

Strengthening Teaching Competences
in Higher Education
in Natural and Mathematical Sciences



Co-funded by the
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**WP2 - Upgrading
educational infrastructure at
the PC HEIs**

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University of Kragujevac, Serbia



Final Conference, Belgrade, October 9-11, 2022

WP2-

Upgrading educational infrastructure at the PC HEIs

Lead Organisation – P4 University of Kragujeva

Tasks

- **2.1** Forming technology-enhanced learning spaces
- **2.2** Preparing material for PPM training courses
- **2.3** Creating material for providing language support for teaching staff
- **2.4** Preparing guidelines for the technological enhancement of teaching and learning

Period of realisation: 15-01-2019 - 20-12-2021



2.1 Forming technology-enhanced learning spaces


- Provisional equipment specification given in the project application as the need of the PC universities, was revised by TeComp team members and discussed at the kick-off meeting (January 2019).
- This work started simultaneously with comparative analysis and identification of needs in WP1.
- The final decision about the purchase of equipment was made at the partners meeting in Oviedo (March 2019).
- The equipment and other materials which have been made possible through tendering with TeComp project funds enabled the project team members to successfully work towards the project objectives.



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2.1 Forming technology-enhanced learning spaces

- Separate tender procedures for the Serbian (March – July 2019 and November – December 2019) and Albanian partner institutions (January – April 2020) have been carried out.



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Број: 6/00-58-067/19-061
Р.б. набавке 3/2019
Датум: 22.07.2019. године

На основу члана 108. Закона о јавним набавкама („Службени гласник РС”, број 124/12, 14/15 и 68/15) у складу са чланом 7 став 2. Тачка 2. Подтачка а) Закона о јавним набавкама, мишљења Управе за јавне набавке број 011-00-68/10 од 8.11.2010. године, и на основу Упутства за спровођење набавке опреме у оквиру Темпус и Ерасмус мундус пројеката који је Универзитету доставила Национална Темпус канцеларија у Београду и на основу Извештаја Комисије о стручној оцени понуда број 6/00-58-067/19-059 од 22.7.2019. године, ректор Универзитета у Нишу доноси следећу

ОДЛУКУ

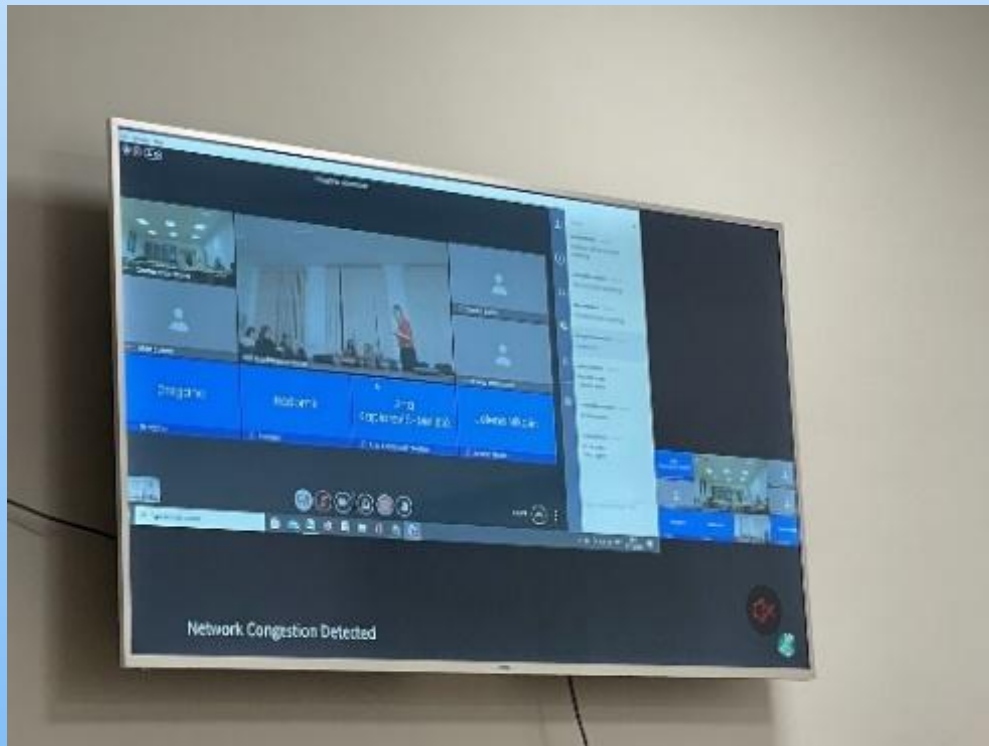
о додели уговора у отвореном поступку за обједињену набавку рачунарске опреме за потребе Универзитета у Нишу, Универзитета у Београду, Универзитета у Новом Саду и Универзитета у Крагујевцу партнера на Ерасмус + пројекту бр. 598434-EPP-1-2018-1-RS-EPPKA2-CBHE-JP „Strengthening Teaching Competences in Higher Education in Natural and Mathematical Sciences” (TECOMP)



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2.1 Forming technology-enhanced learning spaces

- Each of partners from Serbia purchased **LifeSize video conference** (4 item)
- Universities organized installation of video conference rooms and Lifesize accounts were registered. These VCR was use for organising on-line meetings, collaborations, and workshops, during the project activities.



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2.1 Forming technology-enhanced learning spaces

- 82 desktop computers (+ monitor) [23-UNI, 1-UB, 21-UNS, 35-UNIKG, 2-AL]
- 16 laptops [3-UNI, 1-UB, 4-UNS, 8-AL]
- 12 tablets [3-UB, 1-UNS, 8-AL]
- 5 computer science laboratories were formed [1-UNI, 1-UNS, 2-UNIKG, 1-AL]



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2.1 Forming technology-enhanced learning spaces

- 18 video projectors [2-UNI, 6-UB, 4-UNS, 2-UNIKG, 4-AL]
- 13 classrooms are modernized [2-UNI, 5-UB, 4-UNS, 1-UNIKG, 1-AL] and 5 projectors are removable.



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2.1 Forming technology-enhanced learning spaces

- 25 document cameras [8-UNI, 12-UB, 2-UNIKG, 3-AL]
- 11 laboratories are modernised [4-UNI, 2-UB, 2-UNIKG, 3-AL].



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2.1 Forming technology-enhanced learning spaces

- Other equipment for modernisation of classrooms and laboratories at the PC HEIs have been purchased and installed.
- Technology-enhanced learning spaces enabled the use of innovative teaching and learning methodologies during and after the project life and was very important and helpful during COVID pandemic conditions.



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2.1 Forming technology-enhanced learning spaces - resume

Title	Universities equipped with technology-enhanced learning spaces
Type	<input type="checkbox"/> Teaching material <input type="checkbox"/> Learning material <input type="checkbox"/> Training material <input type="checkbox"/> Event <input type="checkbox"/> Report <input checked="" type="checkbox"/> Service/Product
Achieved goals	<p>For Serbian and Albanian universities appropriate equipment for educational purposes was purchased and installed. This resulted with upgraded technical infrastructure and laboratory equipment, and enabled technology-enhanced learning spaces.</p>
Conclusion	



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2.2 Preparing material for PPM training courses

2.4 Preparing guidelines for the technological enhancement of teaching and learning

- Thinking and collecting ideas and drafts for training and training materials starts in the first year of the project initiated with findings in reports of WP1 and experiences collected during visits of partners in EU in year 2019.
- UNIKG as a packet leader worked on plans of activities and first drafts in 2019.



2.2 and 2.4 - Preparing teaching and learning materials

- Because of COVID pandemic in year 2020 all planned visits to the partners from EU were postponed. Instead of that, and after the eligibility period of the project extended by 12 months, at the end of year 2020, partners from UNIOVI, UMB and UGR conducted webinars in December 2020. Also, during the spring 2021 UGENT conducted online 12-week (45 hours) course the professional development course “Educational Interaction and Communication in Higher Education”.

Microsoft Teams

Request control

More actions

Module 2A. eXeLearning as a tool for creating digital content

Laura Muñiz Rodriguez

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University of Oviedo

TeComp

Participants

Presenters (12)

- Besian Rama
- Denisa Kafazi
- elpona mido
- etepawce
- Išidor Kokalari
- Jelena Matijević
- Kostaq Lili
- LAURA MUÑIZ RODRIGUEZ
- Miroslav Ćirić
- sanadojanovic
- sladjanaimitrijevic

Zoom Meeting

Recording

education

Design guidelines for educational posters

- Acknowledging the position of posters in 21st century higher education
- Linking poster design to the learning objectives of your own course
- Explaining the key design principles of an educational poster
- Evaluating the educational value of a poster

Upload / Create

Existing Activities

The impact of using posters as an instructional strategy

Drag and drop files here to create and update topics

A checklist to evaluate student posters in classroom and during poster sessions

Assignment in view of this poster

Educational posters: a first overview

Posters are part of the "heritage" of education. Besides the use of a blackboard (with the slide as a precursor), the use of posters goes back a long way. Sometimes those posters were referred to as wall charts. Nowadays, we often use the word infographics to refer to these posters. Since the 18th century, these wall charts have been seen as the solution to make education more "visual" (De Buck, 2015). You can see the visualization principle as a precursor to what cognitivists emphasize as the importance of "multiple representations". Typical wall charts showed historical situations, geographic phenomena, in veterinary sciences, technology, mathematics, physics, chemistry...

Theme 4 - Discussion and collaboration in

TeComp

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2.2 and 2.4 - Preparing teaching and learning materials

- At online CMT held on 22nd March Editorial board for training material was formed:
 - Zorana Lužanin (UNS) presedent,
 - Miroslav Ćirić (UNI),
 - Andrijana Zekić (UB),
 - Siniša Đurašević (UB),
 - Sladana Dimitrijević (UNIKG).
- The Editorial board is entrusted with the management of the process of collecting and reviewing teaching materials, as well as the selection of materials for printing and the design of volumes.



Strengthening Teaching Competences in
Higher Education in Natural and
Mathematical Sciences

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Naziv materijala:

Ime recenzenta:

Ocena prema kriterijumima

Molimo upišite ocenu: 5 - odlično / 4 - dobro / 3 - prosečno / 2 – ispod proseka / 1 – slabo

Kriterijum	ocena
Adekvatnost naslova	
Jasnoća pisanja	
Čitljivost	
Ispravnost i prikladnost strukture	
Popularnost teme	
Doprinos razvoju nastavničkih kompetencija	
Primenljivost sadržaja	
Zanimljivost sadržaja	
Materijal sadrži značajan broj korisnih primera.	

Pozitivne strane materijala.

Negativne strane materijala i preporuke za otklanjanje.

Da li materijal predstavlja dobru i jasnu osnovu za obuku i sticanje nastavničkih kompetencija?



of the European Union

2.2 and 2.4 - Preparing teaching and learning materials

- Draft versions of programs and learning material, each of them in Serbian and in English, were collected till LCM in Kragujevac in June 2021. Editorial board defined reviewing process and plan dynamic for it.



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2.2 and 2.4 - Preparing teaching and learning materials

- During the summer 2021 reviewing process was ended, materials were organized in two booklets and proofreading (in Serbian) were finished.
- Final versions of materials were accepted by Editorial board on online meeting held on 25th August.
- One booklet is devoted to digital competences and the other to didactic and pedagogical competences.
- At the end of year 2021 the materials were published in Serbian and English.

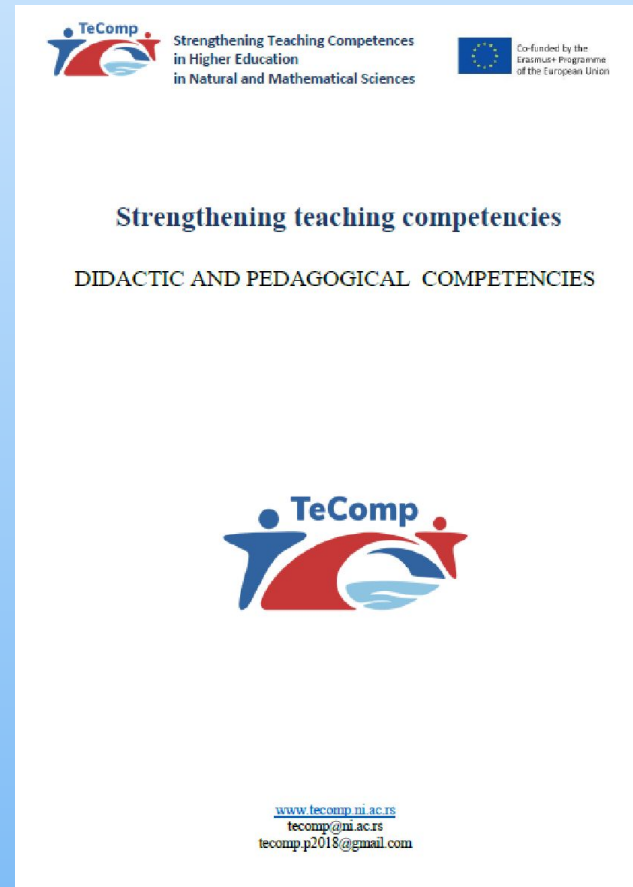


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2.2 Preparing material for PPM training courses - Deliverables

Volume PPM – STRENGTHENING TEACHERS COMPETENCES

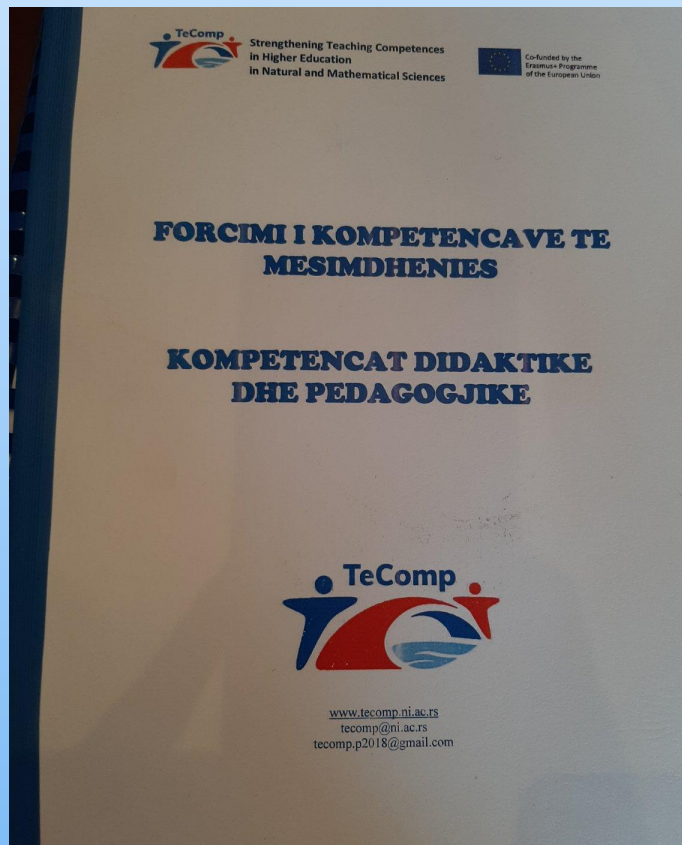
- 9 themes
- 9 authors from 2 universities
- 193 pages



2.2 Preparing material for PPM training courses - Deliverables

Volume PPM – STRENGTHENING TEACHERS CPMPETENCES

- During the spring 2022 partners from Albania, translated it in Albanian.
- 7 staff members from Eqrem Çabej University Gjirokastër were involved in translating the materials.



2.2 Preparing material for PPM training courses - resume

Title	Material for PPM training courses
Type	<input checked="" type="checkbox"/> Teaching material <input checked="" type="checkbox"/> Learning material <input checked="" type="checkbox"/> Training material <input type="checkbox"/> Event <input type="checkbox"/> Report <input type="checkbox"/> Service/Product
Achieved goals	<p>Printed and electronic materials for psychological, pedagogical and methodological (PPM) training courses were prepared (in Serbian, English and Albanian). They were used for the trainings organized within WP3.</p>
Conclusion	<p>Aims are completely achieved.</p>

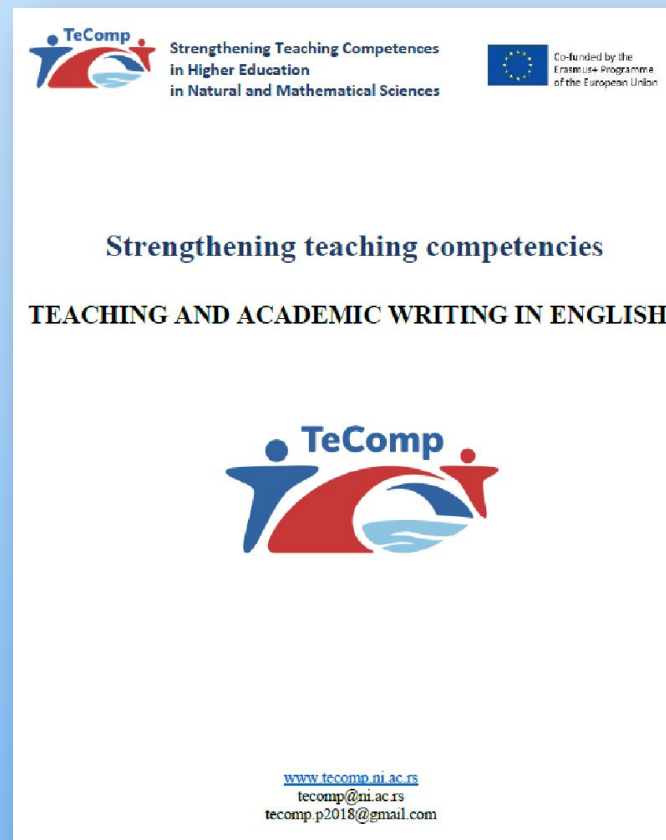


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2.3 Creating material for providing language support for teaching staff

The material that has already been developed by the project FUSE (TEMPUS project, coordinator UNI) during the 2021 was adapted to the specific needs of teaching and academic writing in English in the field of natural and mathematical sciences. It was published at the end of 2021.

- 6 themes
- 3 authors from UNI
- 60 pages



2.3 Creating material for providing language support for teaching staff - resume

Title	Creating material for providing language support for teaching staff
Type	<input checked="" type="checkbox"/> Teaching material <input checked="" type="checkbox"/> Learning material <input checked="" type="checkbox"/> Training material <input type="checkbox"/> Event <input type="checkbox"/> Report <input type="checkbox"/> Service/Product
Achieved goals	Printed and electronic material for providing language support for teaching staff was prepared specially taking in to account the specific needs of teaching and academic writing in English in the field of natural and mathematical sciences. They were used for the trainings organized within WP3, activity 3.4.
Conclusion	Aims are completely achieved.



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2.4 Preparing guidelines for the technological enhancement of teaching and learning - Deliverables

Volume IT – DIGITAL COMPETENCES

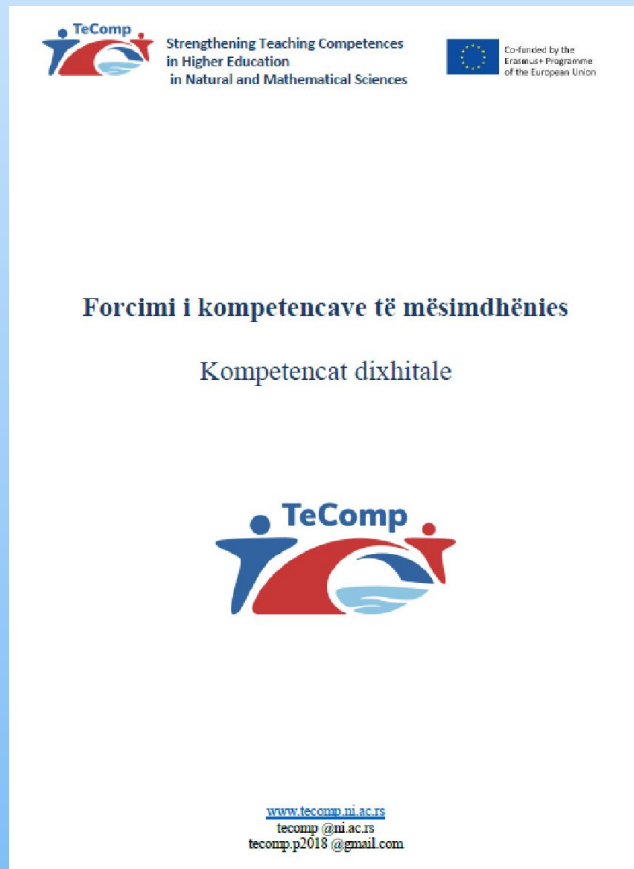
- 7 themes
- 10 authors from 4 universities (UNI, UB, UNS, UNIKG)
- 146 pages



2.4 Preparing guidelines for the technological enhancement of teaching and learning - Deliverables

Volume PPM – STRENGTHENING TEACHERS CPMPETENCES

- During the spring 2022 partners from Albania, translated it in Albanian.
- 4 staff members from Fan S. Noli University Korce were involved in translating the materials.



2.4 Preparing guidelines for the technological enhancement of teaching and learning - resume

Title	Preparing guidelines for the technological enhancement of teaching and learning
Type	<input checked="" type="checkbox"/> Teaching material <input checked="" type="checkbox"/> Learning material <input checked="" type="checkbox"/> Training material <input type="checkbox"/> Event <input type="checkbox"/> Report <input type="checkbox"/> Service/Product
Achieved goals	Guidelines and instructions for wider integration of ICT in teaching and learning were given in the booklet for digital teacher competences. They were used for the trainings organized within WP3.
Conclusio	



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University of Kragujevac

**Thank you all for good
cooperation
during project activities!**

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