"Accelerating Western Balkans University Modernisation by Introducing Virtual Technologies"

VTech@WBUni

WP2.3 - Deliverable 2.3.1

Selection of pilot courses at each HEI that will use virtual technology

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1. Project Executive Summary

Possessing specific ICT skills has an effect on economic competitiveness, especially in small countries such as WB countries (Albania, North Macedonia, Kosovo), with high unemployment rates, whereas one of the solutions to survive is active participation in the lifelong learning process (European Commission, 2011), by upgrading current competences and obtaining new competences, needed in the local, regional, European and global labour market.

Virtual Technologies are considered one of the tools to transform and modernize Higher Education. Students today are already familiar with various technologies, which is why computerized tools and apps make sense in a classroom setting. In WB countries the rate of possession of smartphones and other smart equipment is comparable with the rate presented for European countries.

The project's general aim is to introduce for the first time at Western Balkan universities the concept of virtual technologies as a tool for accelerating university modernization while contributing to developing a knowledge-driven society.

By incorporating Virtual Technologies in the academic culture of universities we aim to increase the quality and level of efficiency in teaching and knowledge retention through interactive learning methods, thus contributing to skills enhancement and further building of a digital society in WB countries.

In the mid and long term, the project will enhance the effectiveness of the higher education system in knowledge retention and application. The project's direct beneficiaries are universities, schools, teachers, students, regional industries, and businesses.

Some of the specific objectives of the project are:

- Capacity building of academic staff to incorporate Virtual Technologies in teaching
- Develop teaching methodologies availing of technology and/or ICT tools
- Increase the level of understanding and reduce the grasping time and the effort that students need to learn information by using 3D concepts instead of 2D ones
- Offer a better delivery of basic knowledge even for complex issues, higher learning efficiency, and better learning experience by AR/VR techniques.

The project brings together 11 partners with the University "Aleksander Moisiu" of Durres as the lead partner:

- Aleksandër Moisiu University of Durrës
- European University of Tirana
- Polis University

- Epoka University
- University of Prishtina
- University for Business and Technology
- South East European University
- Mother Teresa University
- University of Ljubljana
- University of Tartu
- Lodz University of Technology

2. About this document

This Report is prepared as an activity and deliverable within VTech Erasmus + project. The compilation of the Report is based on WP2 (2.3.) Activity 2.3.1. Selection of pilot courses at each HEI that will use virtual technology.
The European Commission support for the production of this publication does not constitute an endorsement of the contents which reflects the views only of the authors and project consortium, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

3. Selection of pilot courses

In each project partner, several meetings with academic staff were conducted. In each meeting, in-depth discussions were held to decide for the most suitable courses in which virtual technologies could be implemented. Faculty staff members gave valuable inputs in proposing and elaborating the reasons for proposed courses that can implement VR technology and that will directly impact the teaching and learning process in selected fields.

After the period of discussion within partner institutions, each partner proposed at least three selected courses offered as bachelor and/or master studies that can implement VR technology.

The development of the courses will be based on the development of the methodology which will remain in place for use by the Higher Education Institutions (HEIs) after the project ends. Such development will further contribute to the priorities of the ministries in the WB countries to increase the modernization of HEIs and introduce new technologies.

The HEIs in the WB countries are directly affected by VR courses, which will be available for the students at the national level, to ensure teaching quality and enhance students' performance. Moreover, the courses will be included in the curriculum which will ensure an impact on the HEIs internally.

4. List of Vtech-supported courses

The selected courses from each partner university for implementing virtual technologies are:

- **University of Prishtina** selected seven courses for implementing VR technologies, four in bachelor and three in master-level programs.
- **Polis University** came with three propositions, one for a bachelor, one for an integrated master, and one for the master course.
- **European University of Tirana** stated that three courses are most suitable for implementing these technologies, two in the bachelor and one in the master program.
- **Mother Tereza University** proposed two courses, one in bachelor and one in master-level studies.

- **EPOKA University** selected three courses, two in the bachelor and one in the master program.
- **Aleksander Moisiu University** claimed that in their study programs, there are eight courses that are suitable for implementing virtual technologies, five in bachelor and three in master studies.
- **South East European University** selected four courses, three in bachelor and one in master studies
- **University for Business and Technology** proposed ten courses, five in the bachelor and five in the master program.

The selected courses for each HEI are presented in the table below:

No.	University	Course	Study level Bachelor/ Master	Expected number of students	Academic staff e-mail contact
1	University of Prishtina	Fundamentals of Electrical Engineering	Bachelor	120	Luan Ahma Luan.ahma@uni-pr.edu
2	University of Prishtina	Digital circuits	Bachelor	120	Enkele Rama Enkele.rama@uni-pr.edu
3	University of Prishtina	Digital Electronics	Bachelor	20	Sabrije Osmanaj sabrije.osmanaj@uni-pr.edu
4	University of Prishtina	Animation and virtual reality	Bachelor	30	Jeta Dobruna jeta.dobruna@uni-pr.edu
5	University of Prishtina	Multimedia Communications	Master	20	Hena Maloku hena.maloku@uni-pr.edu
6	University of Prishtina	Bio-medicinal electronics	Master	20	Sabrije Osmanaj sabrije.osmanaj@uni-pr.edu
7	University of Prishtina	3D Animation	Master	20	Hena Maloku hena.maloku@uni-pr.edu
1	POLIS University	Computational aided design	Integrated Master	100	Ledian Bregasi ledian_bregasi@universitetipolis.edu.al
2	POLIS University	Computer-based Arts	Bachelor	80	Gerdi Papa gerdi_papa@universitetipolis.edu.al
3	POLIS University	Interactive Design	MSc	80	Valerio Perna valerio_perna@universitetipolis.edu.al
1	European University of Tirana	Anatomy	Bachelor	75	Brunilda Mezani Brunilda.mezani@uet.edu.al
2	European University of Tirana	Digital Design – Digital visual effects	Master	15	Shaqir Veseli Shaqir.veseli@uet.edu.al
3	European University of Tirana	Multimedia Communications	Bachelor	92	Gejsi Tafa Gejsi.tafa@uet.edu.al

1	Mother Teresa University	Computer Architecture	Bachelor	20	Bekim Fetaji Bekim.fetaji@unt.edu.mk
2	Mother Teresa University	Game Programming	Bachelor	10	Stojan Kitanov stojan.kitanov@unt.edu.mk
1	EPOKA University	Data Structures	Bachelor	120	Enea Mancellari emancellari@epoka.edu.al
2	EPOKA University	Circuit Theory	Bachelor	160	Julian Hoxha jhoxha@epoka.edu.al
3	EPOKA University	Digital Image Processing	Master	20	Arban Uka auka@epoka.edu.al
1	Aleksander Moisiu University	Fundamentals of Electrical Engineering	Bachelor	20	Marsida Ibro marsida.ibro@gmail.com
2	Aleksander Moisiu University	Data structures	Bachelor	50	Kristel Bozhiqi bozhiqikristel@yahoo.com
3	Aleksander Moisiu University	Operating Systems	Bachelor	50	Emiliano Mankolli emiliano_fshn@hotmail.com Viola Shtino vf.sh@hotmail.com
4	Aleksander Moisiu University	Image processing	Bachelor	25	Marsida Ibro marsida.ibro@gmail.com
5	Aleksander Moisiu University	Integrating Marketing Communications	Bachelor	50	Xhafer Rakipllari xhrakipllari@gmail.com
6	Aleksander Moisiu University	Multimedia Laboratory	Master	15-20	Marsida Ibro/ marsida.ibro@gmail.com Uendi Çerma/ cermauendi@gmail.com Albana Halili ndreualbana@yahoo.com
7	Aleksander Moisiu University	Advanced Multimedia Technologies	Master	15-20	Frida Gjermeni/ Frida_gjermeni@hotmail.com Kristel Bozhiqi bozhiqikristel@yahoo.com
8	Aleksander Moisiu University	Data Mining	Master	20-25	Emiliano Mankolli/ emiliano_fshn@hotmail.com Senada Bushati bushatin@yahoo.com
1	South East European University	Game programming	Bachelor	20	Xhemal Zenuni xh.zenuni@seeu.edu.mk
2	South East European University	Computer Graphics	Bachelor	20	Visar Shehu v.shehu@seeu.edu.mk
3	South East European University	Capstone Projects	Bachelor	10	Visar Shehu v.shehu@seeu.edu.mk Marika Apostolova Trkovska m.apsotolova@seeu.edu.mk
4	South East European University	Master Thesis	Master	1-5	Visar Shehu v.shehu@seeu.edu.mk

					Lejla Abazi Bexheti l.abazi@seeu.edu.mk Arbana Kadriu a.kadriu@seeu.edu.mk
1	UBT	Fundamentals of Mechanical Engineering	Bachelor	50	Xhemajl Mehmeti xhemajl.mehmeti@ubt-uni-net
2	UBT	Game Programming	Bachelor	250	Astrit Hyseni astrit.hyseni@ubt-uni.net
3	UBT	Introduction to System multimedia	Bachelor	85	Faton Spahiu faton.spahiu@ubt-uni.net
4	UBT	Lab Course 1/2	Bachelor	80	Besnik Qehaja besnik.qehaja@ubt-uni.net
5	UBT	Web Multimedia	Bachelor	250	Xhelal.jashari xhelal.jashari@ubt-uni.net
6	UBT	Digital elektronics and signals	Msc	85	Zhilbert Tafa zhilbert.tafa@ubt-uni.net
7	UBT	CAD and Computational Structural Analysis	Master	15	Betim Shabani betim.shabani@ubt-uni.net
8	UBT	Dizajnimi dhe Modelimi i Softuerit	Msc	80	Edmond Jahjaga edmond.jahjaga@ubt-uni.net
9	UBT	Modelimi i Sistemeve Softuerike Komplekse	Msc	20	Krenare Pireva Krenare.pireva@ubt-uni.net
10	UBT	Power electronics in smart grids	Master	30	Armend Ymeri armend.ymeri@ubt-uni.net

Conclusion

This report summarized the selected courses from all partner universities for implementing virtual technology.

This selection is based on a couple of meetings that all partners conducted in their universities with academic staff engaged in study programs.

From the discussions, all partners decided on the most suitable courses in which they asses that virtual technologies can be implemented.

Courses were selected from bachelor and master-level programs.

With the implementation of VR technology in these pilot courses, it is understandable that the teaching process will be significantly enhanced and that the students will benefit greatly from this experience.

We are positive that in the near future, many more courses will follow these steps in the implementation of VR technology in their teaching process.