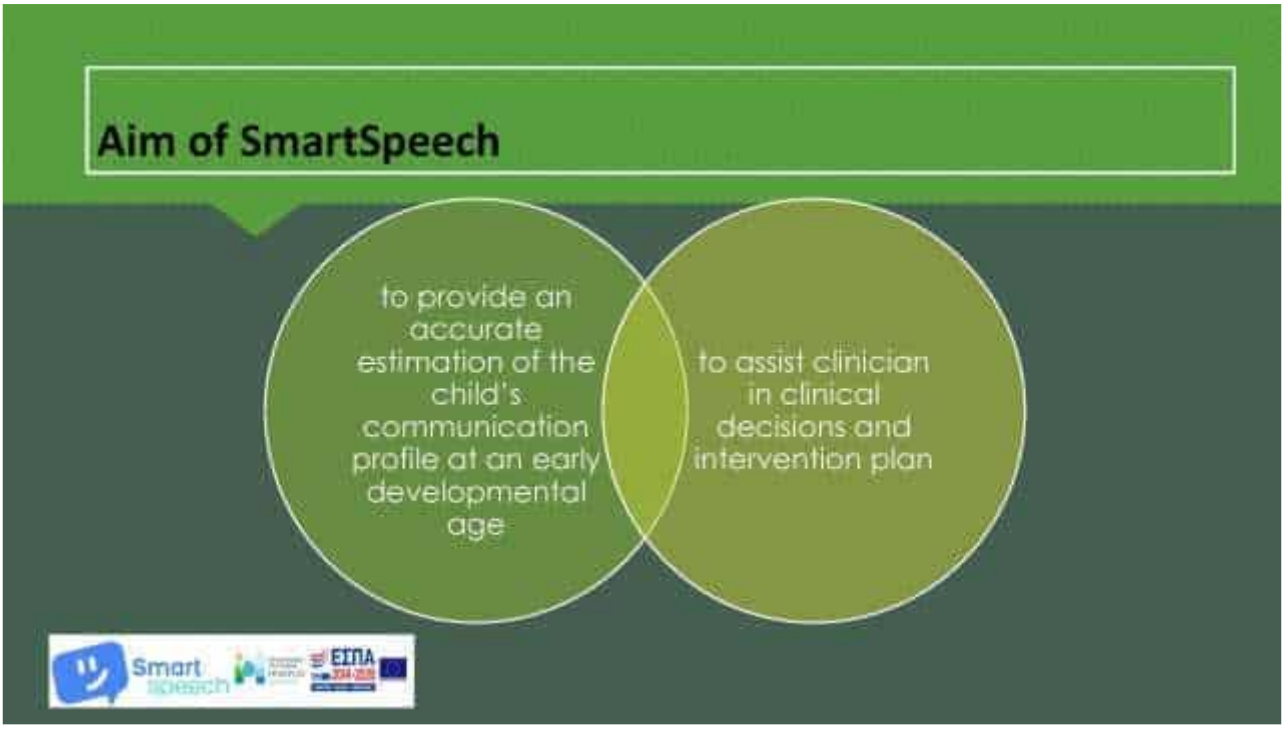

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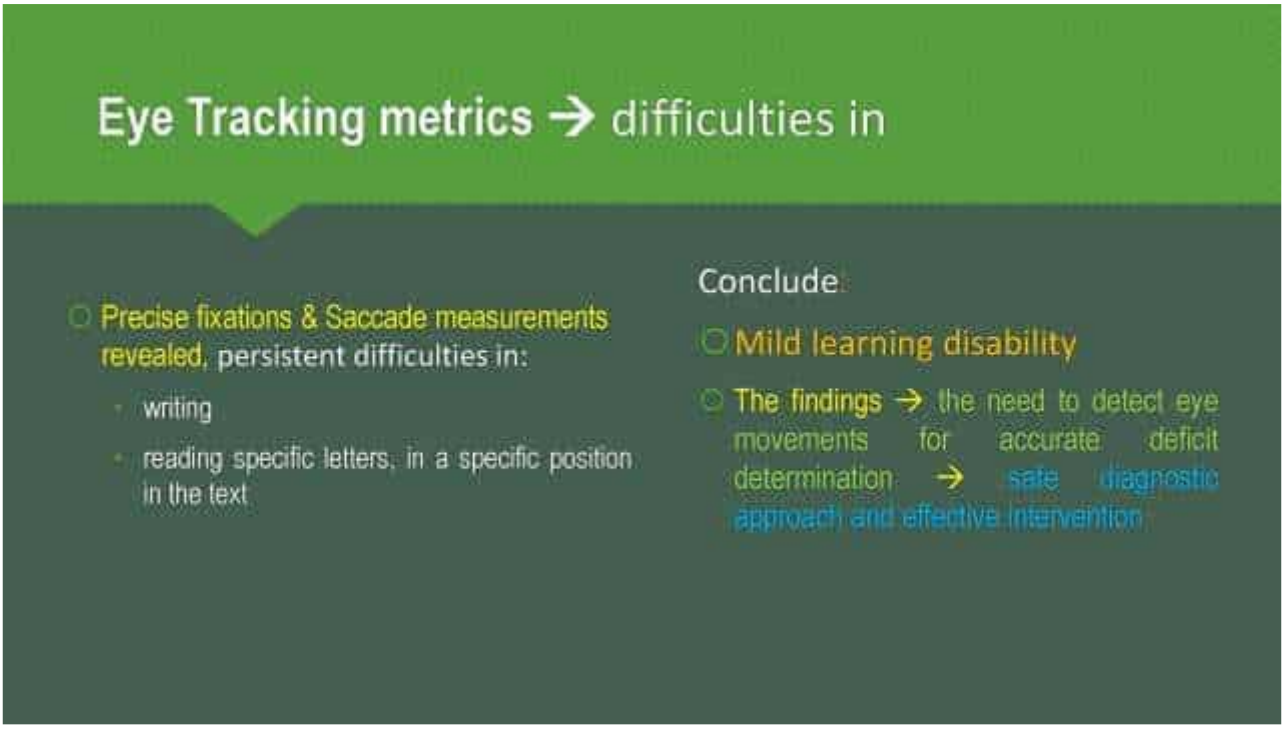

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Publications

signals

Article

Employing Classification Techniques on SmartSpeech Biometric Data towards Identification of Neurodevelopmental Disorders

Publications

mathematics

Article

Applying Neural Networks on Biometric Datasets for Screening Speech and Language Deficiencies in Child Communication

Operational Programme
Human Resources Development, Education and Lifelong Learning
Co-financed by Greece and the European Union

This program is co-financed by the European Union (European Social Fund- ESF) and Greek national funds through the Operational Program "Human Resources Development, Education and Lifelong Learning", "ESPA 2014-2020", in the context of the project "Support for Internationalization Activities of the University of Ioannina, ICT in Education: Applications in Natural, Social and Health Sciences" – MIS 5162213.

Authors wish to thank

- the Region of Epirus for funding this project titled "Smart Computing Models, Sensors, and Early diagnostic speech and language deficiencies indicators in Child Communication", acronym "SmartSpeech" with code ΗΠΤΑΒ-28185, supported from European Regional Development Fund (ERDF)
- all the project partners for their contribution
- all participants parents & their children

Approved by the UoI Research Ethics Committee (Prot. No. 18435/15.5.2020)

Concluding…

- enhancing patient care,
- improving diagnosis and treatment,
- accelerating research, and
- increasing the accessibility of healthcare services.

technology has transformed health science in numerous ways:

Future perspectives:

- As technology continues to advance, it will likely play an even more significant role in shaping the future of healthcare and improving overall health outcomes.

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Cyber as a Meta-Discipline: Education, Awareness, Training

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This program is co-financed by the European Union (European Social Fund- ESF) and Greek national funds through the Operational Program "Human Resources Development, Education and Lifelong Learning", "ESPA 2014-2020", in the context of the project "Support for Internationalization Activities of the University of Ioannina, ICT in Education: Applications in Natural, Social and Health Sciences" – MIS 5162213.

Cyber as a Meta-Discipline: Education, Awareness, Training

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Abstract

The presentation titled "Cyber as a Meta-Discipline: Education, Awareness, Training" by Dr. Ismini Vasileiou explores the integration of cybersecurity as a core element across various fields, highlighting **its social and economic impact.**

Key points include:

1. Human Factors in Cybersecurity: Emphasising the importance of understanding human roles and behaviours in maintaining secure practices, particularly for SMEs (small and medium-sized enterprises). This section covers proactive security approaches, resilience-building through secure infrastructure, compliance, training, and collaboration with security experts.
2. Secure by Design: Outlining principles for integrating security from the beginning of business processes and product development. The "secure by design" approach includes robust authentication, encryption, secure coding practices, and regular security assessments, all aimed at creating a security-first culture.
3. Economic Impact: Recognising cybersecurity as a driver of innovation and economic resilience, with long-term benefits such as increased customer trust, competitiveness, and reduced risk.
4. Cyber Skills and Awareness: Building foundational cyber skills and fostering a cyber-aware culture, emphasising the role of education in preparing individuals and organisations for the digital landscape.
5. Case Study - Leicester City Council Cyber Attack: An example highlighting the impact of cyber threats on public entities and the importance of resilient security strategies.
6. Call to Action: Encouraging SMEs to prioritise cybersecurity, allocate resources for "secure by design" practices, conduct regular security assessments, and engage in collaborative defence efforts with industry and government.

The presentation concludes with a call for continuous improvement in security measures, commitment to resilience, and viewing cybersecurity as an enabler of business innovation and trust-building.

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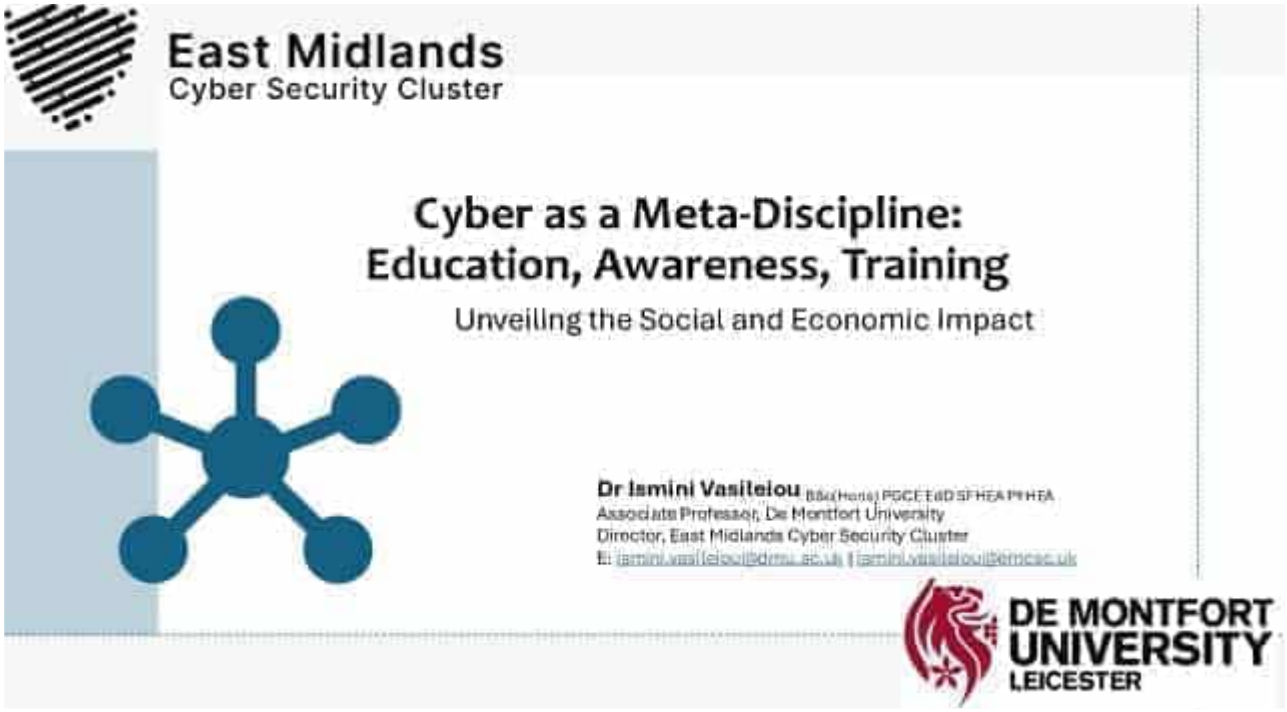

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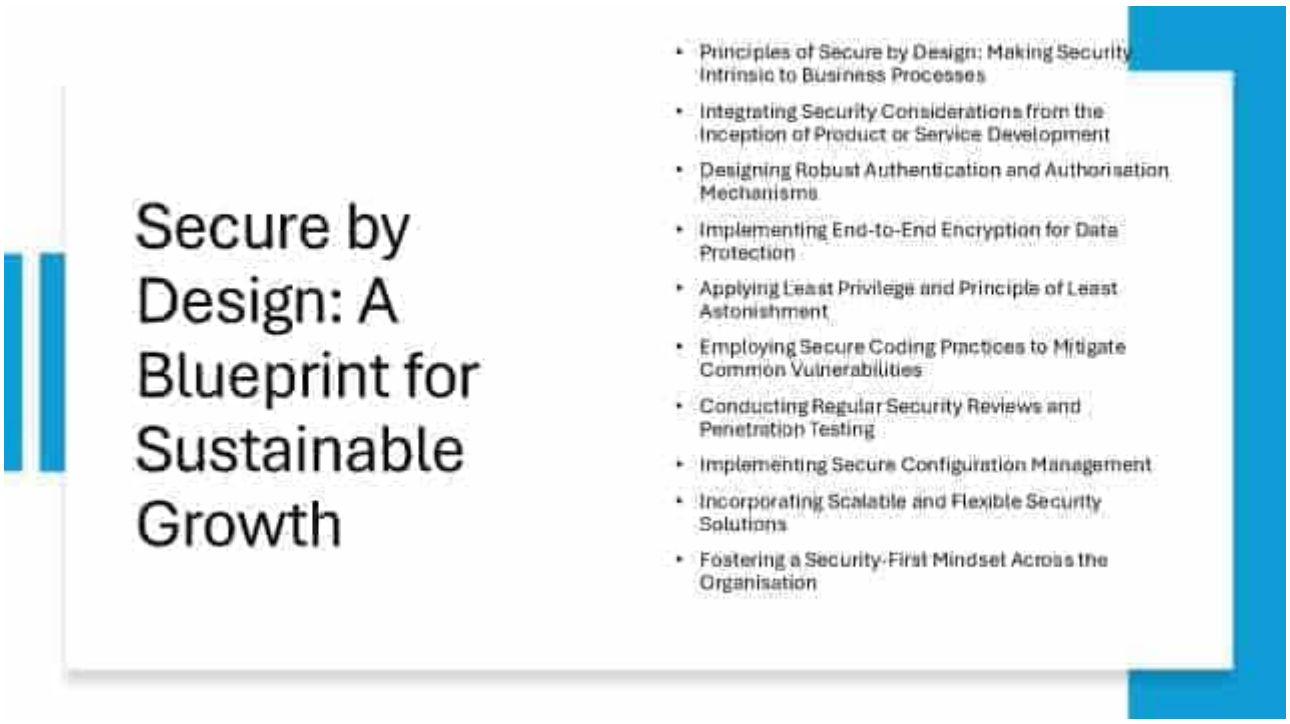

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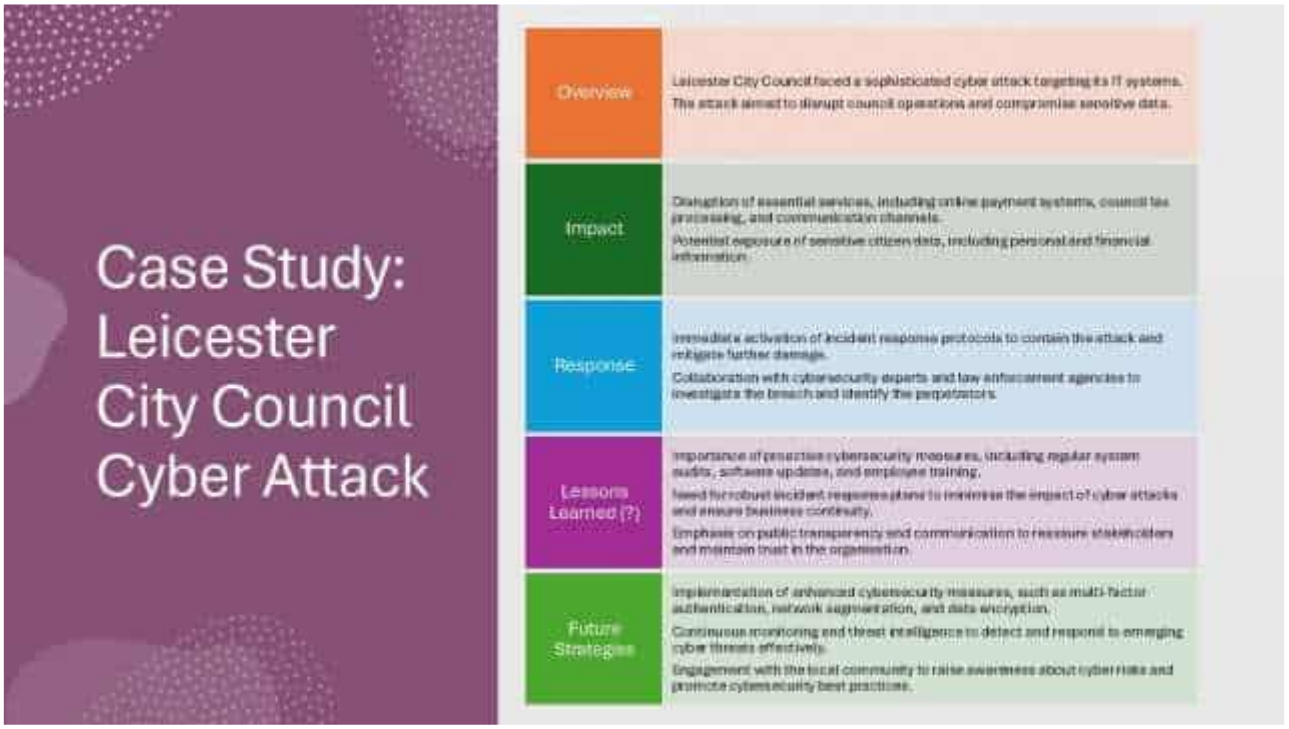

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Diversity and Commonalities in International Dissertations

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DIVERSITY AND COMMONALITIES IN INTERNATIONAL DISSERTATIONS

Liudmila Rupšienė

University of Klaipėda, Lithuania

SOME HISTORICAL FACTS ABOUT DISSERTATIONS

- The word dissertation derives from the Latin word, *disserto*, which is a form of the infinitive, *disserere*, both meaning to make an argument.
- Historically, a dissertation consisted of discussions and debates to test a student's knowledge (Swank, J. M., Weaver, J. L., & DePue, K. (2021)
- Centuries later, a shift in higher education standards reflected a new emphasis on empirical research influenced by 19th century positivism (Barton, 2005).

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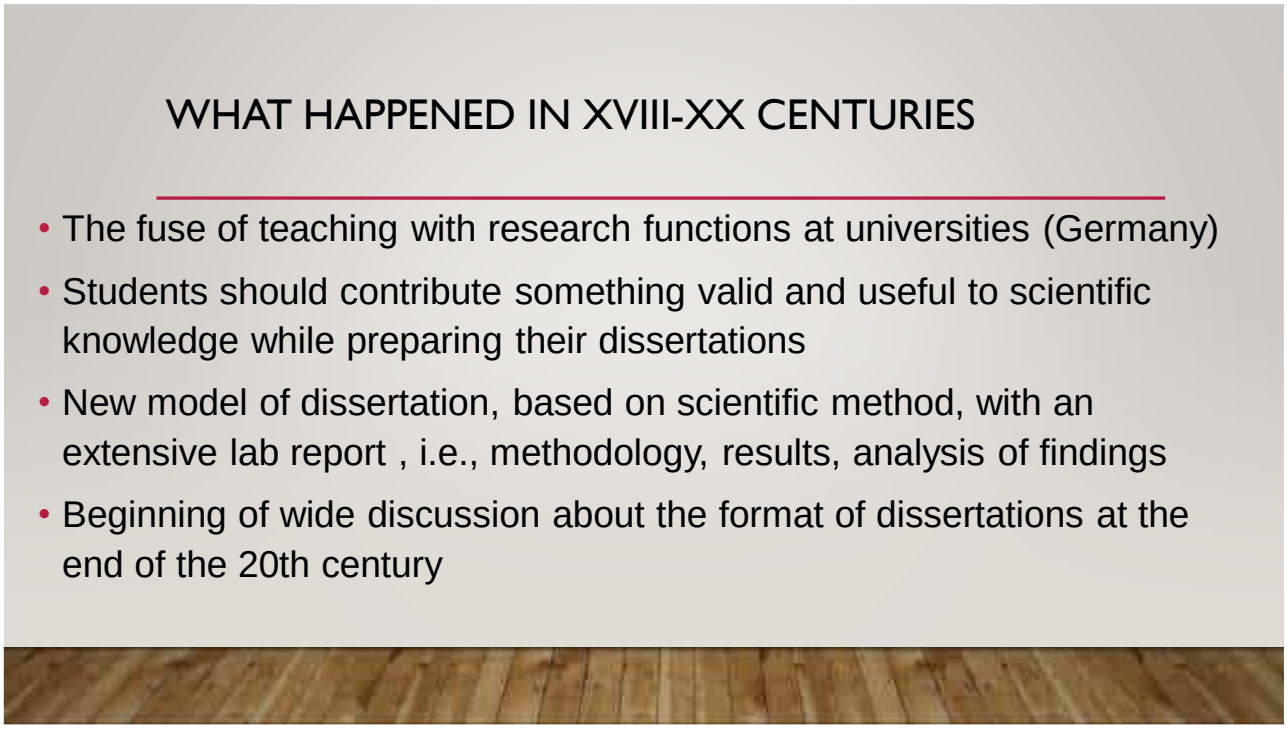

German universities were the first to fuse teaching with research functions (McClelland, 1980). German scholars thought students should contribute something valid and useful to scientific knowledge creating the new standard of a dissertation. The written dissertation was modeled from the scientific method, resembling an extensive lab report (i.e., methodology, results, analysis of findings). To obtain one's doctorate before the end of the 18th century in Germany, it was a requirement to complete this type of dissertation (Barton, 2005).

At the end of the 20th century, the Council of Graduate Schools (US) began discussing flexibility in the traditional dissertation format.

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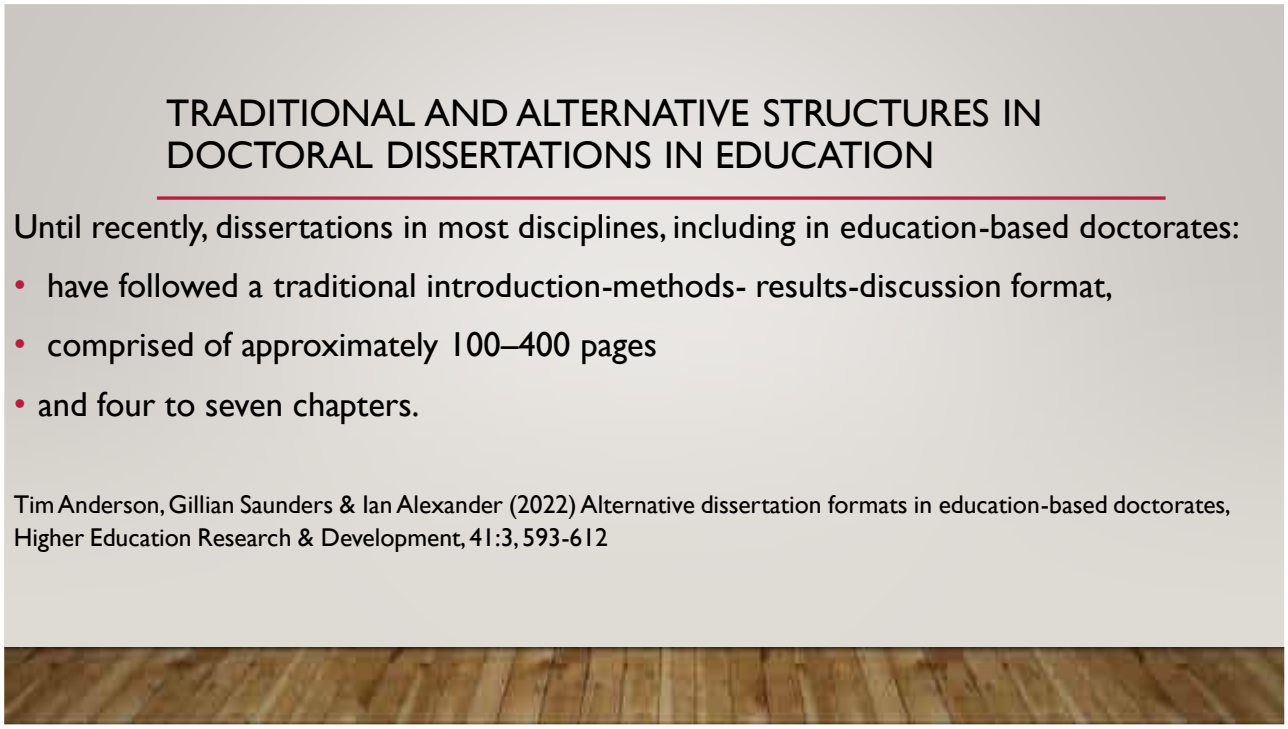

Twenty years ago, in 1999, Duke and Beck argued that education-based disciplines should consider 'alternative formats for the dissertation' (p. 31) on the basis that the dissertation is a 'strange' genre with a limited audience and dissemination opportunities.

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They distinguish 3 main types of dissertations: traditional and non-traditional (or alternative) manuscript style and topic-based style.

This is the evidence of shifting notions of what doctoral research and dissertations can (and do) look like in contemporary PhD programs.

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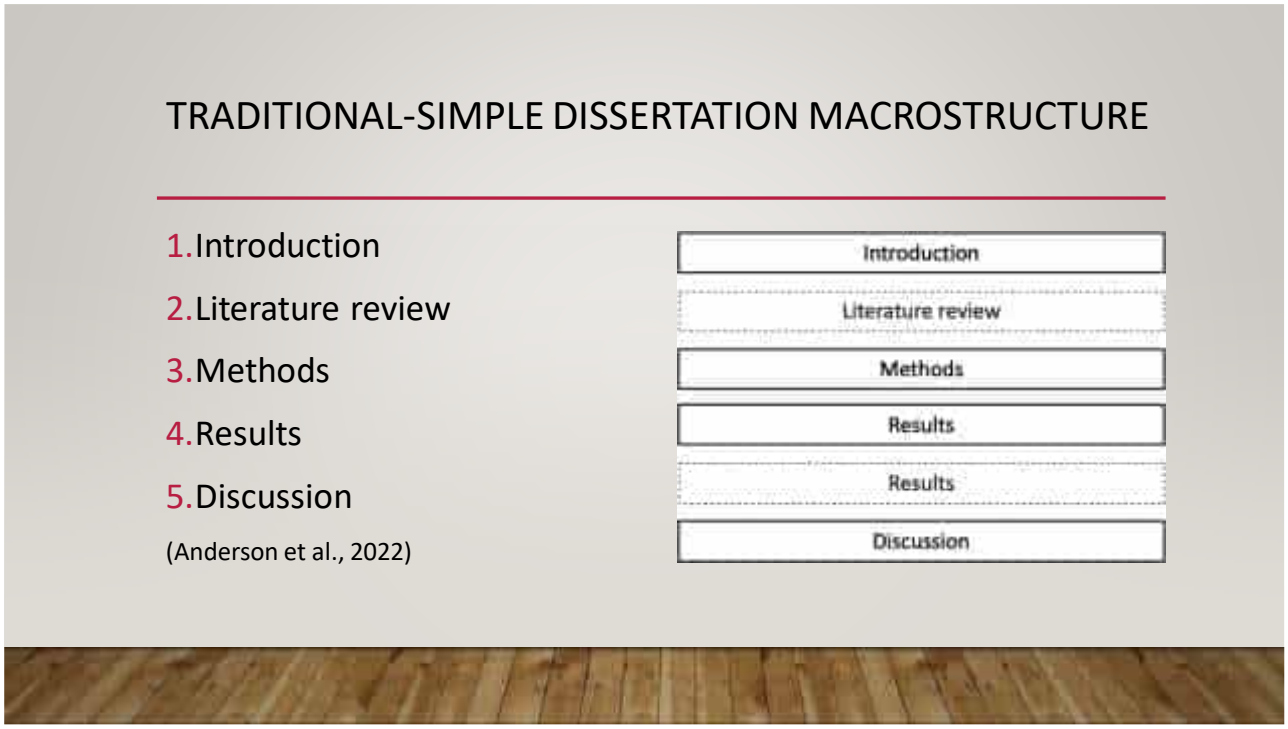

This dissertation length and number of chapters can vary.

Many traditional-simple dissertations contain more than one 'results' chapter (especially for qualitative dissertations), but the basic global structure remains generally consistent.

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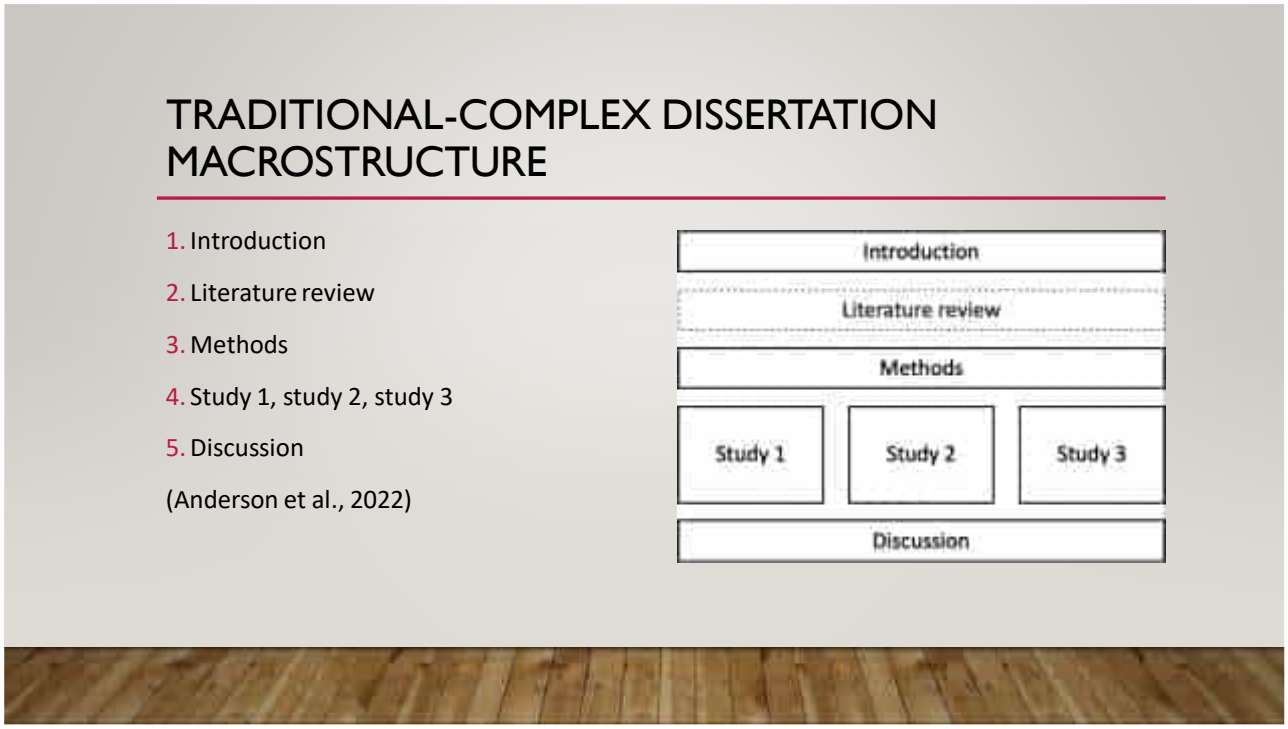

This type of dissertation comprised of two or more separate research studies.

Every separate study is typically reported on in distinct interior chapters.

Similar to the traditional-simple category, this dissertation often contains separate introductory and literature review sections or chapters and a general discussion of the research methods.

A separate discussion chapter typically concludes the dissertation.

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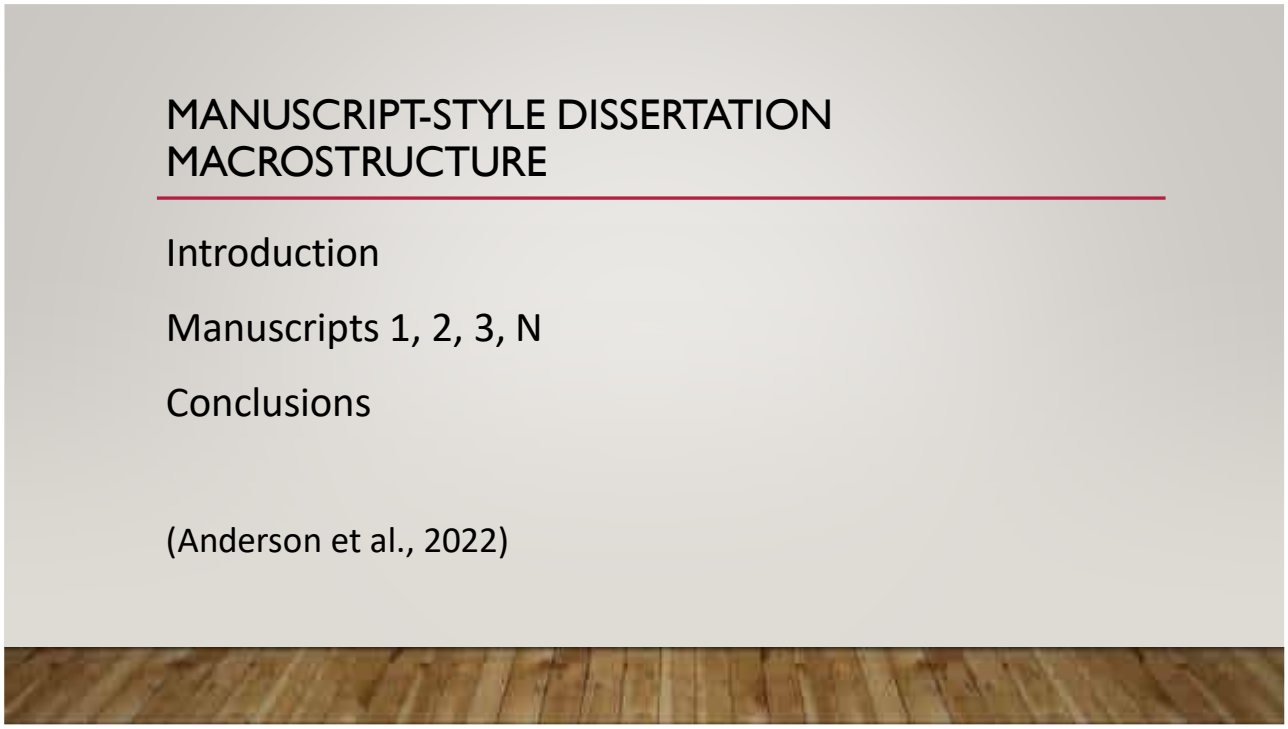

A manuscript-style dissertation typically s comprised of either published or publishable manuscripts.

They usually are presented in the style of journal articles or book chapters.

They often include separate introductory and concluding chapters.

This format can vary in length, involve only one or multiple interior manuscript-chapters.

The authorship of manuscripts can be different: an author can be one or the manuscripts can be written by co-authors.

The manuscript-model as a dissertation format has its modern roots in the UK, and the University of Cambridge in the mid-1960s (Wilson, 2002), but its origins extend back to the nineteenth century in Germany.

Both the process and final product of this dissertation can vary considerably across countries and institutions, and it has been referred to by many names, including the PhD/thesis/dissertation by publication, PhD by portfolio, PhD by published work, publication-based thesis, article-style, article-compilation format, research article format, and the manuscript model/option.

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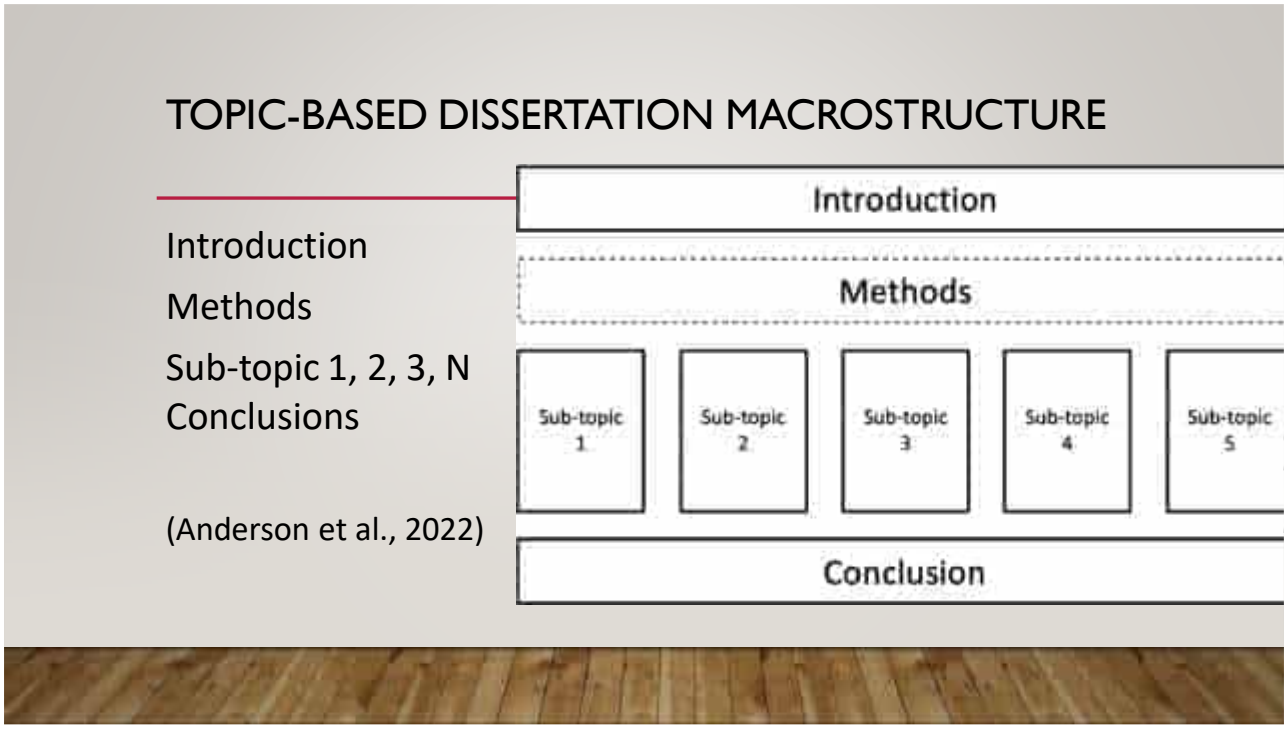

The topic-based dissertations are disproportionately used by doctoral writers in education-based disciplines informed by arts-based inquiry, women's and gender studies, Indigenous studies, poetic inquiry, and literary fields, for example.

Many of the topic- based dissertations seemed purposefully anti-empirical in how they were structured; in other words, this dissertation structure allowed authors the opportunity to express their research and voices in ways that resisted the confines of 'traditional' empirical research and the traditional dissertation structure.

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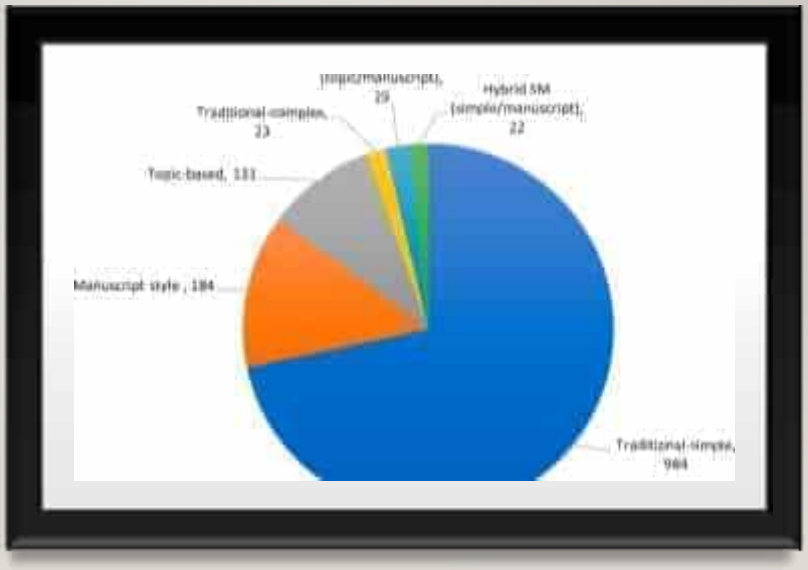
DISSERTATION MACROSTRUCTURES (1373)



MANUSCRIPT-STYLE DISSERTATIONS

	Chapters	Authors	Single-authored	Co-authored
Quantitative 113	5,66	5,23	17	96
Mix method 42	5,45	3,83	12	30
Qualitative	5,43	2,14	19	9
None 1	5,5	1	1	0

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TOPC-BASED DISSERTATIONS

	Chapters	Authors	Single-authored	Co-authored
Quantitative 2	7,5	1	2	0
Qualitative 128	6,66	1	128	0

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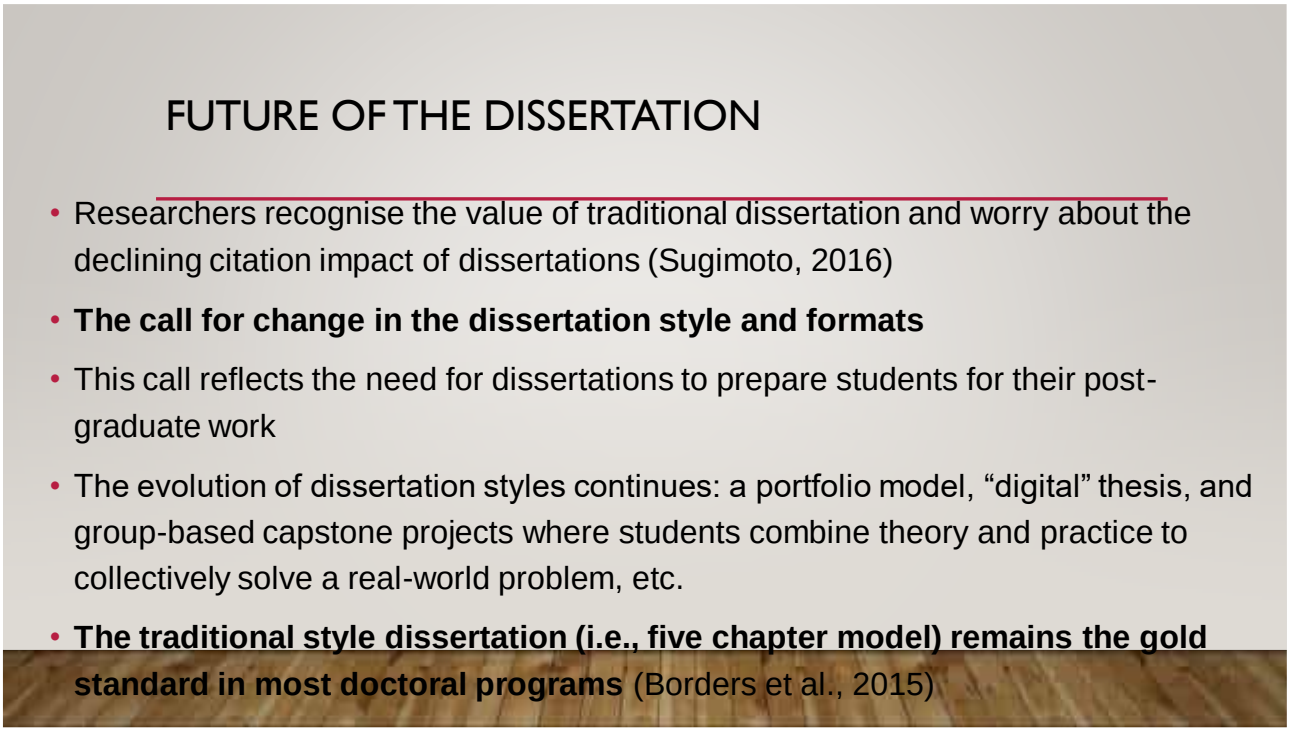

In 2016, the Council of Graduate schools US held a two-day workshop entitled "The Future of the Dissertation". The workshop included discussions on various dissertation formats, such as manuscript style dissertations (e.g., Smith, 2016). Presenters described the value of the dissertation, in its current form, as oftentimes determined by its completion, and commented on the declining citation impact of dissertations (Larivière et al., 2008; Sugimoto, 2016). Additionally, the call for change in the dissertation style reflects the heterogenous job market for doctoral graduates, and the need for dissertations to prepare students for their post-graduate work. For example, alternatives to the traditional-style dissertation in the arts and humanities include a portfolio model, "digital" thesis, and group-based capstone projects where students combine theory and practice to collectively solve a real-world problem (Loss, 2016). Hence, the evolution of dissertation styles continues; yet, the traditional style dissertation (i.e., five chapter model that includes an introduction, literature review, methodology, results, and conclusion) remains the gold standard in most doctoral programs, including counselor education (Borders et al., 2015).

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The Use of Microcontrollers in Education

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This program is co-financed by the European Union (European Social Fund- ESF) and Greek national funds through the Operational Program "Human Resources Development, Education and Lifelong Learning", "ESPA 2014-2020", in the context of the project "Support for Internationalization Activities of the University of Ioannina, ICT in Education: Applications in Natural, Social and Health Sciences" – MIS 5162213.

The Use of Microcontrollers in Education

E.K. Evangelou

Ioannina, September 01-03, 2023

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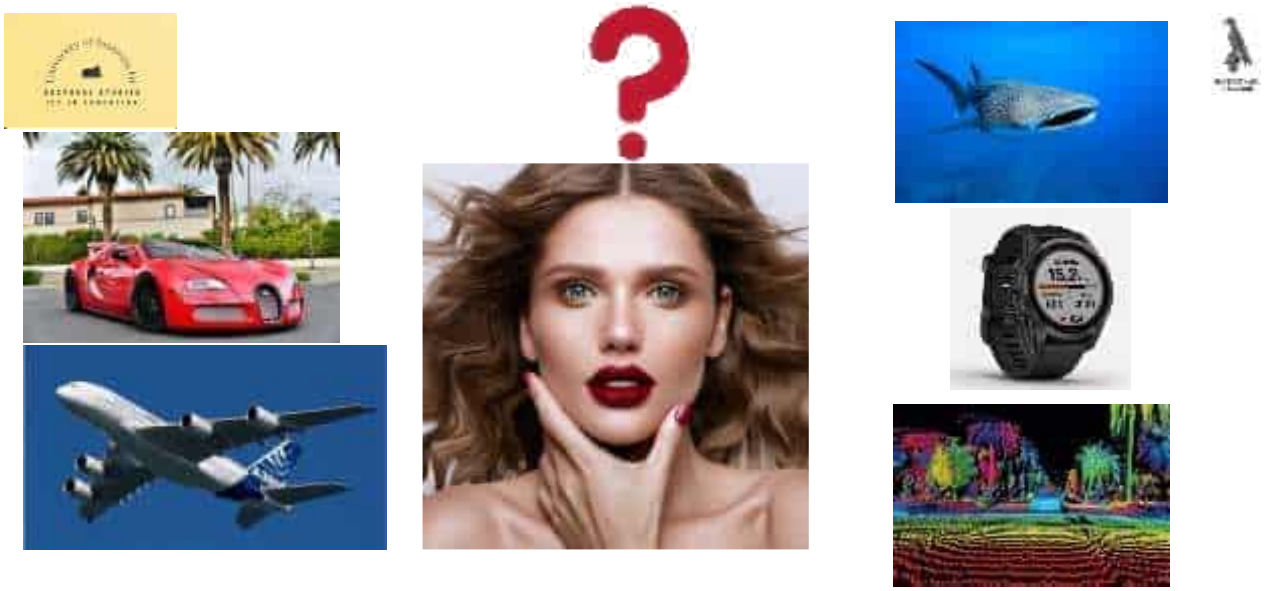

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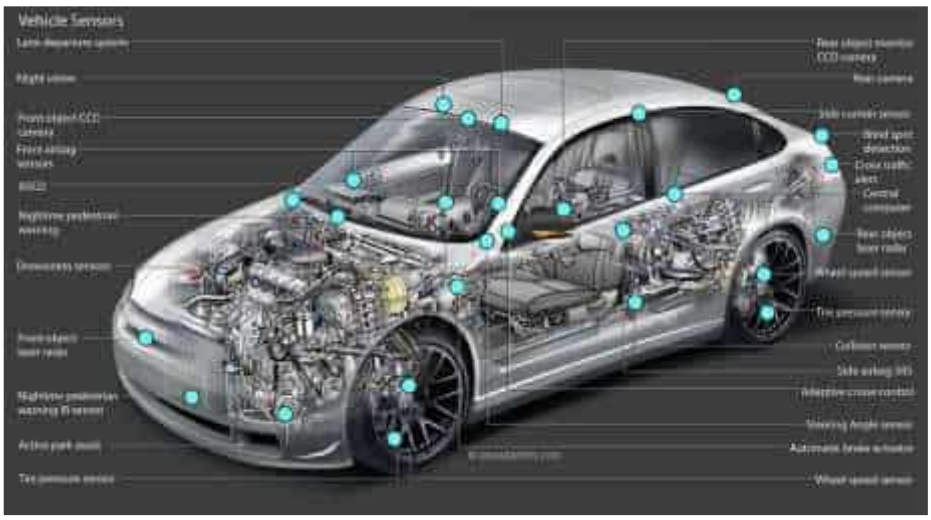
Sensors in a modern car



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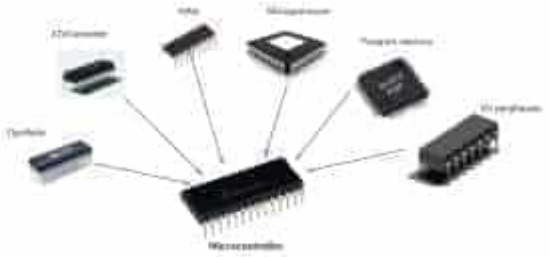
Which device controls these sensors?

Various Microcontrollers !!!



So,

If Microcontrollers are everywhere in our lives

How do we introduce them to the young

students/pupils??

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Simple MCU boards .....

Arduino UNO

Raspberry - pi

And applications!

Arduino UNO

Raspberry - pi

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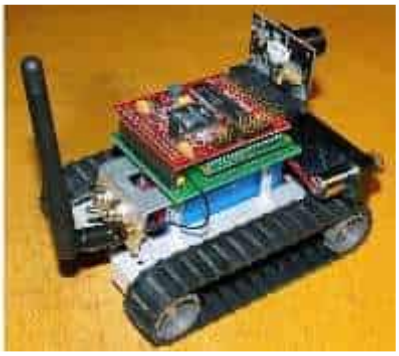
Which soon become …
ROBOTS!!!



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And some difficult questions ....

Who teaches Microcontrollers ? EEE or School of Education?

How do we introduce them to the young generation?

In theory or in practice?

What about the basics of programming?

Which platform/board?

Robotics come before (as a game) or after (as a serious game)?

.....

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To be answered in

International PhD Programmes

ICT in Education: Applications in Natural, Social and Health Sciences

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Workshop – Operational Programme "Human Resources Development, Education and Lifelong Learning 2014-2020" ESPA 2014-2020

Georgia Gardiakou

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Workshop – Operational Programme "Human Resources Development, Education and Lifelong Learning 2014-2020" ESPA 2014-2020

Γεωργία Γκαρδιακού

Νομική Σύμβουλος, Στέλεχος Μονάδας Β2.2. «Διαχείριση Πράξεων Τριτοβάθμιας Εκπαίδευσης και Ενδυνάμωσης του Ερευνητικού Δυναμικού», Ειδική Γραμματεία Διαχείρισης Προγραμμάτων ΕΚΤ, Ε.Υ.Δ. Ε.Π. «Ανάπτυξη Ανθρώπινου Δυναμικού, Εκπαίδευση και Δια Βίου Μάθηση», Υπουργείο Ανάπτυξης και Επενδύσεων

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Αξιότιμα μέλη της Πανεπιστημιακής κοινότητας, αξιότιμοι προσκεκλημένοι, αγαπητοί φοιτητές, καλημέρα σας.

Εκ μέρους της Διαχειριστικής Αρχής του Επιχειρησιακού Προγράμματος «Ανάπτυξη Ανθρώπινου Δυναμικού, Εκπαίδευση και Δια Βίου Μάθηση», ευχαριστώ την Επιστημονική Υπεύθυνη του Προγράμματος κα Πολυξένη Παγγέ για την πρόσκληση και εύχομαι καλή επιτυχία στις εργασίες του Συνεδρίου.

Η γνώση, η έρευνα και η καινοτομία δεν μπορούν να περιοριστούν στο στενό πλαίσιο μιας χώρας. Τα τελευταία χρόνια τα ελληνικά ακαδημαϊκά ιδρύματα, με σταθερά βήματα, στρέφουν το βλέμμα τους στο εξωτερικό, πραγματοποιούν διεθνείς συνεργασίες, συμμετέχουν σε ανταλλαγές φοιτητών, ερευνητών και τεχνογνωσίας, εκπονούν ξενόγλωσσα προγράμματα και γίνονται πιο εξωστρεφή, αναζητώντας τη θέση τους στον κόσμο.

Ο όρος διεθνοποίηση αναφέρεται σε δράσεις και συνέργειες οι οποίες μπορεί να περιλαμβάνουν την εκπόνηση κοινών και διπλών προγραμμάτων σπουδών, τη συμμετοχή ξένων φοιτητών σε ξενόγλωσσα και θερινά προγράμματα στη χώρα μας, τις ανταλλαγές φοιτητών, ακαδημαϊκών, ερευνητών και τεχνογνωσίας, καθώς και άλλες μορφές συνεργασίας προσδιορισμένες από τα ίδια τα εκπαιδευτικά ιδρύματα.

Στρατηγικός στόχος του Υπουργείου Ανάπτυξης και Επενδύσεων είναι η εξωστρέφεια των ελληνικών ακαδημαϊκών ιδρυμάτων, ιδίως μέσα από την ανάδειξη νέων σχημάτων συνεργασίας και την προσφορά ξενόγλωσσων προγραμμάτων, καθώς και η μετεξέλιξή τους σε «πανεπιστήμια

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του μέλλοντος», σε κόμβους έρευνας και καινοτομίας, που θα αποτελούν πόλο έλξης για την επιστημονική έρευνα, ιδιαίτερα στην περιοχή της ΝΑ Ευρώπης.

Η περίοδος της πανδημίας κατέδειξε την αξία των πανεπιστημίων αλλά και τον ρόλο που μπορούν να διαδραματίσουν στην κοινωνία, μέσα από συμπράξεις και συνεργασίες οι οποίες θα έχουν θετικό αντίκτυπο σε τοπικό και παγκόσμιο επίπεδο. Μια καίρια ερώτηση η οποία τέθηκε είναι πώς ένα ακαδημαϊκό ίδρυμα ορίζει τι σημαίνει επιτυχής διεθνοποίηση, με δεδομένο ότι μέσα στο ίδιο πανεπιστήμιο μπορεί να υπάρχουν διαφορετικές ιδέες και ερμηνείες αναφορικά με το όραμα και την αποστολή του ιδρύματος αλλά και τους τρόπους με τους οποίους θα επιτευχθούν οι επιδιωκόμενοι στόχοι. Τα σημαντικότερα συμπεράσματα που προέκυψαν μέσα από τις παρουσιάσεις και τη συζήτηση που ακολούθησε είναι ότι μια επιτυχημένη στρατηγική διεθνοποίησης πρέπει να αφορά το εκπαιδευτικό ίδρυμα συνολικά, να αποτελεί τμήμα της γενικότερης στρατηγικής που ακολουθείται, και να διαπνέει όλες τις αποφάσεις και δραστηριότητες του πανεπιστημίου.

Η διεθνοποίηση είναι ένα ζωντανό και ευέλικτο εργαλείο, το οποίο μπορεί να προσαρμόζεται κατά περίπτωση μέσα από την υιοθέτηση οριζόντιων και κάθετων στρατηγικών που θα επιτρέπουν τον συντονισμό όλων των εμπλεκομένων και θα διευκολύνουν την εφαρμογή των αποφάσεων.

Το σίγουρο είναι ότι δεν υπάρχει ένας μόνο ενδεδειγμένος τρόπος μέσα από τον οποίο μπορεί να επιτευχθεί η διεθνοποίηση των πανεπιστημίων· οι προτεραιότητες καθορίζονται με βάση το προφίλ του κάθε πανεπιστημίου, το όραμα και τους συγκεκριμένους στόχους και επιδιώξεις.

Τα πανεπιστήμια καλούνται πλέον να διαχειριστούν μια κατάσταση στην οποία ζητήματα τοπικού και παγκόσμιου ενδιαφέροντος διαρκώς αντιπαραβάλλονται ή και έρχονται σε σύγκρουση. Η πιο παραγωγική προσέγγιση είναι να επιχειρείται μια σύνδεση ανάμεσα στο τοπικό και στο παγκόσμιο, η οποία θα επιτρέπει στα πανεπιστήμια να δραστηριοποιούνται σε διεθνές επίπεδο, αποφεύγοντας την απομόνωση, αλλά ταυτόχρονα να έχουν έναν ενεργό ρόλο και στις τοπικές κοινωνίες των οποίων αποτελούν σημαντικό κομμάτι.

Κοινός στόχος των ελληνικών πανεπιστημίων είναι να αποκτήσει η χώρα μια ανταγωνιστική θέση στον παγκόσμιο εκπαιδευτικό χάρτη. Για την επιτυχή περαιτέρω διεθνοποίηση των ελληνικών πανεπιστημίων σημαντικές παράμετροι είναι οι ευκαιρίες κινητικότητας και συνεργασίας, η σύνδεση της εκπαίδευσης και των πτυχίων με την αγορά εργασίας, η εξασφάλιση πολιτικής ίσων ευκαιριών και η έκθεση των φοιτητών σε νέες γνώσεις και δεξιότητες, οι οποίες θα τους επιτρέψουν να ανταπεξέλθουν στις απαιτήσεις του σήμερα και του αύριο. Παράλληλα, μια τέτοια εξέλιξη προϋποθέτει την ποιοτική αναβάθμιση των πανεπιστημίων, μέσα από προγράμματα που

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δίνουν έμφαση στη βιωσιμότητα, εστιάζουν και επενδύουν σε τομείς αιχμής και στα αντικείμενα εκείνα που παρουσιάζουν τις μεγαλύτερες δυνατότητες για ανάπτυξη. Η «ψηφιακή μεταμόρφωση», η οποία βρίσκεται σε εξέλιξη, είναι άλλο ένα σημαντικό στοιχείο. Τα ελληνικά πανεπιστήμια, εκμεταλλευόμενα την εμπειρία που απέκτησαν την περίοδο της πανδημίας, κατά τη διάρκεια της οποίας κυριάρχησαν η τηλεργασία και η εξ αποστάσεως εκπαίδευση, μπορούν να προσφέρουν προγράμματα βασισμένα σε ένα υβριδικό εκπαιδευτικό μοντέλο το οποίο να συνδυάζει δια ζώσης και εξ αποστάσεως μαθήματα, με δεδομένο ότι η «ψηφιακή κινητικότητα» (virtual mobility) είναι μια νέα πραγματικότητα.

Ειδικότερα, στο πλαίσιο της δράσης αυτής τα πανεπιστήμια θα έχουν τη δυνατότητα:

- να οργανώσουν και αναπτύξουν ξενόγλωσσα προπτυχιακά και μεταπτυχιακά προγράμματα σπουδών, με ή χωρίς συνεργασία με πανεπιστήμια άλλων ευρωπαϊκών και μη χωρών,
- να συνάψουν διεθνείς συμφωνίες συνεργασίας,
- να αναπτύξουν ψηφιακό εκπαιδευτικό υλικό ανοικτής πρόσβασης,
- να καλέσουν επισκέπτες καθηγητές από το εξωτερικό να διδάξουν,
- να οργανώσουν υπηρεσίες υποδοχής και υποστήριξης φοιτητών
- να λάβουν διεθνή πιστοποίηση των προγραμμάτων τους από αναγνωρισμένους διεθνείς φορείς πιστοποίησης,
- να συμμετάσχουν σε διεθνείς επιστημονικές ενώσεις,
- να οργανώσουν διεθνείς ημερίδες και συνέδρια συναφή με τα αντικείμενα των προγραμμάτων τους.

Η δράση υποστηρίζει τις διαδικασίες ωρίμανσης προγραμμάτων σπουδών, και όχι την πλήρη λειτουργία τους, ώστε ένα μεγάλο μέρος αυτών να μπορούν να καταστούν βιώσιμα σε βάθος χρόνου και να αποτελέσουν τη βάση για την πλήρη ανάπτυξη της στρατηγικής διεθνοποίησης της ανώτατης εκπαίδευσης.

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Workshop – Operational Programme "Human Resources Development, Education and Lifelong Learning 2014-2020" "ESPA 2014-2020"

Νίκος Φατσέας

Στέλεχος Μονάδας Β2.2. «Διαχείριση Πράξεων Τριτοβάθμιας Εκπαίδευσης και Ενδυνάμωσης του Ερευνητικού Δυναμικού», Ειδική Γραμματεία Διαχείρισης Προγραμμάτων ΕΚΤ,

Ε.Υ.Δ. Ε.Π. «Ανάπτυξη Ανθρώπινου Δυναμικού, Εκπαίδευση & Δια Βίου Μάθηση»,

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Εκ μέρους της Διαχειριστικής Αρχής του Επιχειρησιακού Προγράμματος «*Ανάπτυξη Ανθρώπινου Δυναμικού, Εκπαίδευση και Δια Βίου Μάθηση*», ευχαριστούμε την Επιστημονικά Υπεύθυνη του Προγράμματος, κα Πολυξένη Παγγέ, για την πρόσκληση συμμετοχής μας στο Συνέδριο, δεδομένου ότι μας προσφέρει την ευκαιρία να ανταλλάξουμε πολύτιμες εμπειρίες, καθώς και πληροφορίες οι οποίες θα διευκολύνουν την κατανόηση της λειτουργίας των Προγραμμάτων και τη μελλοντική βελτίωσή τους.

- Η Πρόσκληση υποβολής προτάσεων για τη Δράση «*Υποστήριξη Δράσεων Διεθνοποίησης της Ανώτατης Εκπαίδευσης*» του Ε.Π. «*Ανάπτυξη Ανθρώπινου Δυναμικού, Εκπαίδευση και Δια Βίου Μάθηση*» απευθύνθηκε σε είκοσι πέντε (25) ΑΕΙ, με συνολικό προϋπολογισμό (Π/Υ) 20.000.000 ευρώ.
- Υπέβαλαν προτάσεις είκοσι ένα (21) ΑΕΙ, με τριάντα (30) Τεχνικά Δελτία Πράξης (ΤΔΠ):
  - Δέκα (10) ιδρυματικές προτάσεις για Ξενόγλωσσα Προπτυχιακά Προγράμματα Σπουδών (ΞΠΠΣ) και

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- Είκοσι (20) ιδρυματικές προτάσεις για Ξενόγλωσσα Μεταπτυχιακά Προγράμματα Σπουδών (ΞΜΠΣ β΄ και γ΄ κύκλου).

- Εντάχθηκαν είκοσι επτά (27) ΤΔΠ, συνολικής Δημόσιας Δαπάνης (ΔΔ) 8.687.014 €. Τα ενταγμένα ΤΔΠ περιλαμβάνουν:
  - ✓ **Δεκαέξι (16) ΞΠΠΣ** με Π/Υ 820.000€.
    Α.Π.Θ. (2), Δ.Π.Θ. (1), Ε.Α.Π. (4), Ε.Κ.Π.Α. (2), ΠΑ.Δ.Α. (2), ΠΑΝ/ΜΙΟ ΔΥΤ. ΜΑΚΕΔΟΝΙΑΣ (3), ΠΑΝ/ΜΙΟ ΚΡΗΤΗΣ (1), ΠΑ.ΜΑΚ. (1).
  - ✓ **Εκατόν είκοσι εννέα (129) ΞΜΠΣ β΄ κύκλου** με Π/Υ 6.198.068€.
    Διψήφιο αριθμό προγραμμάτων υπέβαλαν: ΔΙ.ΠΑ.Ε. (24), Ε.Κ.Π.Α. (23), Α.Π.Θ. (12), ΠΑΝ/ΜΙΟ ΘΕΣΣΑΛΙΑΣ (12), Ε.Μ.Π. (11), ΠΑΝ/ΜΙΟ ΚΡΗΤΗΣ (11).
  - ✓ **Πενήντα δύο (52) ΞΜΠΣ γ΄ κύκλου** με Π/Υ 1.668.140€.
    Απ' αυτά, τα τριάντα εννιά (39) κατανέμονται στο ΠΑΝ/ΜΙΟ ΔΥΤ. ΜΑΚΕΔΟΝΙΑΣ (21) και στο Ε.Κ.Π.Α. (18). Τα υπόλοιπα δεκατρία (13) κατανέμονται στο ΠΑΝ/ΜΙΟ ΙΩΑΝΝΙΝΩΝ (6), στο ΔΙ.ΠΑ.Ε. (3) και στα Α.Π.Θ., Ε.Μ.Π., ΠΑΝ/ΜΙΟ ΠΑΤΡΩΝ, ΠΑΝ/ΜΙΟ ΠΕΛΟΠΟΝΝΗΣΟΥ (από 1).

- Το ποσό που **το Πανεπιστήμιο Ιωαννίνων** μπορούσε να χρησιμοποιήσει για **Πράξεις της Διεθνοποίησης**, με την αρχική κατανομή των δύο (2) εκατομμυρίων ευρώ, ανέρχεται στα **1.069.767,00 ευρώ**.

  Στο Πανεπιστήμιο Ιωαννίνων υλοποιούνται έξι (**6) ΞΜΠΣ** γ΄ κύκλου, με συνολικό Π/Υ **340.000 ευρώ**.

  Σημειώνεται ότι κάθε δικαιούχος είχε τη δυνατότητα να συμπεριλάβει νέα Προγράμματα Σπουδών, υποβάλλοντας σχετικό αίτημα τροποποίησης, έως εξαντλήσεως του ανώτατου προϋπολογισμού του. Εφόσον υπάρξουν αδιάθετα ποσά λόγω μη εκδήλωσης ενδιαφέροντος από κάποια Ιδρύματα για το σύνολο του προϋπολογισμού που τους αντιστοιχεί, αυτός θα μπορούσε να διατεθεί σε ΑΕΙ που ήδη έχουν εξαντλήσει το σύνολο του προϋπολογισμού τους, κατόπιν υποβολής και εξέτασης σχετικού αιτήματος τροποποίησης της ενταγμένης Πράξης από την ΕΥΔ ΕΠΑΝΑΔΕΔΒΜ.

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- Από τη μέχρι σήμερα εμπειρία μας να επισημάνουμε τα εξής:
  - ✓ Η Δράση υποστηρίζει τις διαδικασίες ωρίμανσης Προγραμμάτων Σπουδών και όχι την πλήρη λειτουργία τους, ώστε ένα μεγάλο μέρος αυτών να μπορούν να καταστούν βιώσιμα σε βάθος χρόνου και να αποτελέσουν τη βάση για την πλήρη ανάπτυξη της στρατηγικής Διεθνοποίησης της Ανώτατης Εκπαίδευσης.
  - ✓ Οι Δράσεις της Διεθνοποίησης χρηματοδοτούνται από το Ευρωπαϊκό Κοινωνικό Ταμείο (ΕΚΤ). Ως εκ τούτου, οι δαπάνες για Προμήθειες δεν επιτρέπεται να υπερβαίνουν το 20% του προϋπολογισμού.
- Λόγω της λήξης του τρέχοντος ΕΠ, η Δράση έχει χρονοδιάγραμμα υλοποίησης έως 31-10-2023, διάστημα το οποίο κρίνεται πολύ μικρό με βάση την πολυπλοκότητα και την καινοτομία του φυσικού αντικειμένου. Συνεπώς, έχει δρομολογηθεί η μεταφορά των Πράξεων της Δράσης στο ΕΠ 2021-2027. Αυτό σημαίνει ότι τα ενταγμένα έως και σήμερα προγράμματα θα μεταφερθούν, με το σημερινό τους περιεχόμενο, στο επόμενο ΕΠ, αλλάζοντας κωδικό MIS.

Η ΕΥΔ προτείνει να εγκριθεί χρονοδιάγραμμα μέχρι 31/12/2024. Αργότερα, θα εκδοθεί Πρόσκληση για την ένταξη νέων Προγραμμάτων Διεθνοποίησης, επομένως, με αφετηρία τις εμπειρίες από το πρώτο στάδιο, από πλευράς σας θα θέλαμε να κατατεθούν προτάσεις βελτίωσης, ώστε να ληφθούν υπόψη στη σύνταξη της νέας Πρόσκλησης.

Ευχαριστούμε για την προσοχή σας. Είμαστε στη διάθεσή σας για πιθανές ερωτήσεις και συζήτηση.

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The Economic Impact of ICT on Firms and Economies

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The economic impact of ICT on firms and economies

D. PANAGIOTOU
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Information and communications technology (ICT) has turned into the key technology of the past decade.

The rapid diffusion of the Internet, of mobile telephony and of broadband networks all demonstrate how pervasive this technology has become.

But how precisely does ICT affect economic growth and the efficiency of firms?

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Impacts of ICT at the aggregate level

Technological progress in the production of computers, e.g. the release of increasingly powerful computer chips, is projected to continue for the foreseeable future.

The same is true for communications technologies.

As long as firms -producing these technologies- are confronted with sufficient competitive pressure, the (quality-adjusted) prices of these technologies will continue to decline, encouraging ICT investment and stimulating further productivity growth.

The second important economic impact of ICT is linked to having a sector producing ICT goods and services.

Having such a sector can be important for growth, since ICT-production has been characterised by rapid technological progress and very strong demand.

The sector has therefore grown very fast, making a large contribution to economic growth, employment and exports.

Having an ICT-producing sector can thus support growth, although previous OECD work has shown that it is not a prerequisite to benefit from the technology.

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A third impact of ICT that shows up at the aggregate level is linked to the use of ICT.

Several studies have examined the performance of those sectors of the economy that are intensive users of ICT.

Most of these are located in the services sector, e.g. industries such as finance, business services and distribution.

In some countries, notably the United States and Australia, there is evidence that sectors that have invested most in ICT, such as wholesale and retail trade, have experienced an increase in the overall efficiency of using labour and capital, or multi-factor productivity growth.

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Impacts of ICT at the firm level

The firm-level evidence suggests that there are important cross-country differences in firms' use of ICT.

New firms in the United States seem to experiment more with ICT and relevant business models than those in other OECD countries; they start at a smaller scale than European firms, but grow much more quickly and get higher returns from their investments in ICT when successful.

This is linked to less aversion to risk in the United States, linked to its financial system, which provides greater opportunities for risky financing to innovative entrepreneurs.

Moreover, low regulatory burdens may enable US firms to start at a small scale, experiment, test the market and their business model, and, if successful, expand rapidly.

In contrast, firms in other OECD countries are often faced with high entry and exit costs.

- **Greece: bureaucracy**

Policies to capture the benefits from ICT

The most important implication concerns the business environment.

Governments should reduce unnecessary costs and regulatory burdens on firms to create a business environment that promotes productive investment.

This involves policies that enable firms to undertake organisational changes, that strengthen education and training systems, that encourage good management practices, and that foster innovation.

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Thank you for your attention

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The impact of AI on Global Learning: A focus on international students

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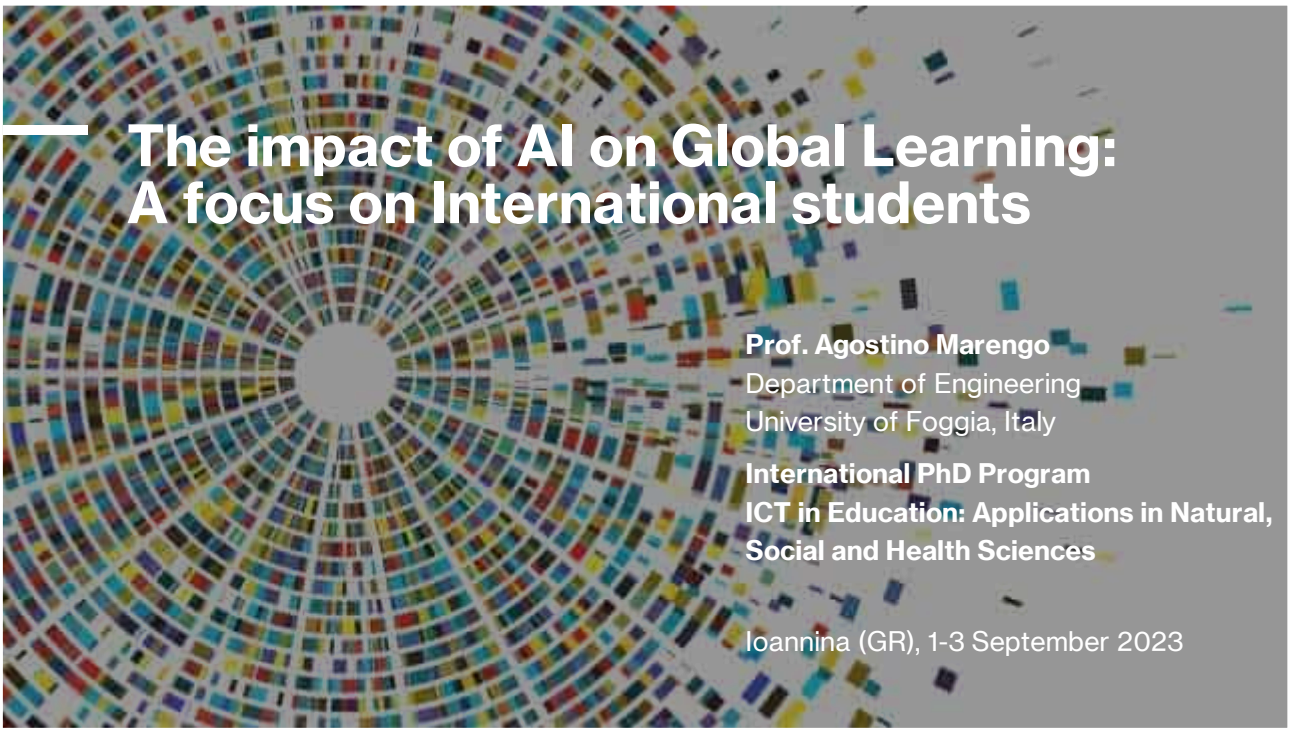

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Global Student Mobility: A Growing Trend

- International students expected to reach 8 million by 2025 Growth from 2.1M (2000) to 6.3M (2020)
- Key drivers: Pursuit of prestigious education
  - Career opportunities
  - Cultural exchange
  - Language skill development

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Challenges Faced by International Students

- Language barriers
- Cultural adaptation
- Understanding academic instructions
- Keeping pace with coursework
- Participation in discussions
- Research methodology differences
- Administrative complexities

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AI Applications in International Education

- Current Implementation Areas:

• Personalized learning experiences

• Adaptive testing systems

• Language translation tools

• Administrative process automation

• Academic writing support

• Real-time feedback systems

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AI-Powered Learning Support Tools

Key Technologies:

- Intelligent tutoring systems (Deep Tutor, Auto Tutor)
- Language support (Grammarly, Google Translate)
- Writing assistance (Write-to-Learn, Turnitin)
- Voice recognition and dictation tools
- Chatbots for learning and research
- Virtual learning environments

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Benefits of AI Integration

- Customized learning paths
- 24/7 accessibility to resources
- Immediate feedback
- Enhanced language support
- Cultural adaptation assistance
- Improved academic performance tracking
- Streamlined administrative processes

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Predictive Analytics and Student Success

AI-driven analytics can:

- Identify at-risk students early
- Track academic progress
- Monitor engagement levels
- Suggest intervention strategies
- Optimize learning pathways
- Enhance retention rates

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Limitations and Concerns

Critical considerations:

- Privacy and data security
- Cultural sensitivity
- Language nuance understanding
- Over-reliance on technology
- Equal access concerns
- Need for human interaction
- Ethical implications

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Future Directions

Emerging trends:

- Advanced personalization
- Enhanced cultural adaptation
- Improved language processing
- Integration with virtual reality
- Smart campus solutions
- AI-driven career guidance
- Cross-cultural collaboration tools

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Conclusions

- AI is transforming international education
- Balance between technology and human touch is crucial
- Continued research and development needed
- Focus on ethical and inclusive implementation
- Commitment to student success
- Future of global education is AI-enhanced but human-centered

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Study in Greece and the New Era in the Internationalization of the Greek Universities

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Higher Education: Priority to internationalization

- Greek state strongly supports internationalization of universities
- Latest legislation *(Law 4957- Government Gazette 41/A'/21 July 2022)*
  - Allows universities to establish international programs.
  - *Distance learning programs.*
  - *Module based programs (majors- minors).*
  - *Short term – semester abroad programs.*
  - *Hellenic National Recognition and Information Center (Hellenic N.A.R.I.C.).*
  - *Collaboration between Greek and international academic communities.*
  - *..etc*

Greece: academic landscape

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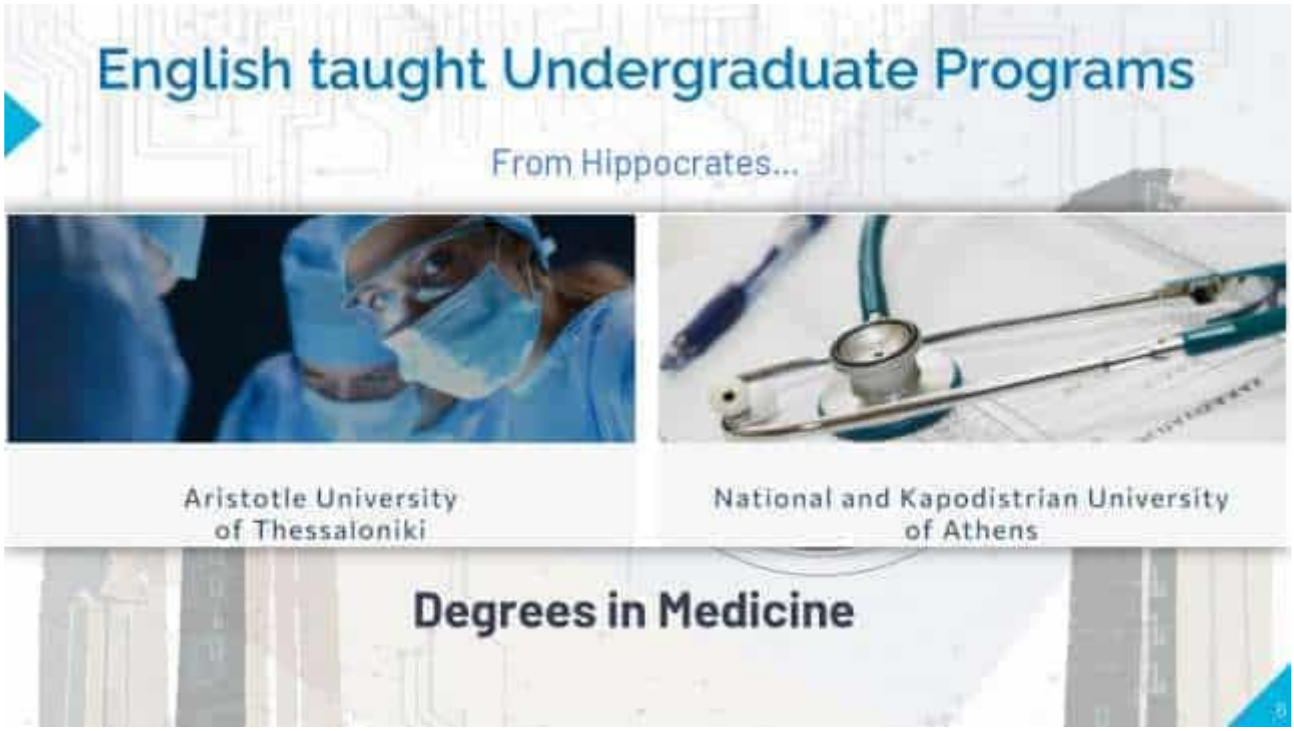

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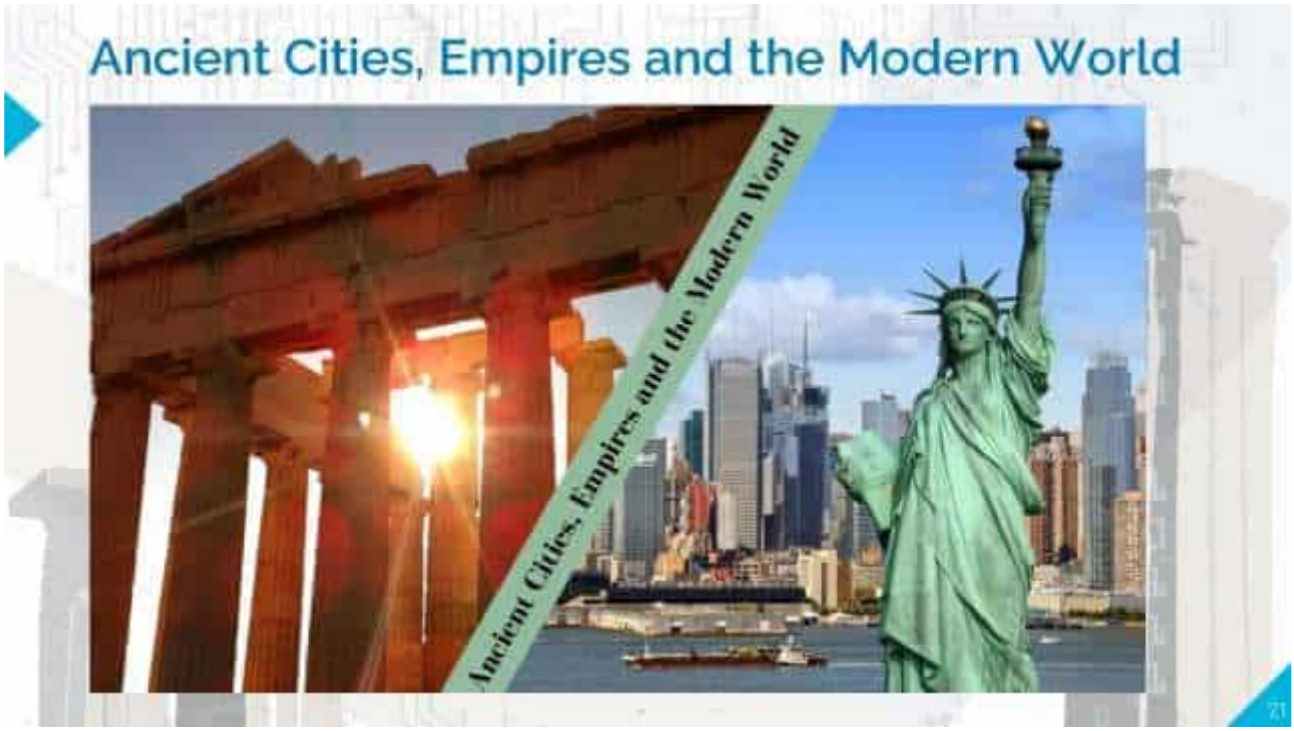

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Neuromarketing as an Innovative Approach for Learning Support

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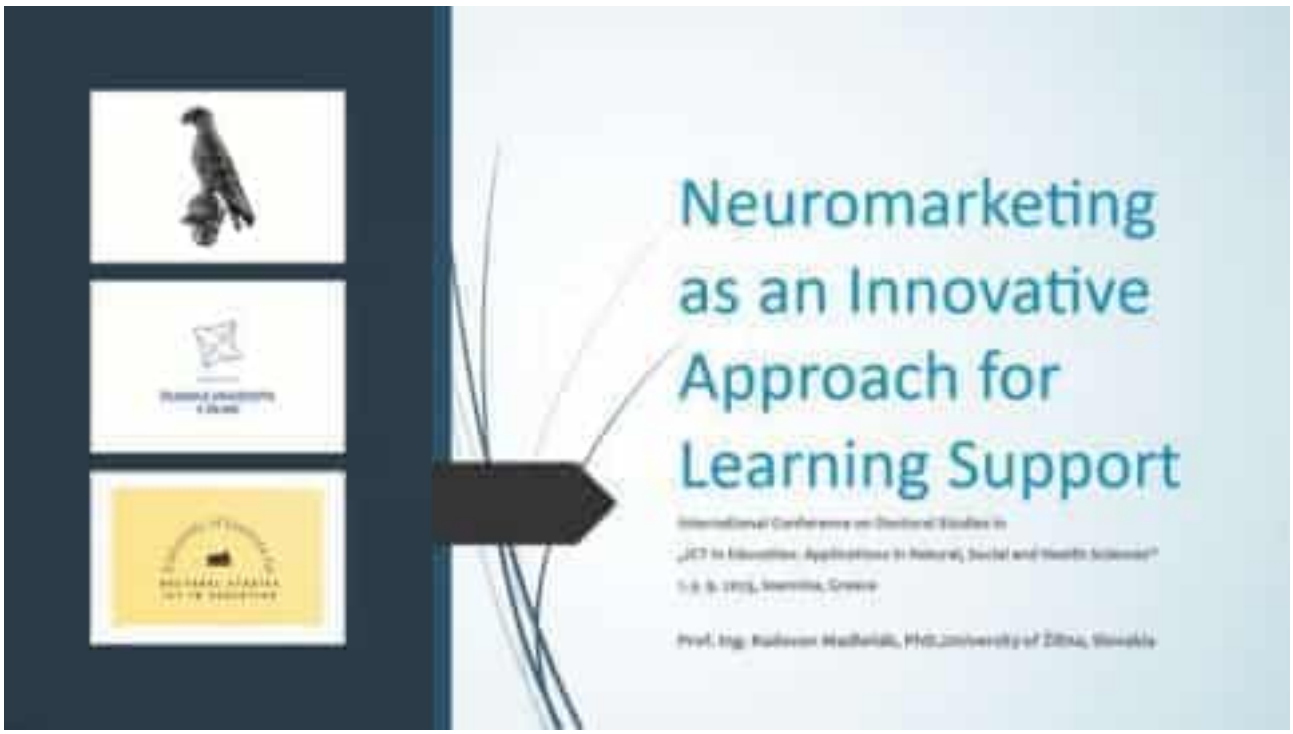

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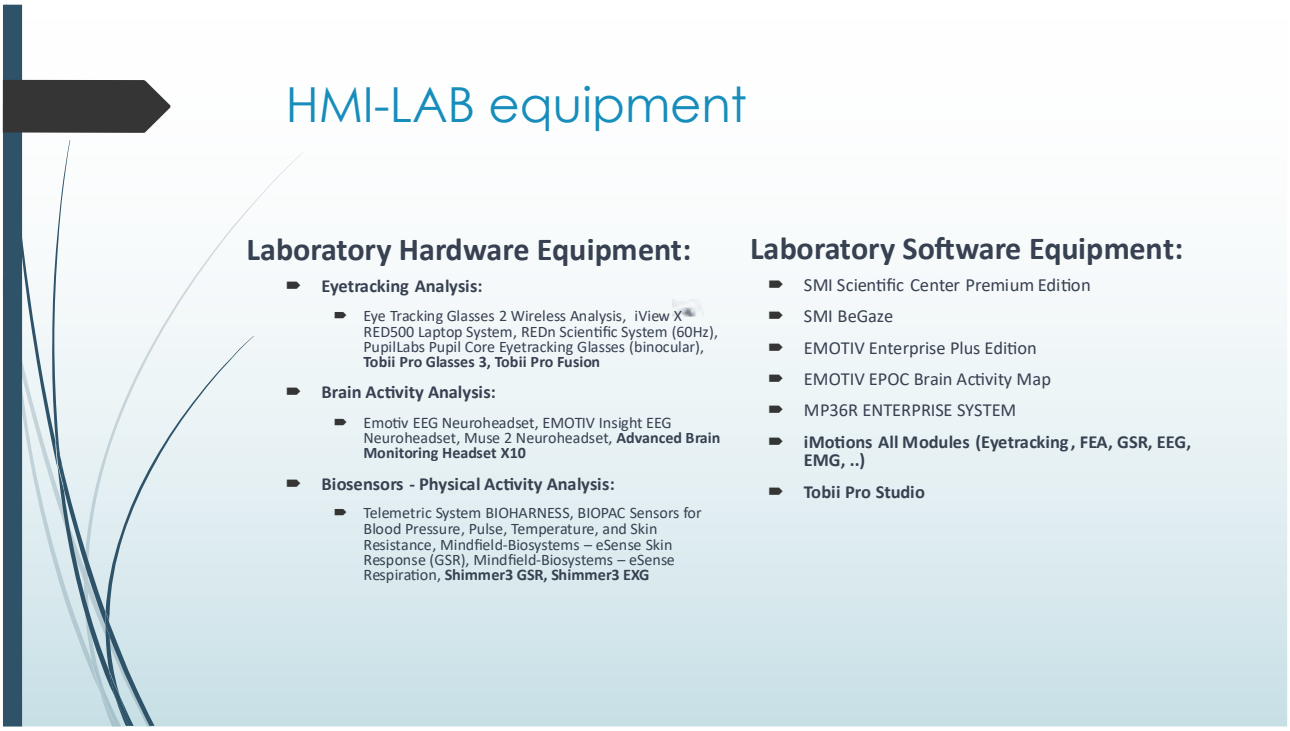

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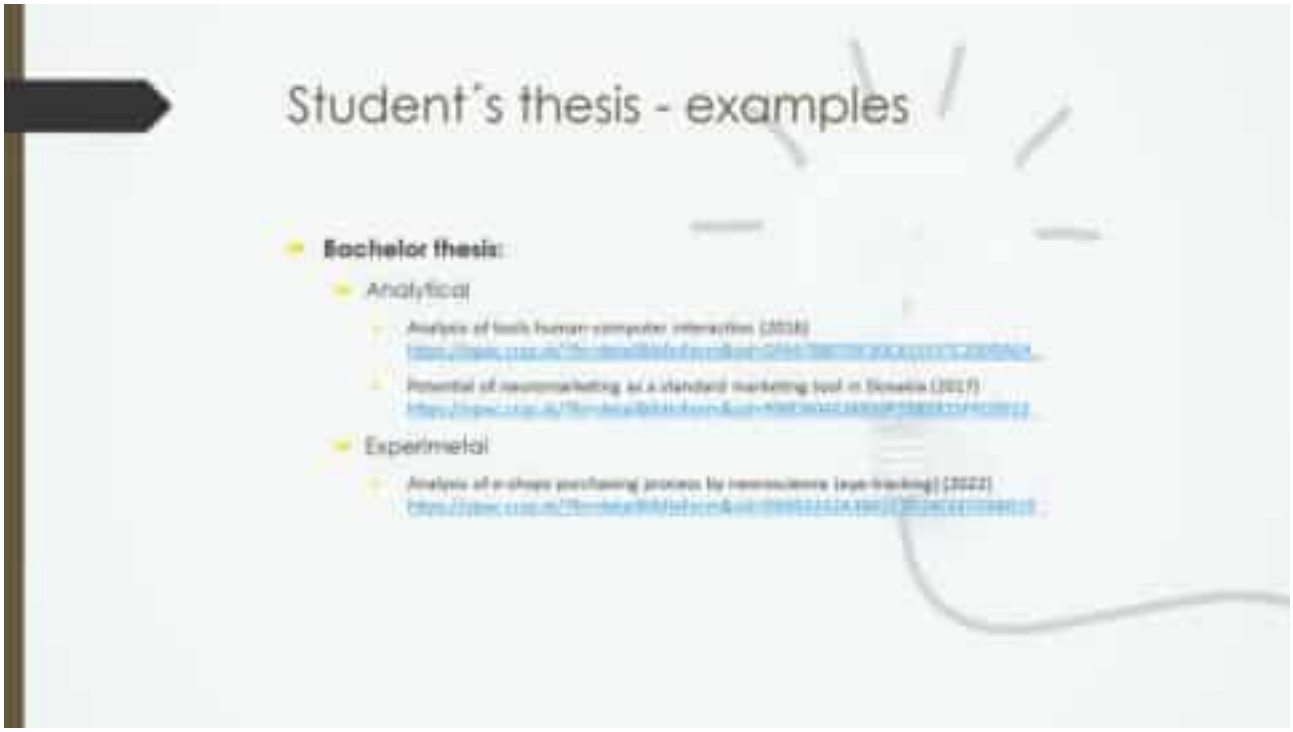

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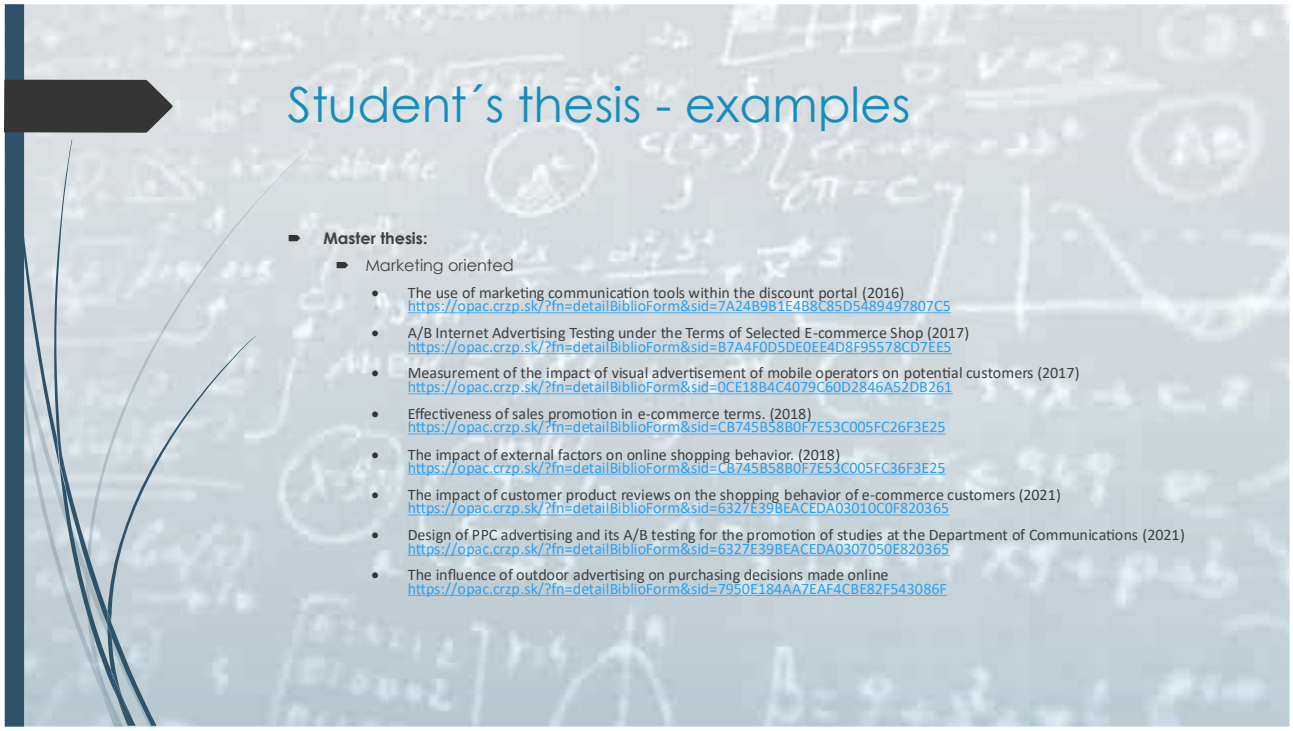

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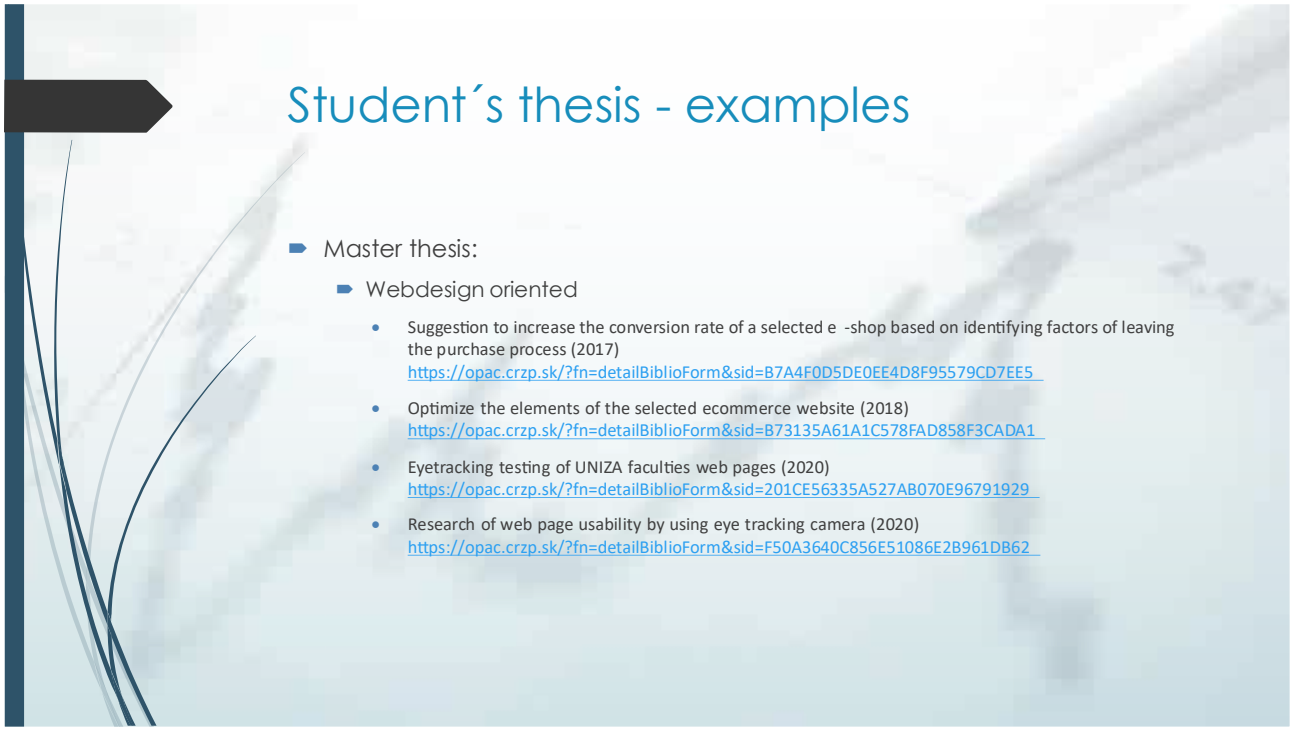

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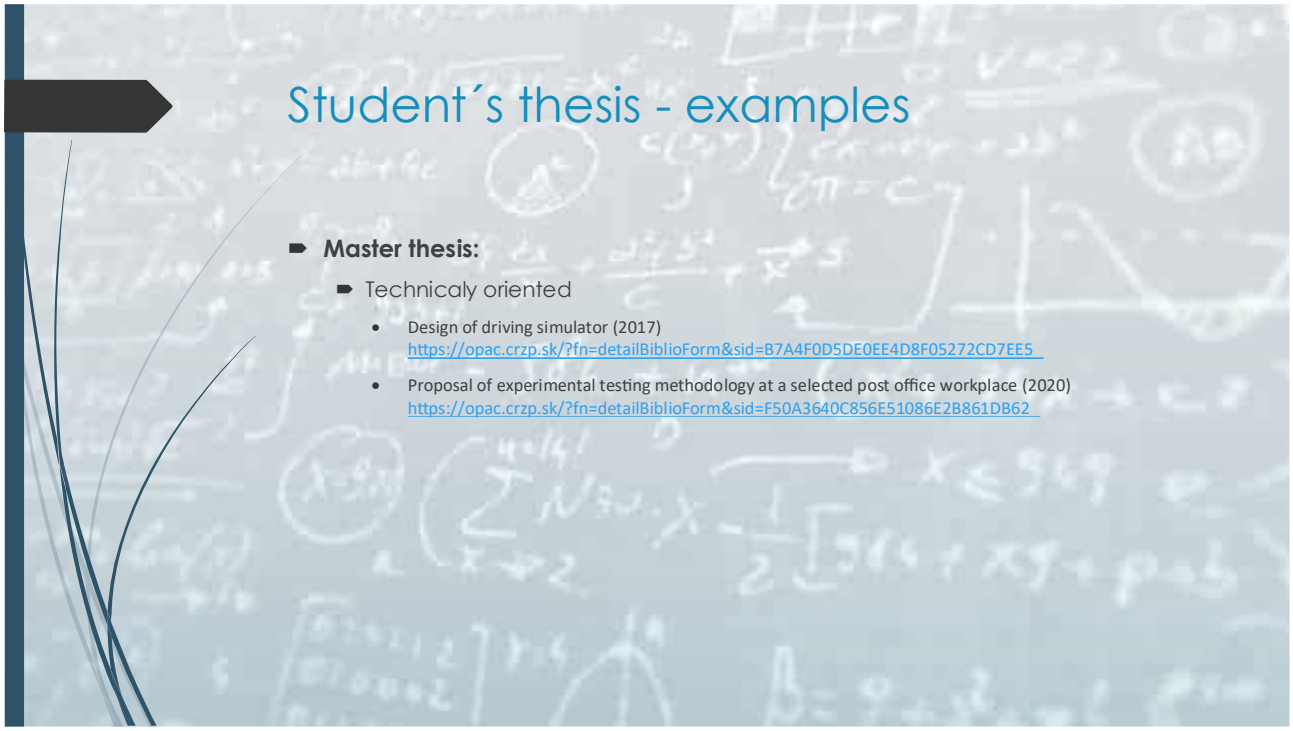

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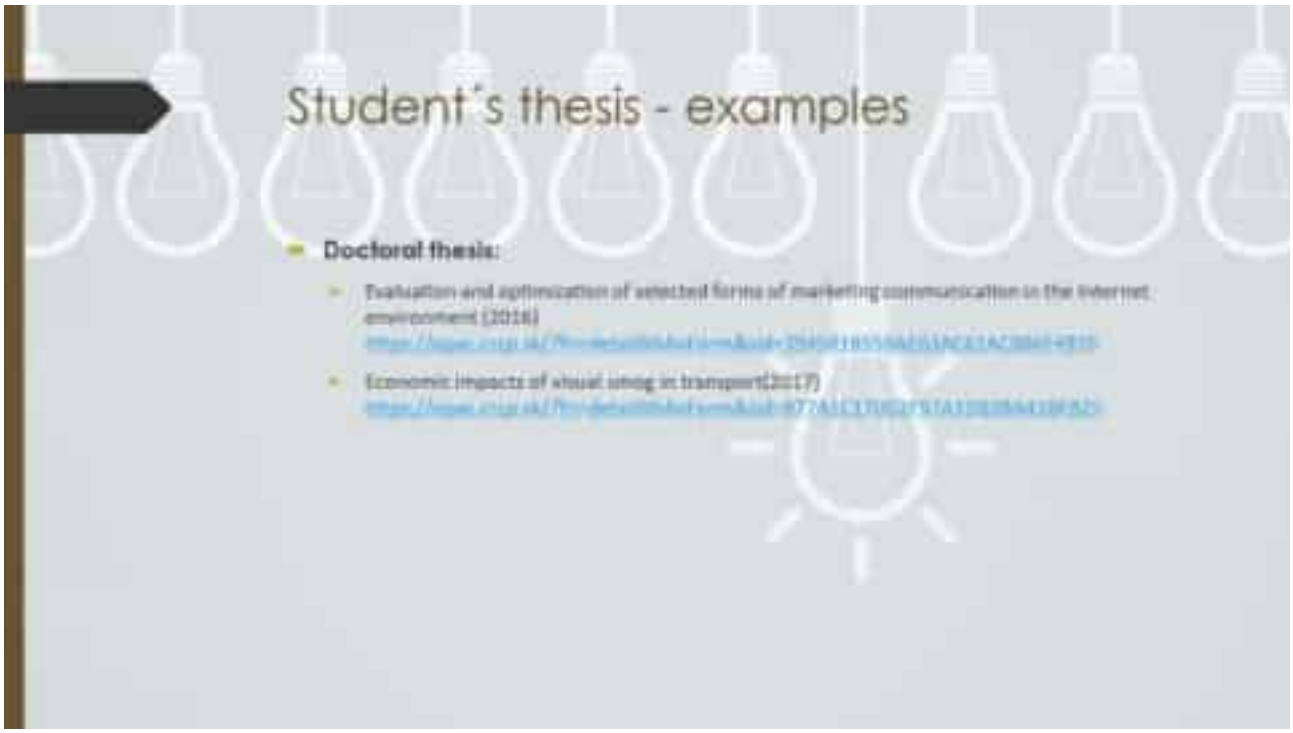

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Thank you for your attention!

Email: radovan.madlenak@uniza.sk

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Perspective Through the International Doctoral Studies Program in Biological Inorganic Chemistry of the University of Ioannina; New Materials for The Development of Innovative Non-Contaminating Contact Lenses

Christina N. Banti

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This program is co-financed by the European Union (European Social Fund- ESF) and Greek national funds through the Operational Program "Human Resources Development, Education and Lifelong Learning", "ESPA 2014-2020", in the context of the project "Support for Internationalization Activities of the University of Ioannina, ICT in Education: Applications in Natural, Social and Health Sciences" – MIS 5162213.

PERSPECTIVE THROUGH THE INTERNATIONAL DOCTORAL STUDIES PROGRAM IN BIOLOGICAL INORGANIC CHEMISTRY OF THE UNIVERSITY OF IOANNINA; NEW MATERIALS FOR THE DEVELOPMENT OF INNOVATIVE NON-CONTAMINATING CONTACT LENSES

Dr Christina N. Banti and Prof Sotiris K. Hadjikakou

Laboratory of Biological Inorganic Chemistry, Department of Chemistry, University of Ioannina

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THIS RESEARCH IS CO-FINANCED BY GREECE AND THE EUROPEAN UNION (EUROPEAN SOCIAL FUND- ESF) THROUGH THE OPERATIONAL PROGRAMME «HUMAN RESOURCES DEVELOPMENT, EDUCATION AND LIFELONG LEARNING 2014-2020» IN THE CONTEXT OF THE PROJECT "BIOLOGICAL INORGANIC CHEMISTRY (BIC)" (MIS 5162213)."

11/5/2024 SAMPLE FOOTER TEXT 1

http://bic.chem.uoi.gr/BIC-En/index-en.html

This program is co-financed by the European Union (European Social Fund- ESF) and Greek national funds through the Operational Program "Human Resources Development, Education and Lifelong Learning", "ESPA 2014-2020", in the context of the project "Support for Internationalization Activities of the University of Ioannina, ICT in Education: Applications in Natural, Social and Health Sciences" – MIS 5162213.

Since 2017, when the first students were enrolled in the

International Inter-institutional Master's Program in Biological Inorganic Chemistry,

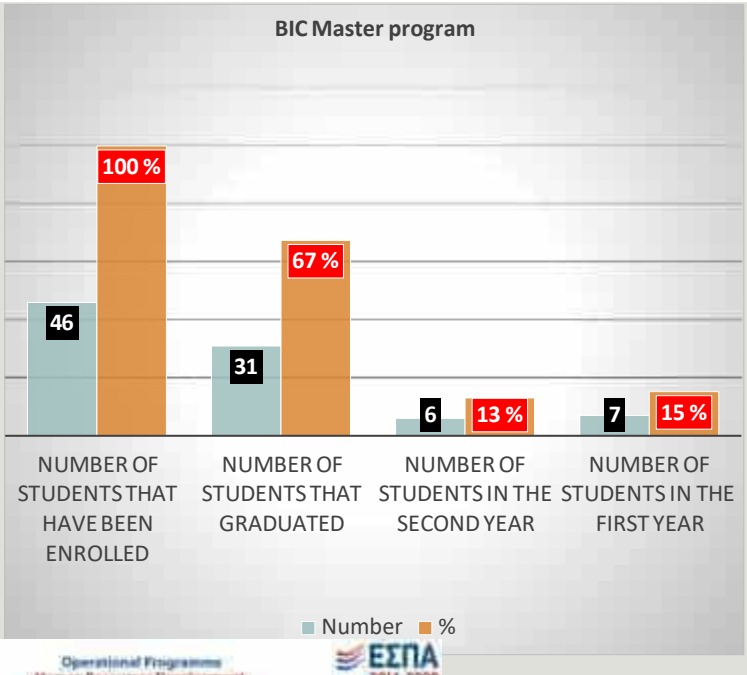
46 students have been enrolled,

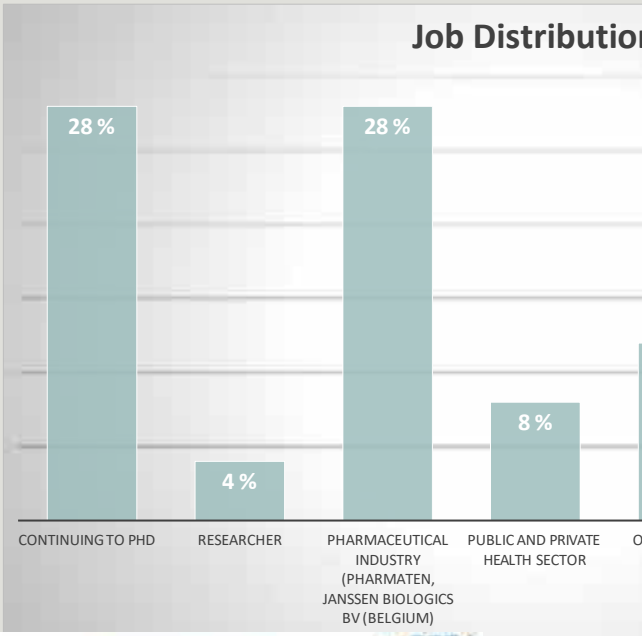
31 have graduated,

While preparing their thesis,

6 students in the second year and

7 students in the first year





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International Ph.D Program «Biological Inorganic Chemistry (BIC)

UNDER THE OPERATION OF THE UNIVERSITY OF IOANNINA, IOANNINA, GRE ECE

THIS RESEARCH IS CO-FINANCED BY GREECE AND THE EUROPEAN UNION (EUROPEAN SOCIAL FUND- ESF) THROUGH THE OPERATIONAL PROGRAMME «HUMAN RESOURCES DEVELOPMENT, EDUCATION AND LIFELONG LEARNING 2014-2020» IN THE CONTEXT OF THE PROJECT "BIOLOGICAL INORGANIC CHEMISTRY (BIC)" (MIS 5162213)."

Participating universities

This program is co-financed by the European Union (European Social Fund- ESF) and Greek national funds through the Operational Program "Human Resources Development, Education and Lifelong Learning", "ESPA 2014-2020", in the context of the project "Support for Internationalization Activities of the University of Ioannina, ICT in Education: Applications in Natural, Social and Health Sciences" – MIS 5162213.

Department of Chemistry, University of Ioannina,
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Department of Chemistry, National and Kapodistrian University of Athens,
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Department of Chemistry, Aristotle University of Thessaloniki,
Prof. GEORGIOS PSOMAS,

Department of Chemical Engineering, Aristotle University of Thessaloniki,
Prof. ATHANASIOS SALIFOGLOU

Department of Chemistry, University of Patras,
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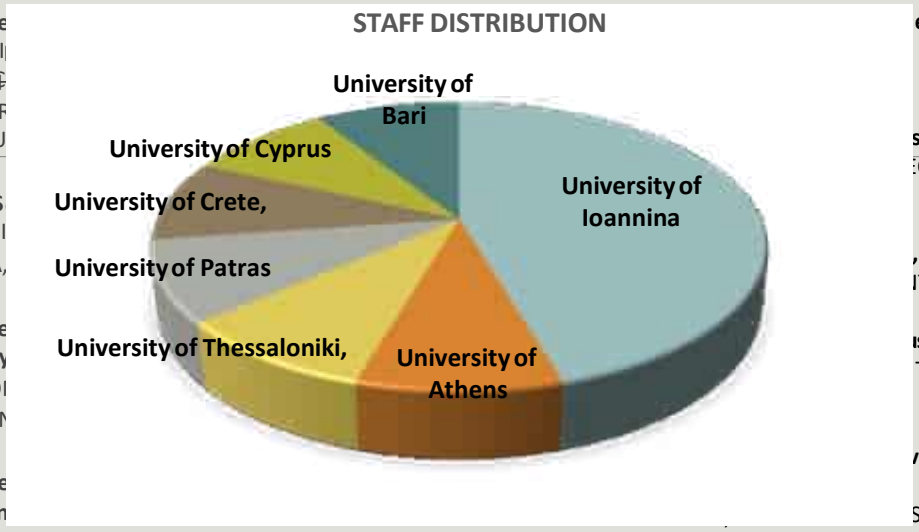
Chemistry Department of the Aldo Moro University of Bari, Italy,
PROF. NICOLA MARGIOTTA, PROF FABIO ARNESANO



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First Semester
1.Bioinorganic Chemistry
2.Physicochemical, Spectroscopic and Biochemical Methods in Bioinorganic Chemistry
3.Biophysics of pharmaceutical effect
4.Special Topics in Biochemistry-Molecular Biology
5.Laboratory of Spectroscopic and Physicochemical Techniques.

Second Semester
1.Collection of bibliographic data and presentations concerning the research field of the Postgraduate Diploma Thesis
2.Introduction to the Research Laboratory
3. Introduction to Thesis.

No fees

Perspectives

Development of hydrogels for contact lenses containing silver(I) metallodrugs of natural products with reduced microbial infection risk

Dr Christina N. Banti and Prof Sotiris K. Hadjikakou

Laboratory of Biological Inorganic Chemistry, Department of Chemistry, University of Ioannina
Email: shadjika@uoi.gr

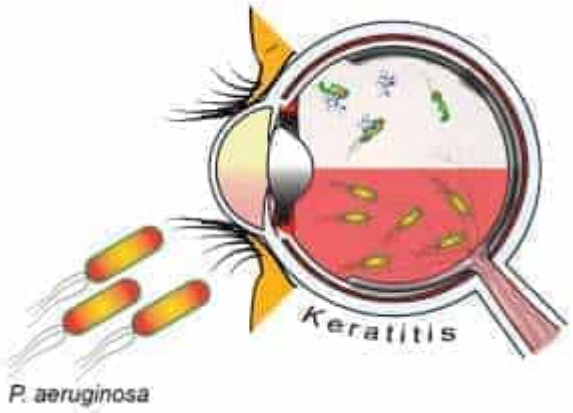
This program is co-financed by the European Union (European Social Fund- ESF) and Greek national funds through the Operational Program "Human Resources Development, Education and Lifelong Learning", "ESPA 2014-2020", in the context of the project "Support for Internationalization Activities of the University of Ioannina, ICT in Education: Applications in Natural, Social and Health Sciences" – MIS 5162213.

Bacterial keratitis

Bacterial keratitis, is one of the most threatening ocular infectious pathologies

Ocular infection is caused by a wide variety of pathogens

The most commonly invasive pathogens in bacterial keratitis are
Gram-negative (*P. aeruginosa, E. coli)*
Gram-positive (*S. epidermidis, S. aureus*)



Operational Programme Human Resources Development, Education and Lifelong Learning
Co-financed by Greece and the European Union

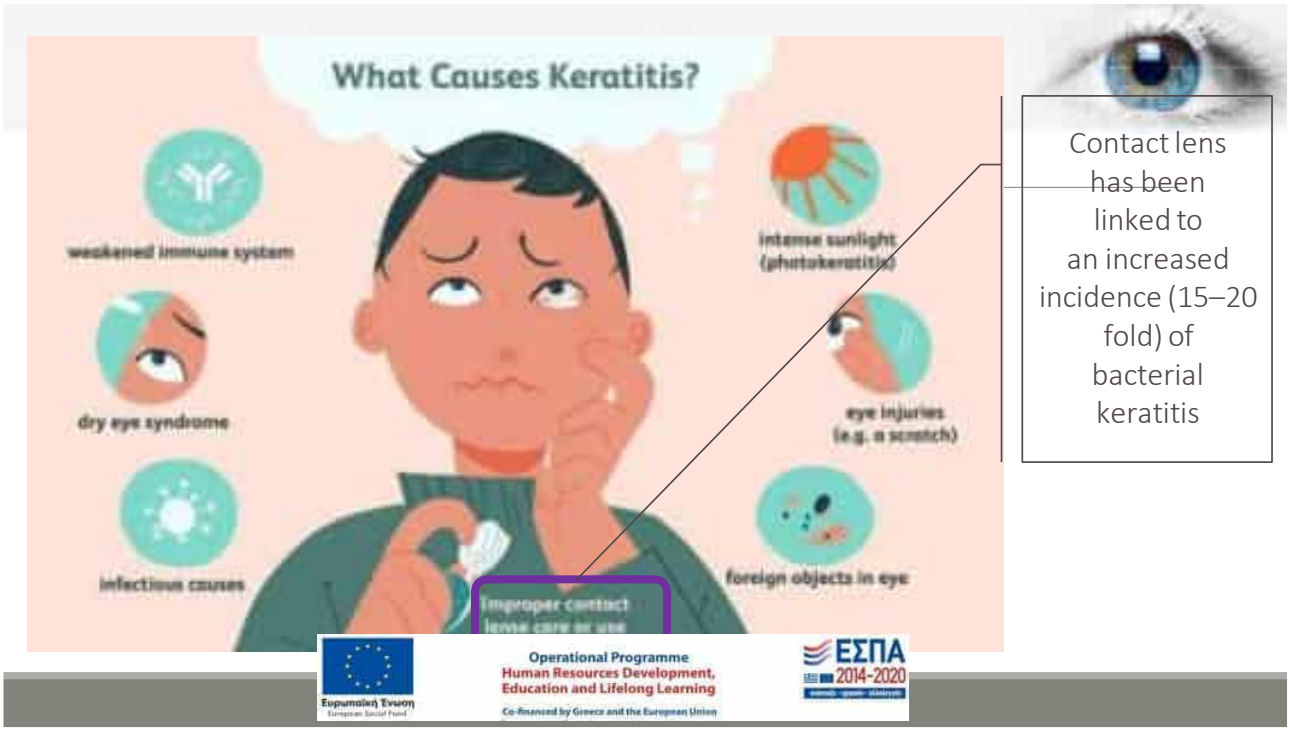
Materials Science & Engineering C 93 (2018) 902–910

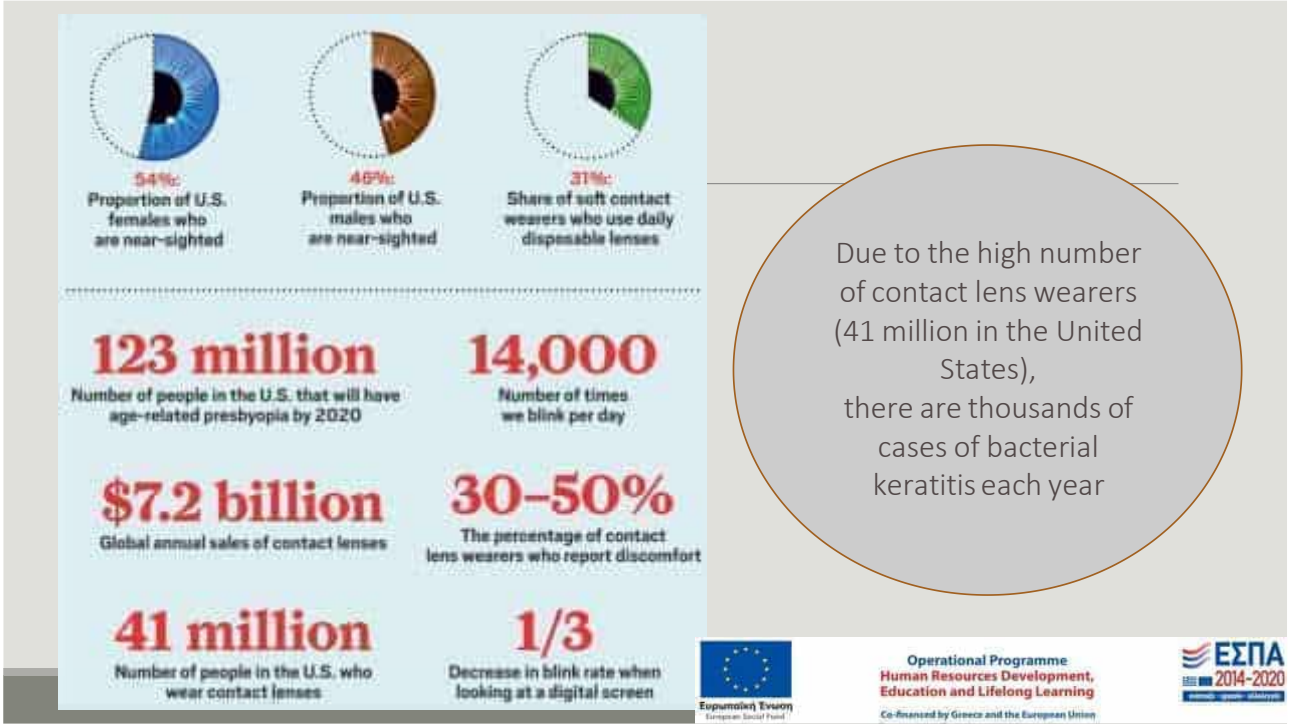
Bacterial keratitis

Bacterial keratitis can cause corneal perforations, which can be occurred in less than 24 hours

Operational Programme Human Resources Development, Education and Lifelong Learning
Co-financed by Greece and the European Union

This program is co-financed by the European Union (European Social Fund- ESF) and Greek national funds through the Operational Program "Human Resources Development, Education and Lifelong Learning", "ESPA 2014-2020", in the context of the project "Support for Internationalization Activities of the University of Ioannina, ICT in Education: Applications in Natural, Social and Health Sciences" – MIS 5162213.





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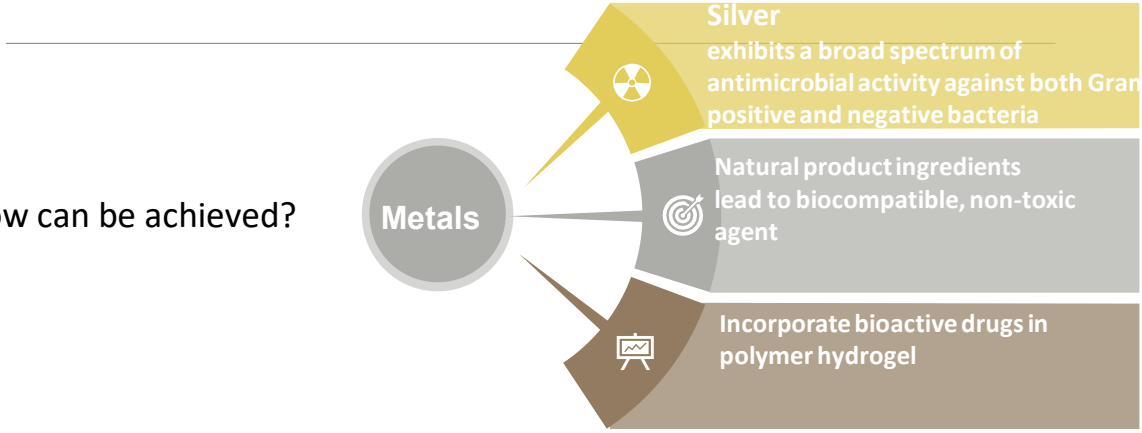
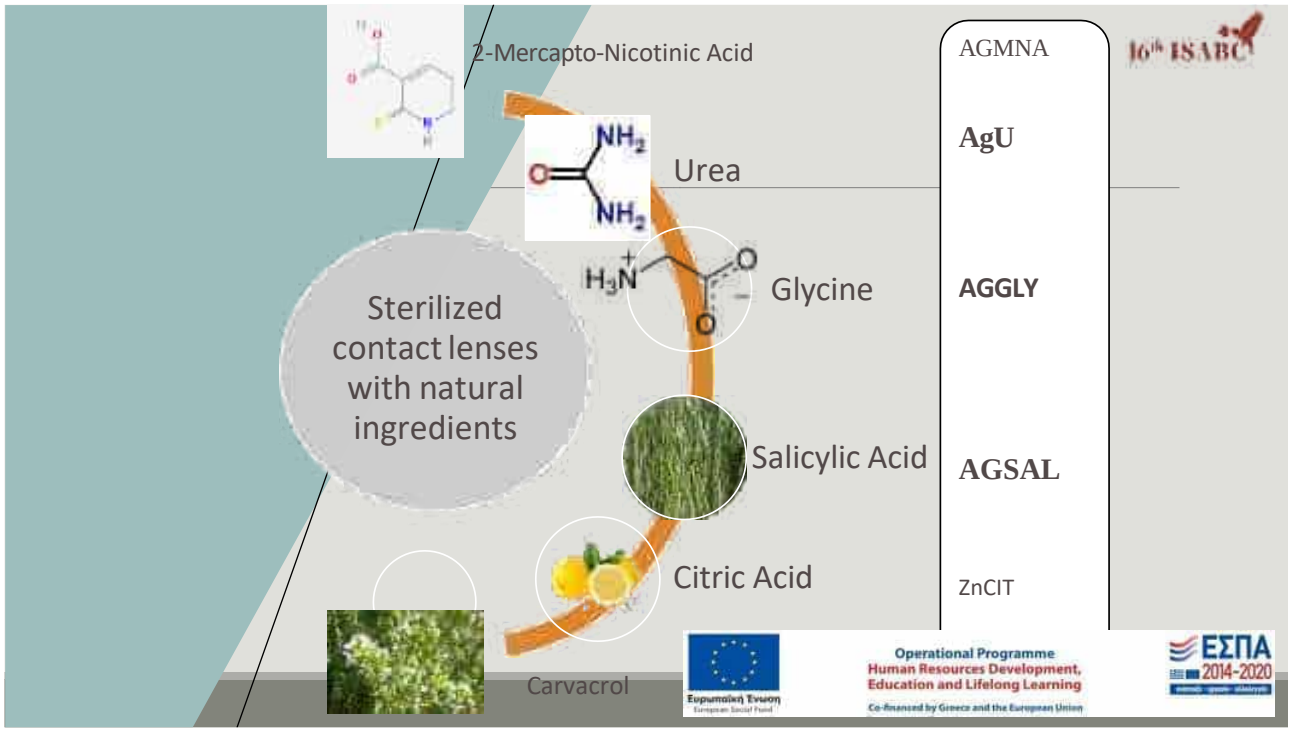
The use of contact lens, which are made by antimicrobial material is a research, technological and financial importance

How can be achieved?





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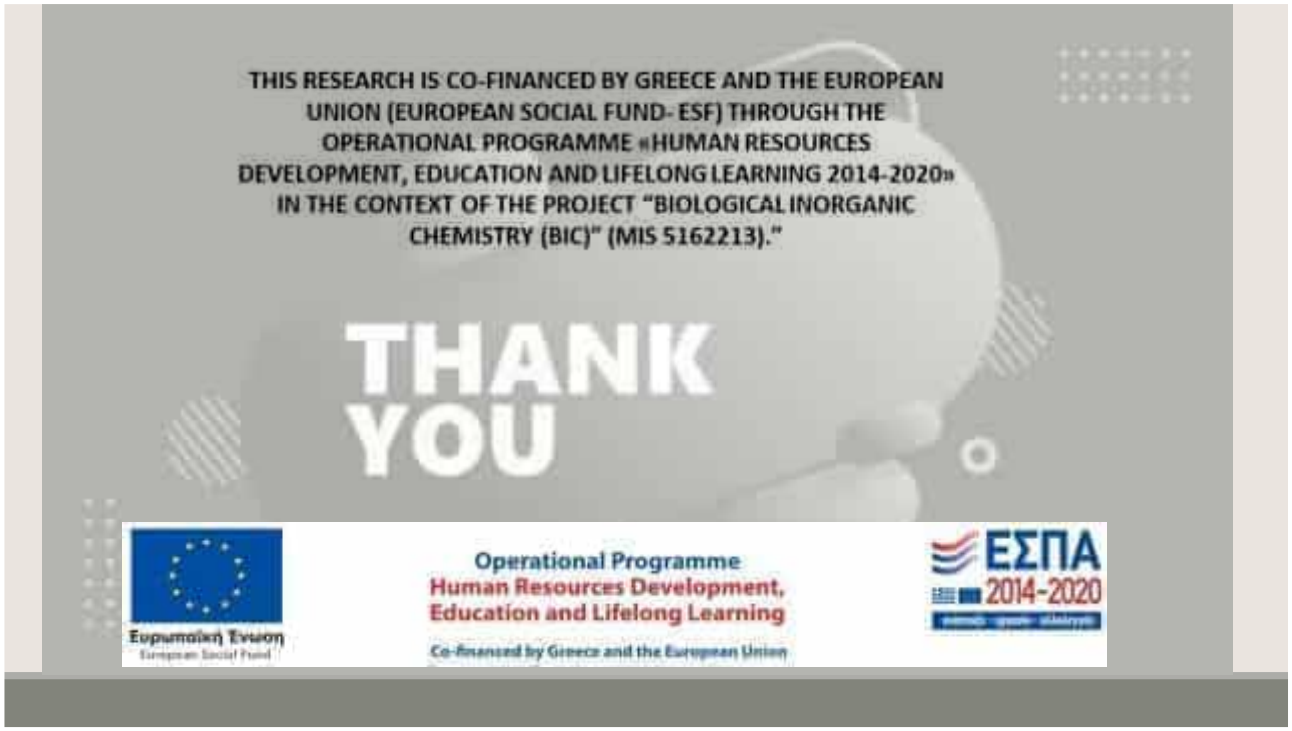

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Transforming Research in the Sector "Environment & Blue

Economy": Pathways for International Led Innovation

Ifigenia Kagalou Professor, Dept. of Civil Engineering, Polytechnic School of Democritus University of Thrace, Greece. E-mail: ikagkalo@civil.duth.gr.

This program is co-financed by the European Union (European Social Fund- ESF) and Greek national funds through the Operational Program "Human Resources Development, Education and Lifelong Learning", "ESPA 2014-2020", in the context of the project "Support for Internationalization Activities of the University of Ioannina, ICT in Education: Applications in Natural, Social and Health Sciences" – MIS 5162213.

The use of ICTs by senior citizens during the covid-19 pandemic in Greece

Vasiliki Manglara[1], PhD Candidate, v.magglara@uoi.gr
[1]Lab of New Technologies & Distance Learning, University of Ioannina, Greece.

The use of ICTs by senior citizens during the covid-19 pandemic in Greece

Vasiliki Manglara[1], PhD Candidate, v.magglara@uoi.gr
[1]Lab of New Technologies & Distance Learning, University of Ioannina, Greece

INTRODUCTION

- In the digital world that we live in, Information and Communication Technologies (ICT) used by elderly people are needed more than ever.
- ICTs support equal access to information society, an increase in internet activities, and active aging [1].
- During covid-19 pandemic, many elderly people were connected to the internet as their need for communication increased more than ever before [2].
- Many problems such as exclusion from social life, inability to communicate with members of family and friends, self-protection, and self-care, appeared during covid-19 [3].
- The purpose of this study was to investigate the use of ICTs by senior citizens, especially above the age of 67 in Greece.

MATERIAL AND METHODS

- A properly structured questionnaire was used for data collection, which was forwarded in April 2022, to a randomly selected group of 120 seniors living in Epirus Greece.
- A mixed research approach was applied, with quantitative and qualitative methods.

RESULTS AND DISCUSSION

- According to the findings of this study, age, educational level, computer ownership and internet connection at home were the main factors of ICTs used by aged people.
- Their interest in learning ICTs are accelerated by 45% during the pandemic.
- As barriers to using ICTs were the difficulty in understanding the instructions of software due to insufficient or basic knowledge of English and their minimal familiarization with computers.
- Their need for communication, entertainment, and information search were their main driving factors for learning ICTs.
- Moreover, senior citizens stated that as long as they remain healthy, they want to participate in lifelong learning programs in computer and ICTs use.

CONCLUSION

- In conclusion, involving senior citizens in a learning process and engaging them with ICTs can have a positive impact on the quality of their life, self-esteem, and personal satisfaction [4, 5].
- At the same time, senior citizens in Greece with a low level of education and limited use of ICTs, require a study program addressed to their specific characteristics, needs, and interests [6].
- So, the development of personalized courses for elderly persons will be a solution for their upskilling to ICT use.

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The Evolving Landscape of Lifelong Learning for Healthcare Professionals

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The Evolving Landscape of Lifelong Learning for Healthcare Professionals

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[1]Department of Public Health, Region of Epirus, Greece

INTRODUCTION

- Lifelong learning is a form of self-initiated education that is focused on personal development. It is an ongoing, voluntary, and self-motivated pursuit of knowledge for either personal or professional reasons. It can take place in various contexts, not just in formal educational institutions such as schools or universities, but also in homes, workplaces, and even locations where people pursue leisure activities [1].
- Lifelong learning is essential for healthcare professionals for several reasons. It helps them to stay current in their profession, learn new skills, and deepen their knowledge. This is particularly important in the healthcare industry, where new knowledge is emerging at an accelerating pace and the complexity of healthcare is increasing [2].
- In the swiftly evolving landscape of the healthcare industry, where novel technologies and treatments are in a constant state of development, the role of lifelong learning and education for medical professionals has gained paramount importance [3], [4].
- The traditional models of continuing education and training often struggle to keep pace with the dynamic nature of the healthcare sector [5], [6].
- This study is a literature review for the best practices using continuing education by healthcare professionals.

MATERIAL AND METHODS

- In this study 4 articles were used, of which 2 were literature reviews and 2 were surveys.

RESULTS AND DISCUSSION

- Digital technologies are rapidly transforming the healthcare industry, including the way healthcare professionals engage in lifelong learning. One of the best practices in this field is to leverage interactive e-learning platforms that offer multimedia content, such as videos, animations, quizzes, and simulations. These platforms provide engaging and dynamic learning experiences, catering to different learning styles. Healthcare professionals can access these resources at their own pace and convenience, allowing them to acquire new knowledge and skills while balancing their clinical responsibilities [7].
- Another example of these practices is seen in implementing VR and AR simulations to create realistic training scenarios for healthcare professionals. Such simulations empower healthcare professionals to practice complex procedures and techniques within a controlled, simulated environment, ensuring both skill enhancement and safety. However, it's crucial to acknowledge that virtual practice, while invaluable, does not fully replicate the intricacies of real patient interactions. Moreover, technical challenges might arise when engaging with virtual simulations and similar interactive tools [8].
- The development of mobile applications that deliver bite-sized, just-in-time learning modules, is another practice in this field. These apps can provide quick access to medical references, diagnostic tools, case studies, and clinical guidelines. Microlearning through mobile apps enables healthcare professionals to stay updated on the latest research, treatments, and procedures while on the go, fostering continuous learning in short time intervals [9].
- Healthcare professionals can also participate in virtual case discussions, grand rounds, and interdisciplinary team meetings. These platforms enable professionals to exchange insights, experiences, and best practices, regardless of geographical barriers. Additionally, inviting experts from different locations to deliver guest lectures enhances the diversity of learning opportunities [10].

CONCLUSION

- The orchestration of continuous training efforts for healthcare professionals with the use of ICT tools is not just about transferring knowledge, but a holistic endeavor that molds professionals into well-rounded, adaptive, and conscientious contributors to the healthcare arena.
- This symphony of education unfurls within a context that recognizes the healthcare professional as a linchpin, interweaving technical proficiency with ethical bearings, innovation with responsibility, and research acumen with resource optimization.

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This program is co-financed by the European Union (European Social Fund- ESF) and Greek national funds through the Operational Program "Human Resources Development, Education and Lifelong Learning", "ESPA 2014-2020", in the context of the project "Support for Internationalization Activities of the University of Ioannina, ICT in Education: Applications in Natural, Social and Health Sciences" – MIS 5162213.

Use of LEGO® Education SPIKE™ Essential Kit for Teachers' Education **Alina Degteva,** PhD Student
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Use of LEGO® Education SPIKE™ Essential Kit for Teachers' Education

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Introduction

Gamification in education is well-established in many higher educational institutions [1], [2]. This approach of learning is applied within the framework of formal, informal, and non-formal education either in the classroom or outside it [3], [4]. It is well documented that when using online educational games and hands-on digital activities like LEGO® games students develop communication, problem-solving, and critical thinking skills that are essential for STEAM learning [5], [6], [7]. LEGO® kits are used for teaching science, technology, engineering, art, and math, as they develop programming skills through the use of programming languages such as Scratch [7], [8]. Additionally, the use of LEGO® games in the classroom can uphold the active engagement and motivation of students because students must create their own models and then play them, often in groups and using technology [3], [9].

The LEGO® Education SPIKE™ Essential Kit is the cross-curricular STEAM solution for elementary education [10]. The kit includes bricks, minifigures, and intelligent hardware, as well as the SPIKE™ app [10]. The kit is suitable for both developing storytelling skills among teachers and developing student STEAM knowledge and practices, as well as 21st-century skills [10]. The easy-to-adopt LEGO® learning system offers solutions that work both with and without technology [7], [8], [10].

The purpose of this study is to present the LEGO® Education SPIKE™ Essential Kit and the way prospective teachers used it during a lesson.

Materials and Methods

Undergraduate students were asked to go through a lesson, which was prepared by a PhD student using the LEGO® kit.

Thirteen (13) undergraduate students from the Department of Early Childhood Education of the University of Ioannina, Greece, were asked to create models using the LEGO® Education SPIKE™ Essential Kit as part of the lesson and learn the application of robotics in the teaching process.

The LEGO® kit contained: (a) Bricks and Minifigures, (b) Hub, (c) Motors, (d) Sensors, (e) Coding app.

For this study, the gamification approach was applied. During the lesson, prospective teachers were introduced to how to code use LEGO® in kindergartens.

Students were asked to go through an interview. The student's responses [13] in the interviews focused on three aspects: the use of modern technologies, the student-to-student and teacher-to-student interactions, and, they also considered the use of the kit as a modern approach to education that develops creativity, critical thinking, problem-solving, and promotes fun.

Results and Discussion

Working with the LEGO® kit, prospective teachers had the opportunity to try their hand at programming and creating all kinds of models from LEGO® bricks. Undergraduate students could bring their own designs to life, or use ready-made LEGO® instructions to build a model from guidance published online [8].

After the lesson, in which students created their models, we interviewed them.

When students were interviewed to find out their attitudes toward the LEGO® Education SPIKE™ Essential Kit and the idea of such an activity, they expressed positive opinions. It should be noted that some students were so inspired by the resulting models that they took pictures of them and posted photos on social media.

In particular, one student noted that: "*The best game I have used to learn was LEGO®. It's fun, original, creative, and easy to use. It promotes collaboration since many steps of it are done in groups. It was very useful knowledge that I will use in the future with joy and willingness as a teacher*".

Another student emphasized that, "*Through LEGO®, the teacher maintains unobtrusive communication with students and between them and develops digital literacy through the game*".

Finally, one student expressed regret that such teaching methods were not available to her in her childhood. We see this as a good sign, showing a growing interest in using informal approaches in class.

For the sake of completeness, we want to showcase some of the models built by the students, published with their consent (Figures 1-3).

Conclusions

According to our findings, the experience of playing with the LEGO® Education SPIKE™ Essential Kit by the prospective teachers was positive. However, this study was limited to small sample size. In the future, we plan to continue this study and present more comprehensive results.

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