





# **Popularization lectures Report** Period from January 1<sup>st</sup>, 2018-December 31<sup>st</sup>, 2022

January, 2023





Project acronym:	TeComp
Project full title:	StrengtheningTeachingCompetencesinHigherEducationin Natural and Mathematical Sciences
Project No:	598434-EPP-1-2018-1-RS-EPPKA2-CBHE-JP
Number of grant contracts	2018-2467/001-001
Web address of project	www.tecomp.ni.ac.rs
Funding Scheme:	Erasmus+
<b>Coordinator Institution:</b>	University of Nis
Coordinator:	Prof. dr Jelena Ignjatović
Project duration:	15.11.2018. – 14.11.2022
Work package:	WP5 – Quality assurance and monitoring
Lead organization of	University of Korce
WP6:	Activity 6.3 Annual joint report disseminated
Version of the document:	Second
Status:	Final
Dissemination level:	Institutional, Internal





# Introduction

Popularization lectures were organized during the project implementation both in the PC and EU countries involved in the project, where information about the project was given to various groups of project stakeholders, other HEIs, the academic community and to the general public. The information and results were spread at the institutional level and marketing activities were undertaken at the local public level as well as the regional level. An important activity in dissemination of the sustainable project results was Workshop on the sustainability of TeComp project results, where sustainable approaches and deliverables of the project were promoted to a wide audience and electronic version of the Proceedings of the Workshop was prepared and distributed.

All stakeholders consider the project to be sustainable and successful, because it will continue to deliver benefits to the project beneficiaries and/or other constituencies for an extended period after the commission's financial assistance has been terminated.



Co-funded by the Erasmus+ Programme of the European Union



# **Disseminations**

# Workshop in Oviedo (March 2019)

"Workshop was held from March 25th to March 29th, 2019 – University of Oviedo. At the "Workshop on innovative teaching methodologies for mathematics and sciences in the University of Oviedo", the hosts presented their experiences in using new pedagogical and methodological principles in higher education and continuing professional development of teaching staff. They also demonstrated the level of integration of ICT in the teaching and learning process on their University.

Examples of good practice in the field of natural and mathematical sciences were presented. The University of Oviedo has shown the activities of the Center for Innovation in Teaching of the University of Oviedo.

A meeting of partners from Serbia and Albania was also held, where a plan of further activities on the realization of the project has been made."

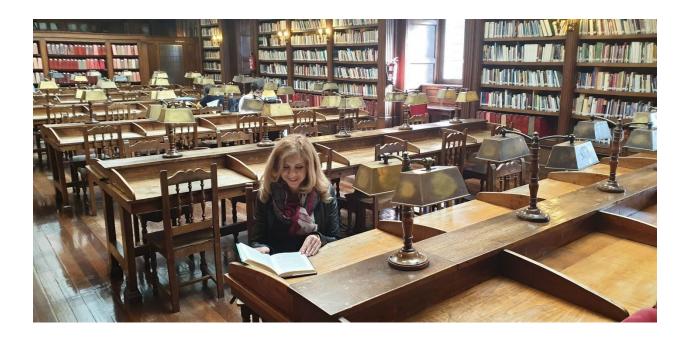




Strengthening Teaching Competences in Higher Education in Natural and Mathematical Sciences









• TeComp Strengthening Teaching Competences in Higher Education in Natural and Mathematical Sciences







Co-funded by the Erasmus+ Programme of the European Union



# Workshop in Ostrava (May 2019)

"Workshop was held from May 13th to May 17th, 2019 – University of Ostrava In the workshop "Workshop on Modern Teaching Inspired by Science" in Ostrava, hosts presented their experiences in using innovative teaching methodologies applied in the field of natural sciences, while a special emphasis was placed on the Heinean method which proved to be very effective in acquiring mathematical basics and directing children and high school students to mathematical and computer science, presented the way in which they use modern pedagogical and methodological principles in higher education through practical work in laboratories.

In addition, special attention was paid to the application of fuzzy models and other seemingly complicated mathematical and logical units, in practice, in addition to the development of useful software, which facilitate work and enable solving real problems by creating a computer vision "







• TeComp Strengthening Teaching Competences in Higher Education in Natural and Mathematical Sciences











# Workshop in Banska Bystrica (May 2019)

"Project meeting was held from May 17th to May 20th, 2019 – Matej Bel University The hosts at the University of Banská Bystrica has shown activities of their departments within the Faculty of Science and Mathematics, they demonstrated contemporary teaching methods that apply both in classical teaching activities and in laboratories and computer classrooms. Examples of good practice in all areas of natural science and mathematics were presented, the content of their rich library, which represents an archive available to professors and students from all universities in Slovakia, and its database was introduced.

The visit was also used for the meeting of representatives of partner institutions from Serbia and Albania, where they conducted outcomes of the surveys that had been examined at these institutions. They made the plan for preparing the draft report which would comprise a comparative analysis of the application of modern PPM methods and modern technologies at the universities in Serbia and Albania (based on analysis of the survey) and institutions from Spain, the Czech Republic and the Slovak Republic (based on the information obtained during the previous visits)".





• TeComp Strengthening Teaching Competences in Higher Education in Natural and Mathematical Sciences











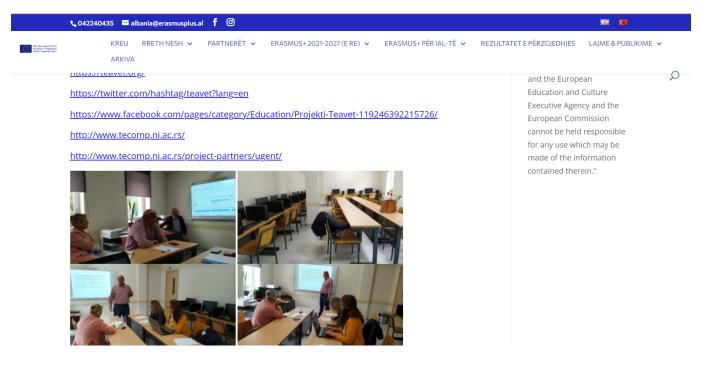
# **Top notch education platform (May 2019)**

"The aim of the visit was to learn about the project outcomes realized and their impact and sustainability prospects with a focus on capacity building and quality of teaching. The visit consisted of project reports and advancements according to the logistic, budget and management plan, scheduled in the project as well as the difficulties encountered until now. Erasmus + staff provides solutions, advices and guidance for next steps."

(https://erasmusplus.al/?p=4847&lang=sq)

Results has been published on the Erasmus+ Office web and Facebook pages https://m.facebook.com/permalink.php?story\_fbid=1288803491312216&id=359546980904543

## Erasmus+ Office web page.





<del>(</del>

Co-funded by the Erasmus+ Programme of the European Union



# **Erasmus+ Office Facebook page.**

Sot zhvilluam monitorimin e dy ... - Albanian Erasmus + Office | Facebook

Albanian Erasmus + Office is in Korçë, Albania. May 24, 2019 at 5:33 PM · Korçë · 🚷

Sot zhvilluam monitorimin e dy projekteve #TEAVET dhe #TECOMP , te mbeshtetura nga Erasmus+. #StrengtheningandDeveloping #Teachingcompetences





Strengthening Teaching Competences in Higher Education in Natural and Mathematical Sciences Co-funded by the Erasmus+ Programme of the European Union



# Workshop in Granada (November 2019)







Strengthening Teaching Competences in Higher Education in Natural and Mathematical Sciences







Co-funded by the Erasmus+ Programme of the European Union



# **Top notch education platform 2020**

One of the Project members Prof. Dr. Miroslav Marić, Faculty of Mathematics University of Belgrade, Serbia, led a team that created an educational platform(<u>http://edusoft.matf.bg.ac.rs/</u>). During the creation process, the methods of good practice already familiarised within the frame of TeComp, were implemented and used, increasing the visibility and dissemination of the Project results. This effort did not go unrecognized, because this platform received a prestigious award at a world competition "Zero Project 2020", organized by the Essl Foundation and the United Nations in Vienna, and presented on the main Serbian TV station, RTS.

### Edusoft.matf.bg.ac.rs

(https://youtu.be/3mc7USkrMEw) (https://youtu.be/IUTPA8SvByU)



One of the TeComp activities was research aimed at determining how students adapted their learning strategies in the sudden interruption of normal study patterns in the first period of the pandemic (March 2020 - June 2020). The online questionnaire was distributed to several universities in Serbia (Belgrade, Novi Sad, Niš, Kragujevac) to 521 students of different faculties. Research results were presented and published at the Tie2022 conference.

# Questionnaire results published.







9<sup>th</sup> International scientific conference Technics and Informatics in Education - TIE 2022 16-18 September 2022

Session X:Technics and informatics in education Professional paper UDC: XX.XX

# Resilience of Higher Education Institutions in Serbia: A Student's Perspective

Olja Jovanović1\*, Ana Pešikan1 and Slobodanka Antić1 <sup>1</sup>University of Belgrade/Faculty of Philosophy, Belgrade, Serbia \*olja.jovanovic@f.bg.ac.rs

Abstract: The present study investigates the experiences of undergraduate students in pursuing their studies in the initial months of the COVID-19 pandemic. In this study, we use an exploratory descriptive approach through an online survey with a convenient sample of 467 undergraduate students. The results indicate that the students have experienced emergency remote education (ERE) as more demanding in comparison to the pre-pandemic face-to-face learning/teaching. Since the ERE has been largely dependent on the resources of learners and their families, it is important to highlight that 25.1% of students reported that none of the teachers showed interest in differences among students in their living and learning contexts, while 34.5% reported that none of the teachers individualized their teaching, accordingly. Recommendations are presented to build the resilience of higher education institutions in Serbia during future emergencies.

Keywords:resilience; higher education; COVID-19 pandemic; education in emergencies

#### 1. INTRODUCTION

In the face of disturbances, such as pandemics, natural disasters, wars, and social unrest, higher education(HE) has an important role to maintain academic quality and continuity. As Bartusevičienė et al. [1] emphasize, educational institutions have to be able to respond to a crisis and continue to provide uninterrupted services through adaptation and adjustment. In this context, resilience as a quality of being able to return quickly to a previously good condition after facing disruptions is becoming crucially importantforHE institutions (HEIs).

One of such disturbances calling for resilient HEIswas the COVID-19 pandemic. The pandemic has imposed increased demands on HE and seriously shaken the established ways HEIs run their courses [2]. This process, emerging from a global context burdened with uncertainty and prosocial concerns and characterized by a rapid and unplanned shift towards remote education, is recognized in the literature as emergency remote education (ERE) [3]. Overview of the studies on the ERE shows that the main challenges areassociated withlack of technical and material resources, lack of digital and pedagogical/learning skills, as well as lack of social interaction in learning/teaching process[4]. Consequently, the ERE is associated with increased stress, burnout and mental health problems for both teachersand learners [4].

The first recorded case of the coronavirus in Serbia occurred in early 2020. Following its rapid spread, the government announced restrictions with stringency increases as the COVID-19virus spread.An expansion of government-imposed restrictions continued until May 2020, after which a first steps towards limited reopening were introduced. In the initial months of the pandemic. university classrooms and dorms were emptied. HEI'smanagement have responded by moving academic and related activities online with a sense of urgency.Researchindicates that for a majority of the HE teachers in Serbia online teaching was a novel task, i.e., they did not have the experience with online teaching prior to the ERE [5].HE teachers experienced have a mismatch betweenavailable resources and support, and previous experiences with remote teaching practices and technologies, on the one hand, and demand for high quality online teaching/learning practices, on the other hand. However, how has the transition from in-class to remote education been experienced by HE students Serbiaremains under-researched.

#### 1.1. Organizational Resilience

The concept of resilience regained attention following the COVID-19 pandemic. Ithas been used to describe individuals, organizations, and/or systems that are able to respond to and recover from threatening experiences with minimum disruption to their stability and functioning [6]. The authors focusing on a level of institution describethis feature as organizational resilience. If organizations are not sufficiently prepared to mitigate impacts and effectively respond to crises, it could have a negative impact on their





The Working Group for Educational Software of the Faculty of Mathematics, University of Belgrade deals with the improvement of teaching mathematics, computer science and informatics through the development of electronic platforms, professional development of teachers, as well as creating electronic materials for teaching and retraining in the IT sector. All created teaching materials, electronic courses and software packages are free and publicly available at: http://edusoft.matf.bg.ac.rs/. Among the educational materials, we highlight the currently very current educational platform "Final Exam – a platform for equal inclusion of students in the educational process", which was recently awarded at the world competition "Zero Project 2020", organized by Essl Foundation and the United Nations in Vienna (http://zavrsniispit.matf.bg.ac.rs/).

This event was reported by the Serbian Government (https://www.srbija.gov.rs/vest/448647/platforma-nasihstrucnjaka-nagradjena-na-svetskom-takmicenjuzero-project-2020.php), Radio Television of Serbia (https://www.youtube.com/watch?v=3mc7USkrMEw&feature=emb\_title) well as as educational institutions and other relevant institutions (http://ezbirka.matf.bg.ac.rs/?action=news).

In addition to the "Final Exam" platform, the Mathematical Society of Serbia, the Faculty of Mathematics University of Belgrade and the GeoGebra Centre Belgrade, the "eCollection" and "Entrance Exam" educational platforms were also created. The "eCollection" is an electronic collection of math tasks for primary school higher years students (http://ezbirka.matf.bg.ac.rs/). The collection contains over 12,000 tasks with solutions, grouped by grades and areas.

The "Entrance exam" (http://www.prijemniispit.matf.bg.ac.rs) contains tasks in mathematics and Serbian language intended for students who are preparing to take entrance exams at the faculties where the program includes the listed subjects. Within these two platforms, more than 4,000 teacher accounts have been opened so far, the number of users has exceeded 100,000, and in the midst of preparations for the final exam, over 50,000 users have accessed the platforms daily. The platforms have been recommended by the Ministry of Education, Science and Technology Development, the Social Inclusion and Poverty Reduction Unit of the Government of the Republic of Serbia and UNICEF as platforms with educational resources for all levels of distance education and they are on "List of digital tools for working with children and students who need additional support" (http://www.mpn.gov.rs/wp-content/uploads/2020/05/3.a.-Listadigitalnih-alata-za-dodatnu-podr%C5%A 1ku-u%C4%8Denie-na-daljinu.pdf). The platforms were presented by invitation at the first online digital conference "Digital Education 2020" (http://edtech.center/sr/konferencija-2020/).



• TeComp • Strengthening Teaching Competences in Higher Education in Natural and Mathematical Sciences







Report on the implementation of the TeComp Erasmus+ project at the Faculty of Mathematics, University of Belgrade

It is my pleasure to briefly report on some activities of the Faculty of Mathematics, University of Belgrade, which were largely implemented on equipment purchased under the Ensamus + project "Strengthening Teaching Competences in Higher Education in Natural and Mathematical Sciences (TeComp)", No. 598434-EPP-1-2018 -1-RS-EPPKA2-CBHE-JP.

Mathematical Sciences (TeComp)<sup>7</sup>, No. 598434-EPP-1-2018-1-RS-EPPKA2-CBHE-JP. Namely, the Working Group for Educational Software of the Faculty of Mathematics, University of Belgrade deals with the improvement of teaching mathematics, computer science and informatics through the development of electronic platforms, professional development of teachers, as well as creating electronic materials for teaching and retraining in the IT sector. All created teaching materials, electronic courses and software packages are free and publicly available at <u>http://dusofhmatfbg.ac.rs/</u>. Among the educational materials, we highlight the currently very current educational platform 'Final Exam – a platform for equal inclusion of students in the educational process', which was recently avanded at the world competition 'Zero Project 2020', organized by Esaf Foundation and the United Nations in Vienna (<u>http://zwww.shija.ow/swie444867/Hafforms-nush-strineniake-marandism-a-systektom-takemiceniu-zero-proiet-2020.php). Radio Television of Serbia (<u>https://www.woulube.com/watch/rv=3mcUSis/Mitw&feature=mb\_itile</u>) as well as educational institutions and other relevant institutions (<u>http://chinfa.nutfbg.ac.sr/?actiom=news</u>). In addition to the "Final Exam" platform, the Mathematical Society of Serbia the Faculty</u>

(http://ebrika.maf/bg.acr?/action=news).
In addition to the "Final Exam" platform, the Mathematical Society of Serbia, the Faculty of Mathematics University of Belgrade and the GeoGebra Centre Belgrade, the "cCollection" and "Entrance Exam" educational platforms were also created. The "cCollection" is an electronic collection of mut hasks for primary school higher years students (http://ebrika.mafba.acr), The collection contains over 12,000 tasks with solutions, grouped by grades and areas. The "Entrance exam" educational platforms years hybrides (http://ebrika.mafba.acr), The collection of the "Intrance" (http://www.fina.mafba.acr) contains tasks in mathematics and Serbian language intended for students who are preparing to take entrance exams at the faculties where the program includes the listed subjects. Within these two platforms, more than 4,000 tacher accounts have been opened so far, the number of users have acceeded 100,000, and in the midst of preparations for the final exam, over 50,000 users have accessed the platforms daily. The lafforms, have been opened preparations for the final exam, over 50,000 users have accessed the platforms daily.

midst of preparations for the final exam, over 50,000 users have accessed the platforms daily. The platforms have been recommended by the Ministry of Education, Science and Technology Development, the Social Inclusion and Poverty Reduction Unit of the Government of the Republic of Serbia and UNICEF as platforms with educational resources for all levels of distance education and they are on "List of digital tools for working with children and students who need additional support" (http://www.mpn.gov.ps/wp-content/uploads/2020.05/3.a.l.ista-digitalnih-altat-za-dodatmu-podr%C5%A1kw.ar%C4%8Denje-ma-dalinu.pdf). The platforms were presented by invitation at the first online digital conference "Digital Education 2020" (http://educeh.center/sr/konferencija-2020).



• TeComp • Strengthening Teaching Competences in Higher Education in Natural and Mathematical Sciences

Co-funded by the Erasmus+ Programme of the European Union





Finally, the "eSchool of the Web" platform (<u>http://edusoft.maff.bg.ac.rs/eskola\_veba</u>) is an electronic school of web programming, which enables interactive learning of the most modern free web technologies through acrefully designed courses. There are a large number of courses on the platform, which cover modern free web technologies: HTML, CSS, Bootstrap, JavaScript, TypeScript, Jourey, AngularS, Angular, React Vusi, P.HPL, Larwel, MySQL, Java, etc. We point out that over 5,000 users have attended the courses per month on average.

All the mentioned platforms have a revolution to course per motion on average. All the mentioned platforms have a very important role in teaching, and they were especially evident in distance teaching during the pandemic. The platforms have been recognized and proposed by the Institute for the Advancement of Education as teaching materials for the preparation of the final and entrance exam (https://nov.ov/rs/ucenic-in-adailinu-alati/za-pit/remu-zarxone\_printemoc\_inpina\_2outivi-teacivi), and teaching materials for distance learning (https://zuov.gov.rs/alati/#1585241840186-836632cd-a772).

Belgrade, 10. 11. 2020.



CKI FAKULTET 1990 Decared P Fab 440, Tel: 7158-151, Fax: 3282-619 Shademost ng 12-10, care comment a. sowe/Jag.ac.r UNIVERSITY OF BELGRADE, FACULTY OF PHYSICS Snu4enski tur 12-16, 11000 Belgnde, Serbin, P.O.Box 440, Tel: +381 11 7158-151, Fac: +381 11 3282-619

Belgrade, November 11., 2020

TITLE: Statement of performing online workshop on EU project entitled "TeComp -Strengthening Teaching Competences in Higher Education in Natural and Mathematical Sciences (598434-EPP-1-2018-1-RS-EPPKA2-CBHE-JP)" at the University of Belgrade, Faculty of Physics

To whom it may concern,

Within the mentioned project in the title, I declare that a one-day online workshop entitled "Training of teachers and associates for conducting online teaching on the G Suite for Education platform" was held four times: March 16 and 23, and October 5 and 12, 2020.

> Regards, Dr. Ivan Belča, Dean



FACULTY OF BIOLOGY UNIVERSITY OF BELGRADE

Studentski trg 16 11000 BELGRADE SERBIA of StMain 11 2186 635 11 2638 500 +381

Belgrade, November 5, 2020

TITLE: Statement of performing online workshop on EU project entitled "TeComp -Strengthening Teaching Competences in Higher Education in Natural and Mathematical Sciences (598434-EPP-1-2018-1-RS-EPPKA2-CBHE-JP)" at the Faculty of Biology University of Belgrade

To whom it may concern,

Within the mentioned project in the title, I declare that a one-day online workshop entitled "Training of teachers and associates for conducting online teaching on the G Suite for Education platform" was held four times: March 16 and 23, and October 5 and 12, 2020.

Best wishes, hype f Auford Dr Leljko Tomanović, Dean









# The scientific conference by University of Oviedo (April 2021)

"The result of the project were presented by the University of Oviedo at four scientific conference.Aguilar-González, Á., Lorenzo-Fernández, E., y Muñiz-Rodríguez, L. (2021). Mathsumers: Creadores y consumidores de vídeos educativos sobre matemáticas. [Mathsumers: Creators and Consumers of Educational Videos on Mathematics]. VI International Conference on Communication and Thought. The revolution of the prosumers: youtubers and instagramers."

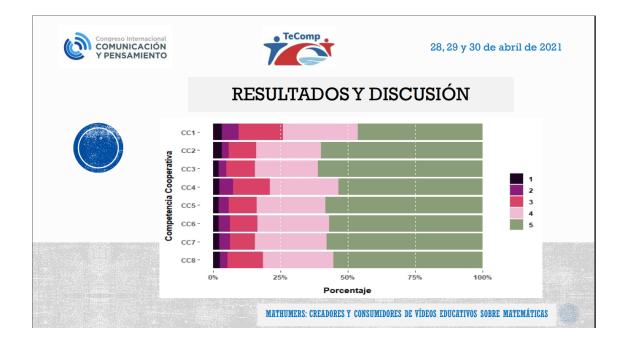




Strengthening Teaching Competences in Higher Education in Natural and Mathematical Sciences









• TeComp • Strengthening Teaching Competences in Higher Education in Natural and Mathematical Sciences

TeComp

Co-funded by the Erasmus+ Programme of the European Union



VÍDEOS EDUCATIVOS CITER LUIS J. RODRÍGUEZ-MUÑIZ<sup>1</sup> MARLÉN ALONSO-CASTAÑO<sup>2</sup> COMO INSTRUMENTO LAURA MUÑIZ-RODRÍGUEZ<sup>3</sup> PARA DESARROLLAR EL luisj@uniovi.es<sup>1</sup> alonsomarlen@uniovi.es<sup>2</sup> CONOCIMIENTO munizlaura@uniovi.es<sup>3</sup> ESPECIALIZADO DEL DEPARTAMENTO DE ESTADÍSTICA E I.O. Y DIDÁCTICA DE LA MATEMÁTICA **PROFESORADO DE** UNIVERSIDAD DE OVIEDO MATEMÁTICAS Universidad de Oviedo Universidá d'Uviéu University of Oviedo

> I Congreso Internacional de Transformación Digital en Entornos de Aprendizaje Mayo, 2021





Strengthening Teaching Competences in Higher Education in Natural and Mathematical Sciences











Online lectures in the high school "Jovan Jovanović Zmaj", Novi Sad (May 2021)

Goran Radojev held two lectures where he promoted the methods he learned at the TeComp project. One lecture was online (25.05.2021.) with 14 students present at the lecture and a total of 83 views afterwards. The second promotion was on October 26, 2022. in the high school Jovan Jovanovic Zmaj Novi Sad, with 17 students present.

26. 10. 202 40. Радни да 40. Наставн	ЭН	1
1. час	Историја Црна Гора, Срби под османском влашћу	[15]
	утврђивање Борислав Ћалић	☎ 3
2. час	Анализа са алгебром	[31]
	Квадратне неједначине Горан Радојев	<b>2</b> .1 ×
3. час	Анализа са алгебром	[32]
	Квадратне неједначине Горан Радојев	<b>2</b> 1 ×

# Šesnaesti čas - utorak, 25.5.2021. u 20h (Kvadratna funkcija i Vijetove formule 2)

💐 URL Video snimak - čas 16	151 views by 83 - users	Wednesday, 2 November 2022, 11:32 AM (3 hours 28 mins)
File Čas 16 - rešenja	165 views by 83 users	Saturday, 8 January 2022, 7:14 PM (297 days 19 hours)





# LCT and working hours Kragujevac (June 2021)

"Dr Jelena Ignjatović from The faculty of Mathematics and Natural Sciences, coordinator of the TeComp project: "We know the technology is making progress at breakneck speed, so the main goal of this project is to improve the teaching methodology in ways of using the modern technology and motivating students."

Dr Slađana Dimitrijević from The Faculty of Science in Kragujevac, the host of this LCT meeting: "Every day should be looked as an opportunity for cooperation. The only room for improvement comes after you see how the other people are working."

# https://www.facebook.com/watch/?v=1218772345250362

https://www.facebook.com/watch/?v=865087600796793

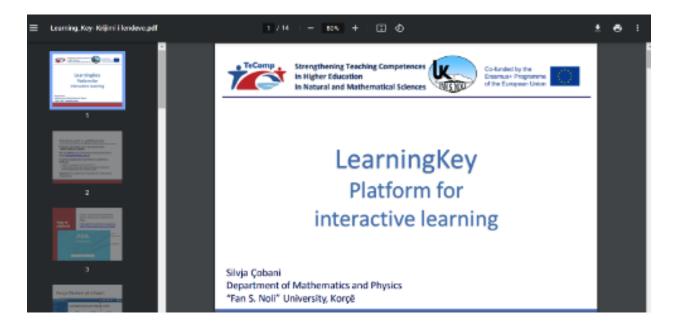


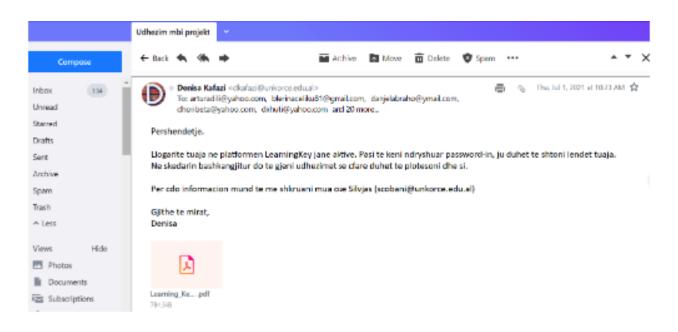




# Informing teachers and students about the TeComp project and the LearningKey platform at Korca University (Jun 21)

"On 30th June 2021 teachers and students of the Faculty of Natural and Human Sciences attended a short online presentation on MS Teams about the Learning Platform. There was a total of 36 participants, and the presenter was Silvja Çobani. Moreover, the presentation was sent via email to the teachers of the Faculty of Natural and Human Sciences the next day"







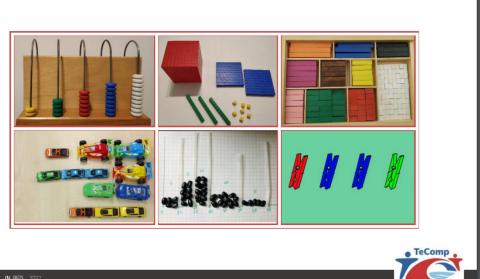




# The scientific conference by University of Oviedo (Jun 2021)

The result of the project were presented by the University of Oviedo at four scientific conference.Muñiz-Rodríguez, L., Lorenzo-Fernández, E., y Aguilar-González, Á. (2021). Mejora de la motivación hacia la didáctica de la matemática y desarrollo de la competencia docente de los estudiantes para maestro a partir de una experiencia de m-learning. [Improvement of the motivation towards the didactics of mathematics and development of the teaching competence of the students for teacher from an experience of m-learning]. VII Congress of Educational Innovation and Online Teaching (IN-RED 2021).







E



	RESULTADOS							
	2018-2019	2019-2020	2020-2021	Total				
Género								
Femenino	45	73	92	210 (67.96 %)				
Masculino	18	30	51	99 (32.04 %)				
Edad								
Media	19.67	20.17	20.29	20.12				
Mínimo	18	18	18	18				
Máximo	30	49	41	49				
Total	63 (20.39 %)	103 (33.33 %)	143 (46.28 %)	309				

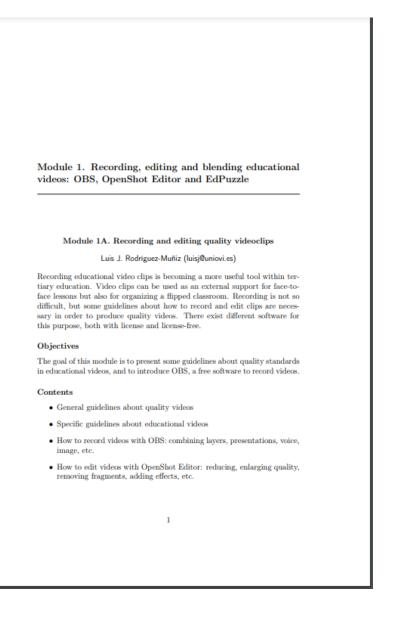






## The scientific conference by University of Oviedo (January 2022)

"The result of the project were presented by the University of Oviedo at four scientific conference. Rodríguez-Muñiz, L.J., Muñiz-Rodríguez, L., Aguilar-González, Á., Alonso Castaño, M., Lombardero Ozores, A., y Lorenzo Fernández, E. (2022). Uso y elaboración de vídeos educativos para la enseñanza online. [Use and development of educational videos for online teaching]. XIV International Conference on Teaching Innovation: Advances and challenges for educational transformation."



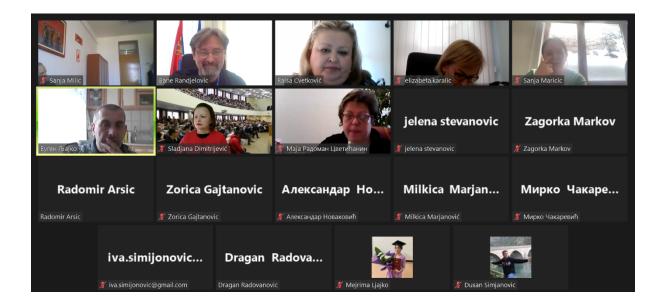






# **TeComp reaches science conference Leposavic (march 2022)**

Our member, Slađana Dimitrijević, participated in an online science conference held by the University of Leposavić about the impact of COVID-19 on education, and digital and online classes.

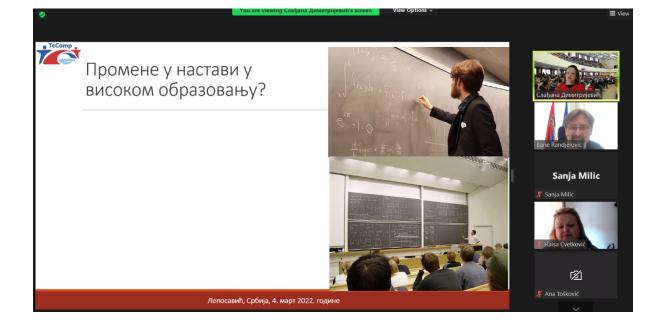






Strengthening Teaching Competences in Higher Education in Natural and Mathematical Sciences







Co-funded by the Erasmus+ Programme of the European Union



# **International conference FSTA (April 2022)**

"Few lectures at the international conference FSTA 2022 in Liptovský Ján on 31st January 2022 and 1st April 2022 have been organised, where modern approaches and IT technologies related to the TeComp have been disseminated: Petra Murinová – Distribution, Quality and Quantity rules for logical syllogisms and Irina Perfilieva – Graph functions similarity determined by preimage problem"







• TeComp Strengthening Teaching Competences in Higher Education in Natural and Mathematical Sciences



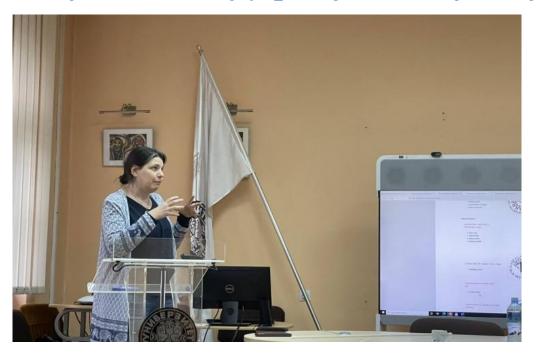


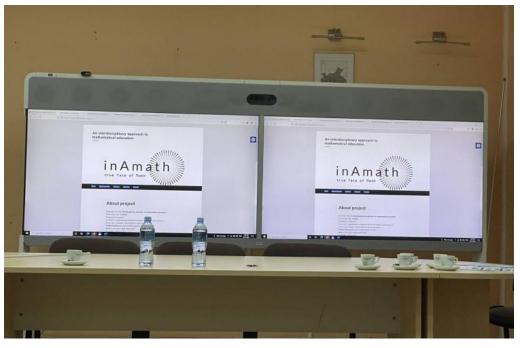


# **Inter-project coaching, In a Math (April 2022)**

"Ivana Stajner-Papuga presented InAmath project at University of Ni. The representatives from both projects presented to participants of the event their achievements, good practice were exchanged and problems shared."

http://www.tecomp.ni.ac.rs/download/Interproject\_coaching-InAmath-TeComp-Nis.docx.pdf







• TeComp Strengthening Teaching Competences in Higher Education in Natural and Mathematical Sciences





• **TeComp** • Strengthening Teaching Competences in Higher Education in Natural and Mathematical Sciences











## The University of Ostrava organizes workshops within the ERASMUS+ project (April 2022)

"On April 21, 2022, two workshops Workshop on innovative teaching and learning methodologies and Workshop on pedagogical approaches will be held in room C610 in building C of the University of Ostrava from 9:30 a.m. as part of the ERASMUS+ Strengthening Teaching Competences in Higher Education in Natural and Mathematical Sciences project."



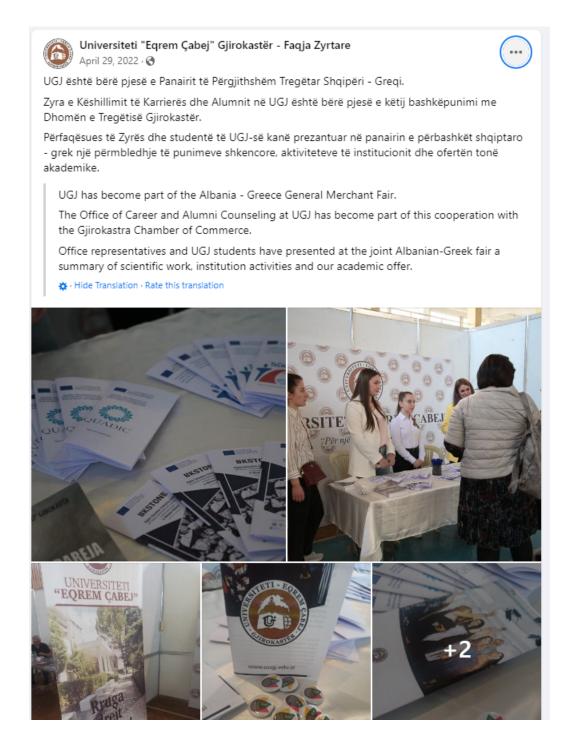






## General trade fair Albania-Greece (April 2022)

"The Career and Alumni Counseling Office at UGJ presented a summary of the scientific works, activities of the institution and academic offer."





Co-funded by the Erasmus+ Programme of the European Union



### **Europe Week at ECUG (May 2022)**

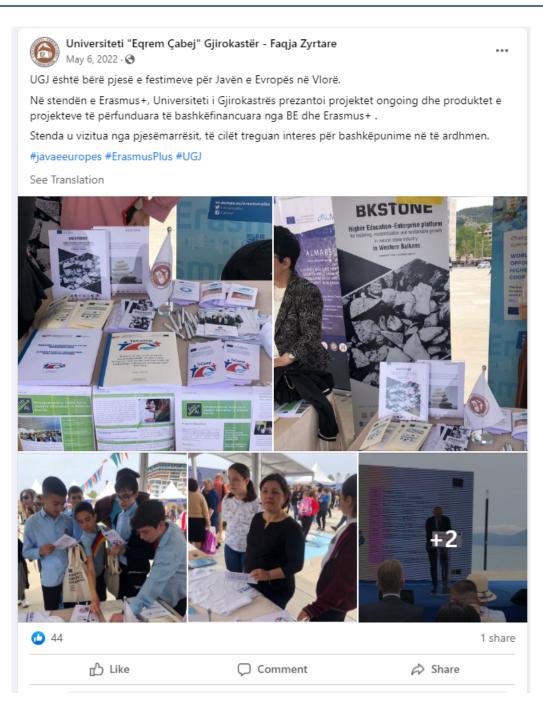
*"Europe Week organized in Vlora on 6th May 2022. ECUG participated with a stand, disseminating projects cofounded by Erasmus+, among which TECOMP project."* 















## Presentation of TECOMP and other projects to the delegation headed by Ambassador Luigi Sorec (May 2022)

"The University of Gjirokastra has been one of the most important stations where EU Ambassador Luigi Soreca, accompanied by the Austrian Ambassador, stopped during his visit to Gjirokastera, within the framework of activities organized for Weeks of Europe. Ambassador Soreca was welcomed by the rector of UGJ prof. Dr. Bektash Mema and vice principal prof. associate. Valbona Duri.

In his welcome speech, Rector Mema gave a panorama of the positive results this institution has had thanks to the implementation of EU projects - and the cooperation over the years of the University of Gjirokastra with European universities.

EU projects have been part of the University of Gjirokastra for many years, bringing positive changes to our institution. The Erasmus Projects, which I would describe as the Erasmus era, are an excellent project that has served students and educators in their professional growth.







Universiteti "Eqrem Çabej" Gjirokastër - Faqja Zyrtare 6 ••• May 6, 2022 · 🚱 UGJ është bërë pjesë e festimeve për Javën e Evropës në Vlorë. Në stendën e Erasmus+, Universiteti i Gjirokastrës prezantoi projektet ongoing dhe produktet e projekteve të përfunduara të bashkëfinancuara nga BE dhe Erasmus+ . Stenda u vizitua nga pjesëmarrësit, të cilët treguan interes për bashkëpunime në të ardhmen. #javaeeuropes #ErasmusPlus #UGJ See Translation BKSTONE 1 14 1 share 🖒 Like Comment 🖒 Share











7 presentations about the results of the project by University of Oviedo (March to September 2022)

"1. Presentation addressed to teachers in the Faculty of Teacher Training and Education, University of Oviedo. March 15, 2022. 23 participants

2. Presentation addressed to teachers in the Faculty of Teacher Training and Education, University of Oviedo. March 16, 2022. 14 participants.

3. Presentation addressed to teachers in the Faculty of Sciences, University of Oviedo. April 15, 2022, 12 participants.

4. Presentation addressed to teachers in the School of Computer Science, University of Oviedo. *April 18, 2022. 7 participants.* 

5. Presentation addressed to students in the Faculty of Teacher Training and Education, University of Oviedo. September 14, 2022. 45 participants.

6. Presentation addressed to students in the Faculty of Sciences, University of Oviedo. September 19, 2022. 21 participants.

7. Presentation addressed to teachers in the School of Computer Science, University of Oviedo. September 20, 2022. 13 participants."









Mejora de la motivación hacia la didáctica de la matemática y desarrollo de la competencia docente de los estudiantes para maestro a partir de una experiencia de m-learning

LAURA MUNÍZ-RODRÍGUEZ, ESTHER LORENZO-FERNÁNDEZ, ÁLVARO AGUILAR GONZÁLEZ.

Universidad de Oviedo





Co-funded by the Erasmus+ Programme of the European Union





Awarding of certificates (September 2022)

"As part of the workhop held during September in Nis, certificates were also awarded for the participants of the English language course and the previously held pedagogical methods course."



















### **Inter-project coaching (September 2022)**

"A very useful and significant part of the empowerment of the TeComp project was Inter-project cocaching. Tatjana Anđelković spoke about TeComp Sustainability - How to keep TeComp results and relationships relevant after the project life? Tatjana Anđeklović was the head of the Erasmus+ project called NetChem. Some of the results of the Erasmus+ project, called Swarm, were presented Milan Gocić, who is the coordinator of the Swarm project."

http://www.tecomp.ni.ac.rs/download/Photo\_album\_Inter-project-coaching-1.pdf



Inter-project coaching: SWARM, NETCHEM and TeComp Niš, September 15th, 2022









## Inter-project coaching: SWARM, NETCHEM and TeComp Niš, September 15th, 2022



Conference in Čačak (September 2022)





"Developing Teaching Competencies for Implementing Blended Learning in Higher Education: Experiences of Faculty of Science, University of Kragujevac"

http://www.tecomp.ni.ac.rs/download/Prezentacija-za-konferenciju-TIE-2022.pptx.pdf

Blended Learning	Co-funded by the Erasmus+ Programme of the European Union
A teaching model – combining the best a online interactive teaching, using suitable      Assessment     Self-Paced     Live Even	Performance
Collaborat TIE 2022, Čačak	ion , Serbia, September 17th, 2022
P Instance a surefit software Registra and Terratory	Educational interaction and communication - Gent
Developing Teaching Competencies for Implementing Blended Learning in Higher Education: Experiences of Faculty of Science, University of Kragujevac Ana Kaplarević-Mališić, Slađana Dimitrijević, Ivana Radojević, Milan Kovačević University of Kragujevac, Faculty of Science, Serbia	<ul> <li>Totally agree Agree Ok Disagree Totally agree</li> <li>Highly rated with an average mark of 4,85, on a scale from 1 to 5.</li> <li>69,2% - very satisfied with the training organization and structure.</li> <li>30,8% said that they plan to participate in similar training in the future, while 69,2% stated that they will probably participate.</li> <li>Highly rated with an average mark of 4,85, on a scale from 1 to 5.</li> <li>69,2% - very satisfied with the training organization and structure.</li> <li>30,8% said that they plan to participate in similar training in the future, while 69,2% stated that they will probably participate.</li> </ul>
TIE 2022, Čačak, Serbia, September 16-18th, 2022	TIE 2022, Ĉačak, Serbia, September 17th, 2022



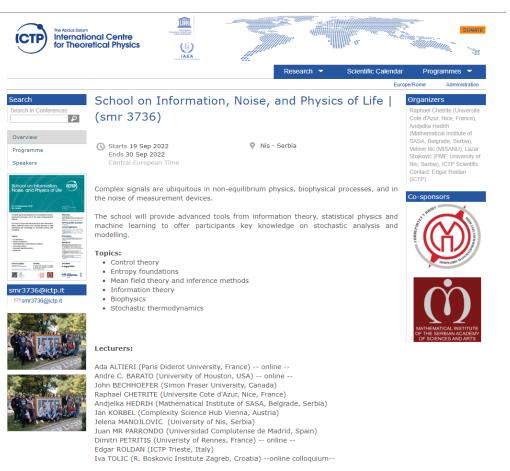


## SCHOOL ON INFORMATION NOISE AND PHYSICS OF LIFE, SPECIAL SESSION ON KNOWLEDGE SHARING AND SUSTAINABLE NETWORKING (September 2022)

"The international summer school, "School on Information, Noise, and Physics of Life", which was organized in collaboration between ICTP (Trieste, Italy), MISANU (Belgrade, Serbia) and PMF (Niš, Serbia), from September 19 to September 30 in Niš (Serbia) achieved a great success. Apart from the high-quality knowledge exchange, one of the greatest achievements of this school could be seen in efficient networking between participants and the local community. This special session, organized in a hybrid format as a set of lightning talks, aims to support and strengthen established connections and to foster future collaborations and interactions, towards sustainable growth of the established research network.

Project manager Jelena Ignjatović gave a lecture at the meeting titled "How to keep TeComp project results and relationships sustainable after the project life?". She presented the achievements of the TeComp project to guests around the world, as well as discussed further cooperation and dissemination of the project."

### https://indico.ictp.it/event/9826/



Volunteers: Bogdan Djordjević (MISANU, Belgrade, Serbia), Katarina Djordjević (PMF, University of Nis, Serbia)

















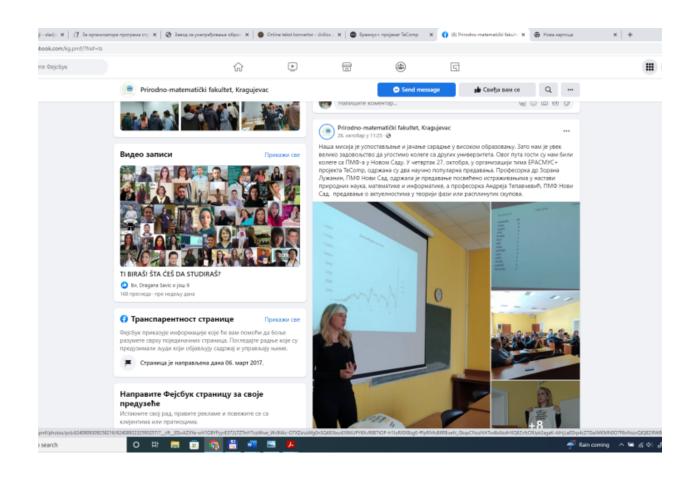




## **Popular lectures in Kragujevac (October 2022)**

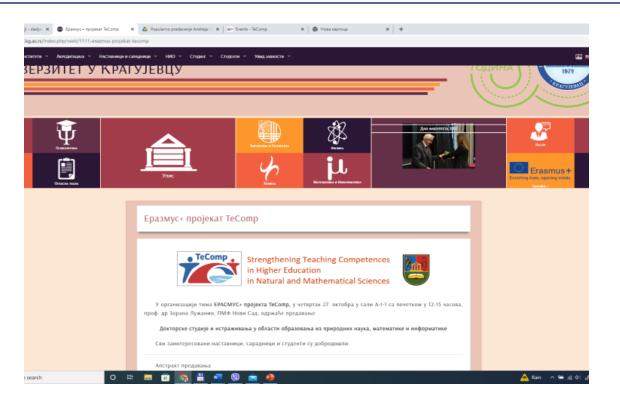
"Popular lectures by professors from the faculty in Novi Sad were held in Kragujevac from October 26, 2022 to October 28, 2022."

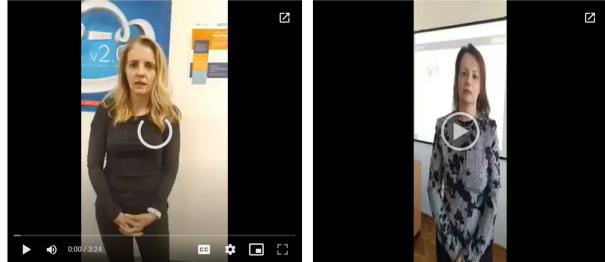
https://drive.google.com/file/d/1XkqhTv0UHoOl7f fdb14JUxu0L8OuCrA/view https://drive.google.com/file/d/17BifD-CheYrBnW2gaxnZpKj71Eb008i0/view

















## **Open invitation for participation on Info Day in the framework of TECOMP project.**

"We invite you on Wednesday, November 2, at 11:00, to join us in an information session, which will take place within the framework of the TECOMP project for the development of objectives, activities organized during the project implementation period and the results achieved. The meeting is open to members of the academic staff and **2 2** UGJ students.

https://www.facebook.com/watch/?v=1496846260782777&ref=sharing

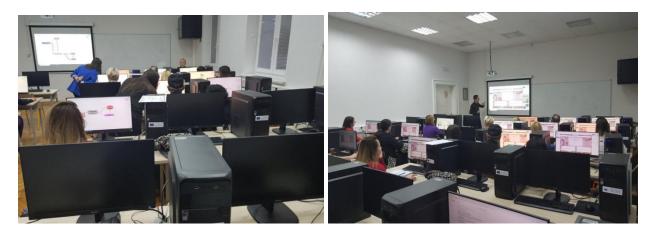
Gufo DAY or you sull e withintexe TeComp we wegi edu el	"Egrem Cabej" University Gjirokastër -       Image: Follow       Image: Follow         Overview       Comments         We invite you on Wednesday, November 2, at 11:00, to join us in an information session, which will take place within the framework of the TECOMP project for the development of objectives, activities organized during the project implementation period and the results achieved.         The meeting is open to members of the academic staff and Image:       UGJ students.         "tecomp #project #ugj #gjirokaster See less       Be the first to leave a comment.
We invite you on Wednesday, November 2, at 11:00, to join us in an information session, which will take place within the framework of the	Write a comment
🖞 Like 💭 Comment 🏟 Share 🚺 13 · 208 view	vyrite a comment





### **Digitally Competent Teacher Project (November 2022)**

"Members of the Kragujevac Branch of the Society of Mathematicians of Serbia and at the same time teachers and associates of Faculty of Scinces and Mathematics in Kragujevac, who were active in the TeComp project, applied to the public competition based on the knowledge and experience gained during the project for financing/co-financing projects of associations/organizations with funds from the budget of the city of Kragujevac in 2022 with the Digitally Competent Teacher project and the project was approved."









**International Conference on Physics education in Secondary Schools** (November 2022)

"International Conference on Physics education in Secondary Schools in Aleksinac is organized by Aleksinac gymnasium with the help of Department of Physics (Faculty of Sciences and Mathematics) and financed by the municipality of Aleksinac. In 2023, it will be its 10th anniversary. The board consists of 20 physics education researchers, which are almost university professors, and from 5 different countries. The conference includes expert lectures, workshops, poster sections, book presentations, panel discussions etc. Besides all that, the conference includes competition for the best experimental work by high school students, where students from many countries participate. The winners receive prizes for their work."



organizuju 10. Jubilarnu Međunarodnu konferenciju o nastavi fizike u srednjim Školama

Aleksinac, 24-26. mart 2023. godine

Program jubilarne Konferencije obuhvata:

Predavanja po pozivu iz metodike nastave fizike Predavanja po pozivu iz raznih oblasti fizike i astronomije

Usmene i poster prezentacije stručnih radova Prezentacije srednjoškolskih i univerzitetskih udžbenika Okrugli sto o problemima srednjoškolske nastave fizike Radionice

Izložbu učila

Zbornik radova 10. Međunarodne konferencije o nastavi fizike u srednjim školama, Aleksinac, 24-26. marta 2023.

Aktiviranie prethodnog znania uČenika

Lazar Radenković, Ljubiša Nešić

Prirodno-matematički fakultet, Niš, Srbija

Apstrakt. do 200 reči. rad sme imati najviše 7 stranica. elektronskom poštom na adresu konferencija.aleksinac@gmail.com.слике засебно, 300 дпи ime\_prezime\_slika\_x

Ključne reči: aktivna nastava, uvodni deo časa, utvrđivanje

#### UVOD

Ovaj rad je nastao kao rezultat novih iskustava koje su autori stekli tokom treninga organizovanog u okviru aktivnosti Erasmus+ projekta Strengthening Teaching Competences in Sciences Education in Natural and Mathematical (Ref. 598434-EPP-1-2018-1-RS-EPPKA2-CBHE-JP (2018-2467)).

Fundamentalni problem sa predavanjima je da se ona temelje na ideji da se učenicima nože preneti znanje, kao da je predmet, id a učenici usvajaju znanje samo zato što im je ono izrečeno. Aktuelna pedagoška teorija je teorija konstruktivističkog poravnanja (eng. constructive alignment), koja je spoj konstruktivizma i učenja usmereno na ishode. U obrazovnom konstruktivizmu je osnovno načelo da osoba nije puki primalac znanja, već da ona mora da aktivno konstruiše svoje razumevanje. Ovaj koncept je izveden iz kognitivne psihologije i uviđa značaj povezivanja novog materijala sa konceptima i iskustvom koji su već pristuti u umu čenika. Drugi je da nastavnik vrši namerno poravnanje nastavnih aktivnosti sa Željenim ishodima

učenja. Ovo je svesni napor da se učincima predstavi jasan i konkretan cilj učenja, dobro osmišljene aktivnosti učenja kao i provera znanja sa jasnim kriterijumom za procenu ostvarenosti ciljeva koja omogućuje i adekvatnu povratnu informaciju učeniku.







# University of Niš The TeComp Consortium

www.tecomp.ni.ac.rs e-mail:

tecomp@ni.ac.rs

tecomp.p2018@gmail.com

Copyright©TeComp Consortium

Co-funded by the Erasmus+ Programme of the European Union



This project has been co-funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein