Innovative Approaches to Remote Education: Case Studies from the University of Rijeka

Abstract. Many universities worldwide are using information and communication technologies for remote teaching to improve accessibility and adapt course activities to the needs of students. The University of Rijeka, Croatia (UNIRI), has been committed to the development of e-learning practices for over 15 years, focusing on both technological and pedagogical-didactic aspects. As a member of the YUFE alliance, UNIRI collaborates with other European universities and offers blended and online courses to students within the alliance. For successful remote educations, teachers should carefully select appropriate models and tools and at the same time apply innovative teaching strategies to increase student motivation. This requires teachers to acquire skills in remote education and share examples of best practice in e-learning. One such initiative is the Virtual Edu project aimed at developing the practical competencies of remote educators.

The aim of this paper is to provide practical insights into the implementation of three online and blended learning courses at UNIRI and to share valuable experiences. The paper highlights innovative approaches and instructional designs suitable for use in higher education, educational policy as well as the educational technology used. The paper contributes to the growing body of research on online and blended learning by discussing the impact of the approaches, models and tools on student engagement and satisfaction.

Keywords: E-learning, Higher education, Remote teaching, Virtual Edu project, YUFE Alliance.

1 Introduction

Many universities around the world are taking advantage of information and communication technology to implement innovative teaching strategies and different approaches to remote teaching with the aim of making education more accessible to students, but also to adapt course activities to the individual needs of students. These include project-based learning [1], problem-based learning [2] and work-based learning [3], all of which emphasize real-world application and active engagement. In addition, constructivist learning approaches are used to encourage students to build their own understanding and knowledge through experience and collaboration with other students

[4], regardless of where they are located. Furthermore, gamification techniques are being utilized to enhance student motivation and engagement by integrating game design elements into e-learning activities [5]. Complementing these strategies, the HyFlex model [6] of blended learning [7] offers students the flexibility to choose between face-to-face class participation, synchronous online participation, or asynchronous engagement with course content to personalize the learning experience.

The University of Rijeka, Croatia (UNIRI) has a longstanding commitment to e-learning, with over 15 years of strategic implementation that emphasizes both technological and pedagogical-didactic aspects of e-learning. In that process, UNIRI prioritizes quality assurance and regularly conducts institutional analyses to determine the acceptance of e-learning among teaching staff and students [8]. As a member of the Young Universities for the Future of Europe Alliance (YUFE), UNIRI collaborates with other European universities, offering blended and online courses to students within the YUFE. Alongside infrastructure development, UNIRI regularly conducts e-learning training programs for teachers, publishes recommendations for the development of e-learning resources and activities, and offers grants for the development and improvement of e-courses in English through the UNIRI CLASS funding program [9].

During the COVID-19 virus pandemic became evident that the approach to remote teaching should be carefully selected and not introduced ad hoc without thinking about the appropriate models and tools. At the same time, innovative teaching strategies should be used to increase students' motivation to learn in an online environment, support them in achieving the expected learning outcomes and prevent a high dropout rate, which is common in online learning. All of the above imposes the need for teachers to acquire skills in the field of remote education, self-assess e-courses, and to share examples of best practice in e-learning [10]. The Virtual Edu project is an initiative aimed at developing the practical competencies of remote educators through training that emphasizes innovative teaching methodologies and examples of good practice [11].

This paper presents three online courses from UNIRI that serve as examples of best practice and are available to international students through incoming mobility and YUFE Student Journey. The aim of this paper is to provide practical insights into the implementation of online and blended learning models in higher education and to share valuable experiences. The paper highlights innovative approaches and instructional designs suitable for higher education setting as well as the educational technology used. The paper contributes to the growing body of research on online and blended learning by discussing the impact of the approaches, models and tools used on student engagement and satisfaction.

2 Background

2.1 Framework for Development and Quality Assessment of e-Courses

The COVID-19 virus pandemic fostered the development and adoption of the Framework for the Development and Quality Assessment of e-Courses [12] at UNIRI, which along with extensive experience in e-learning also contributed to the successful implementation of blended and online learning.

The Framework contains a set of elements grouped into four main categories: E-course organization, Learning materials and methods, Monitoring and evaluation, and Communication and three levels of quality are defined for each: beginner (minimal quality), developed (satisfactory quality), advanced (high quality). The category "Organization of e-courses" includes the elements such as general e-course information, the learning outcomes, the structure of the virtual learning space, organization of resources and individualized teaching plans, and digital tools used. The category "Learning materials, forms and methods of e-learning" assesses learning materials within the e-course's virtual space, design of activities aimed at achieving learning outcomes, teaching methods, strategies, and forms of working. The elements of the "Monitoring and evaluation" category are consistent with UNIRI's policy on assessment and evaluation of student work. This category emphasizes the importance of continuous monitoring and assessment according to clearly defined criteria that are aligned with course learning outcomes and chosen learning and teaching methods and strategies. Timely and clear feedback on assessment is also emphasized. The elements of the last category "Communication" illustrate how important it is to inform students regularly, timely and consistently about all course activities by using appropriate communication channels in the virtual space of the e-course.

2.2 UNIRI funding opportunities

As part of the program "Research and Development Projects in Education - UNIRI CLASS", the University of Rijeka is initiating calls for proposals to provide funds for improving the quality of teaching and the competences of University of Rijeka students. One of the program lines is "Digital citizenship – innovations in learning and teaching". The aim of the program line is to improve existing courses or support the development of new ones across all levels of study or lifelong education programs. This is achieved by promoting the integration of innovative teaching methods in a virtual environment and the introduction of novel forms of teaching for fostering the generic skills and fundamental competencies of both male and female students.

Before the UNIRI CLASS program which started in 2021, the University of Rijeka was for several years announcing competition to allocate funds for the design and development of complete online courses that will be offered to all University of Rijeka students within the internal mobility system, incoming mobility students, and YUFE network students within the virtual campus. The ranking was initially based on the following criteria: Contribution to the development of the quality of the course in accordance with the learning outcomes, content and design of the course pedagogical, didactic-methodological and technical validity of the digital teaching material the level of multimedia and interactivity of the digital teaching material the possibility of repeated and multiple use of the digital teaching material realistic financial structure of the project budget. Since the Framework for the Development and Quality Assessment of e-Courses has been adopted in the meantime, the criteria for the UNIRI CLASS program have been revised so that the part that assesses the elements of the e-course is consistent with the framework. In addition, criteria for consistency with other University strategic documents have been included.

2.3 Erasmus+ Project Virtual Edu

The Erasmus+ project Virtual Edu - Upskilling and Certification Scheme for Virtual Educators, co-funded under Key Activities 2, Strategic Partnerships for Higher Education (KA220-HED), aims to address the challenges of remote working through the development of a certification scheme and the training of teachers, managers and other staff [13]. This initiative supports the digital transformation of the European Union and improves preparedness for pandemics and unforeseen events that impact education and professional work in general. The project intends to establish a certification system that defines the required skills and certification exams according to ECQA (European Certification and Qualification Association) standards [14] as well as training curriculum, resources, and activities for a Massive Open Online Course (MOOC). The Virtual Edu training will be based on innovative teaching strategies (e.g. micro learning, gamification) and examples of best practices and offer remote educators opportunity to improve their remote education skills. Examples of best practices from Croatia are presented in this paper.

Through the project's activities so far, the actual needs of the target participants were also determined, which informed the development of the curriculum that will be used for Virtual Edu training. Important finding of the research among potential participants was that they recognize the importance of training for developing remote education skills, believe that their competencies can be improved, and are eager to participate in the training that will enable them to develop their remote education skills [11].

3 Approach

Approach applied in the research described in the paper included identification of the examples of e-courses offered at UNIRI that can serve as examples of best practice. The research was performed in the context of the Erasmus+ project VirtualEdu, in accordance with the procedure designed by the project consortium. The aim was to identify the e-courses with focus on remote teaching and the use of innovative teaching strategies which are offered not only to UNIRI students but also to international students. The courses considered were those whose implementation was funded by UNIRI and with elements on advanced level of quality, according to the Framework for the Development and Quality Assessment of e-Courses [12].

Three courses were selected from different constituents of UNIRI, and case studies were conducted by interviewing the teachers responsible for course implementation. The quality of all e-courses was assessed according the UNIRI Framework for the Development and Quality Assessment of e-Courses. In addition, the e-learning model of each course, the teaching, learning and assessment methods, the digital tools used and the student feedback obtained through questionnaires or interviews were analyzed to draw conclusions about the impact of these approaches.

Chosen courses were *Operations Research* (OR), offered at Faculty of Informatics and Digital Technologies, *Computer-Based Math* (CBM), offered by the Faculty of Mathematics, and *Human Resources Management* (HRM), offered at Faculty of Economics and Business. The context of the chosen courses is shown in Table 1.

Table 1. Context of the chosen courses

Heading level	OR	CBM	HRM
UNIRI constituent	Faculty of Informatics and Digital Technologies	Faculty of Mathematics	Faculty of Economics and Business
Study program	University undergraduate study in Informatics	University elective course/Life-long learning course	University undergraduate study in International Business
ECTS	5 ECTS	3 ECTS	6 ECTS
Start year	2020	2020	2020
End year	Ongoing	Ongoing	Ongoing
Innovative aspects	- HyFlex model of blended learning - Blend of diverse types of learning materials, various teaching methods, and digital tools - Gamification (digital badges, leaderboards) - Continuous assessment (formative and summative)	- Personalized asynchronous online learning - Work/project-based learning - Blend of diverse types of learning materials, various teaching methods, and digital tools - Continuous assessment (formative and summative)	-Blended learning -Simultaneous face-to-face and online lectures - Problem-based learning - Collaborative learning - Blend of various teaching methods and types of digital tools - Continuous assessment (formative and summative)

4 Case Study 1: *Operations Research* Course

The *Operations Research* course aims to equip students with a fundamental knowledge of the formalization of optimization and scheduling problems, emphasizing their application to decision making in the business environment. The growing need for professionals skilled in Operations Research stems from its interdisciplinary nature, offering problem solving in different areas, decision support, idea generation and innovation. Therefore, the course is aimed at computer science and informatics students and students from diverse disciplines. The course is taught in Croatian for regular students and in English for students from abroad in incoming mobility and YUFE students.

4.1 Innovative aspects

The activities of the course *Operations Research* are designed following the Hybrid-Flexible or HyFlex model. Synchronous and asynchronous teaching methods are integrated, allowing the delivery of activities to be tailored to the individual circumstances of students, such as mobility issues, schedule conflicts, or prolonged illness. This enables some students to attend the course entirely online while others attend part of the

classes in the classroom. This approach is particularly beneficial for students from the YUFE network and for incoming mobility students who take classes in English, as well as for any other students unable to attend scheduled classroom lectures.

Combining different types of learning materials (i.e. text lessons, audio/video lessons, and interactive presentations) enables the personalization of the learning and teaching process according to the individual preferences of the students. The materials are organized within the virtual space of the e-course on Moodle-based LMS called Merlin [15] and students can engage with materials that align with their preferred information channels. The integration of diverse teaching methods and student activities facilitates the effective achievement of learning outcomes. A blend of verbal and visual approaches is used, along with various e-learning activities (e-tivities). As illustrated in Fig. 1, which shows the sequence of course activities, each course lecture is followed by a corresponding practical activity (exercise). All exercises incorporate problem-based tasks that highlight the real-world applications of the learning material, enabling students to develop problem-solving skills relevant to a business environment.

The use of various digital tools both within and outside the LMS enables students to effectively achieve course learning outcomes and develop practical skills. Synchronous online lectures and consultations are conducted using Microsoft Teams. R Studio, LPSolve, Geogebra, and online calculators are employed for solving exercises. To create interactive presentations and visually represent content concepts, Geogebra is used. Additionally, Kahoot!, and Socrative, are used during lectures for organizing gamified quizzes and while Mentimeter is used for real-time feedback collection.
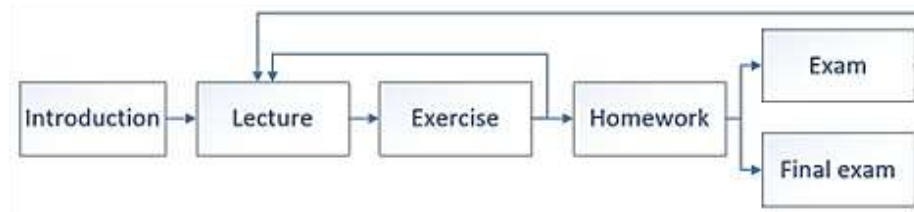

Fig. 1. Flow of activities for the course Operations Research

Students are encouraged to adopt a constructivist learning approach and collaborate with their peers. Despite the extensive range of activities, the workload is appropriately balanced with the ECTS credits allocated to the course. Since the mathematical concepts and quantitative methods in the course are interrelated, continuous student participation is required.

Exercises and homework serve as formative assessments that students must complete prior to summative assessments (exams). In the assessment process, the LMS features are utilized to provide automatic feedback to students whenever possible, thus reducing the teacher's workload. To address the issue of student motivation and active engagement during learning, the approach of gamification with digital badges was selected. Badges are awarded to students for submitting solutions to weekly exercises and homework assignments promptly. Due to the large number of course participants,

badges are automatically allocated to students according to predefined criteria. Furthermore, students are periodically shown a leaderboard ranking the most successful participants throughout the semester.

4.2 Impact

This course represents an example of best practice because it considers the quality of all e-course elements while combining different forms of learning content, teaching methods, and digital tools to support learning. As can be seen from Table 2, an advanced level of quality was achieved for most of the criteria.

Both regular and international students, based on the survey results, find the presented approach to e-course implementation effective. They emphasize the importance of continuous learning and regular participation in weekly activities (exercises) for course completion. Furthermore, they exhibit a positive attitude towards the learning materials and digital tools utilized. They appreciate the possibility of earning badges alongside course grading points and support the future use of badges. They find that gamification with badges is an engaging, enjoyable, and effective way to motivate students to actively participate in formative assessment activities organized weekly.

Delivering a course using the HyFlex model can be quite demanding from the teacher's perspective. Careful planning and coordination of the face-to-face and online components, as well as continuous engagement with students to address their individual needs and preferences, are required.

5 Case Study 2: *Computer-Based Math* Course

The *Computer-Based Math* course is interdisciplinary, focusing on the implementation of mathematical modeling and problem-solving through use of computers and algorithms in diverse fields. The course is aimed primarily for non-mathematicians, and available as an elective course for students of the YUFE. However, students who are enrolled are anticipated to possess fundamental understanding in linear algebra, differential and integral calculus, and programming. The course is also accredited as a life-long learning course for school teachers in mathematics and computer science.

The course is taught in English and entirely online, asynchronously.

5.1 Innovative aspects

The course employs a personalized learning approach, allowing students to progress asynchronously based on their existing knowledge and skills. Students should be active and work continuously throughout the semester to acquire the knowledge and skills. Teaching and assessment are designed following the constructivist learning approach, in alignment with the defined learning outcomes. The methods and topics of the course are based on the teachers' experience in teaching mathematical modeling and its applications to students from various disciplines. In addition to project-based and work-

based learning, various digital tools and different forms of learning materials are used to support the achievement of learning outcomes.

The course is organized in four parts. The first part of the course includes a Python lesson presented as a Moodle activity that is accessible from the beginning. This section is designed to familiarize students with the basics of Python programming and some additional Python packages. The second part introduces various areas of mathematics with numerous applications. It includes video lectures and additional learning materials. In the third part of the course, real-life problems are presented and solved. To understand the problem-solving process, students need to know both the basics of mathematics and the basics of programming in Python. Therefore, the access the third part of the course, students need to successfully complete the Python assignment and score at least 50% on the online test in the second part of the course. Third part of the e-course includes video explanations of problems and solution algorithms.

Table 2. Assessment of e-courses

Category/criteria	OR	CBM	HRM
I. Organization of e-course			
Activity evaluation criteria	Developed	Advanced	Developed
Learning outcomes	Advanced	Beginner	Advanced
Structure of the e-course space	Advanced	Developed	Advanced
Applied technology	Advanced	Developed	Developed
Individual teaching plan	Beginner	Advanced	Beginner
II. Learning materials, forms and methods of e-learning			
Availability of learning materials and harmony with learning outcomes	Advanced	Advanced	Advanced
Way of presenting learning materials	Advanced	Developed	Developed
Strategies and methods	Advanced	Developed	Advanced
Forms of working	Developed	Beginner	Developed
Authorship of learning materials	Developed	Developed	Developed
III. Monitoring and evaluation			
Activity evaluation criteria	Advanced	Developed	Developed
Formative and summative evaluation	Advanced	Developed	Developed
Evaluation feedback	Developed	Advanced	Developed
IV. Communication			
Informing students	Advanced	Advanced	Advanced
Communication between students and teachers	Advanced	Developed	Advanced
Communication between students	Developed	Developed	Advanced
Feedback on the e-course experience	Advanced	Beginner	Developed

Students who fulfill all requirements will receive a project assignment in the final, fourth part of the course. In order to apply the newly acquired skills in real-life scenarios, students can propose their own topics for the project. They should submit a plan for completing the project and at least one working version. Course teachers will assess progress based on the working version and organize consultations as needed. The project assignment and its solution should be submitted as a term paper, including Python programs and a video presentation.

To ensure a personalized approach through the design of the course, various activities are included: different forms of learning materials (i.e. text lessons, audio/video lessons, and interactive presentations), verbal and visual methods, theoretical and practical problem solving tasks, various assessment activities (formative and summative) and different digital resources and tools (lessons, videos, online tests, interactive demonstrations in GeoGebra, Python programs). These activities are planned in such a way that the workload of the students is aligned with the ECTS credits allocated to the course. Furthermore, the Merlin LMS functionalities are utilized to provide automated feedback to students whenever possible, thus reducing the teachers' workload.

5.2   Impact

This course is an example of best practice as it is an online course based on project and work-based learning that can be delivered simultaneously to students in a variety of degree programs. The subject of the course is mathematics, but the implementation of the course allows the enrolment of students with different mathematical backgrounds due to the combination of different forms of learning content, teaching methods and digital tools. A developed or advanced level of quality was achieved for almost all criteria (Table 2).

Statistics from the University of Rijeka indicate that this e-course is one of the most popular courses among YUFE students at the UNIRI. According to teacher's observations, the combination of project-based learning and work-based learning has demonstrated its effectiveness. Students express satisfaction in being involved in the selection of project topics, often opting for everyday issues addressed through mathematical optimization methods. Optimization, being extensively applied in everyday life and across diverse scientific fields, exemplifies the implementation of work-based learning. Given the course's focus on lifelong learning, this approach offers students practical work experiences, fostering the development of skills crucial for career advancement. From the perspective of the teachers, the delivery of the course is demanding. They recognize the need for consistent effort in engaging with students to sustain their motivation and interest, while also offering essential support.

6   Case Study 3: Human Resources Management Course

The *Human Resources Management* course is intended for students interested in social and institutional conditions and the development of human resources in business and public administration. Students from different programs within the YUFE network who

have an interest in studying the social and institutional aspects of HRM are welcome to enroll in this course. The course is taught in English and activities are planned according to the blended model. Lectures are held simultaneously face-to-face (for students in the classroom) and online. Online classes are held for students who cannot be physically present (e.g. due to illness), but mainly for students from mobility programs.

6.1 Innovative aspects

This course emphasizes innovative, problem-based, and collaborative learning approaches to enhance students' problem-solving and critical thinking skills through real-world challenges. The blended learning through combining online and face-to-face teaching and learning is used while e-course virtual space is organized using Merlin LMS. Tools like forum and wiki available in the LMS are combined with those outside the LMS. Among tools for videoconferences, Google Meet was chosen for live streaming and interaction with students during classes. Paid version is used since it enables longer call durations and accommodates a larger number of participants. This videoconferencing tool is preferred for its capability to use multiple cameras simultaneously (e.g., on a mobile phone and a computer), enhancing opportunities for collaboration and interaction during classes. Breakout rooms are employed to divide students into groups for shorter tasks, and a whiteboard for active brainstorming and sketching with others. Additionally, for brainstorming and short discussions in the course, the tool Aha Slides is utilized (also in the paid version), as it facilitates interactive idea development.

The aforementioned tools have proven to be highly useful during the HRM course, as they enable teachers to encourage student participation during lectures while also helping students acquire digital knowledge. In addition, Microsoft OneNote, which allows students to create independent assignments and leave text comments on topics discussed in class, and Turnitin, which allows written texts to be checked to ensure that they haven't been plagiarized, are also used. In addition to synchronous activities, all students participate in asynchronous activities, which involve independent research, mastering relevant topics, and applying quantitative methods to solve problems. These tasks help students develop business knowledge, as well as communication and creative thinking skills. They are also expected to collaborate, share knowledge, and solve practical problems. Collaborative learning is a key component of the course, emphasizing group work and peer learning through discussions, idea sharing, and feedback during lectures and seminars. Problem-based learning encourages students to explore and analyze information, thereby developing critical thinking and problem-solving skills.

All the mentioned activities contribute to formative or summative assessment. Besides written tests in the final exam, students complete independent assignments during the semester, upload them to the LMS, and participate in discussions. Knowledge assessment tools are employed, and students can take the final exam online using Google Meet (with supervision via one or two built-in cameras) and Safe Exam Browser, which restricts computer functions to only the exam. In addition to the tools of the LMS, the Socrative tool that allows the creation of personalized questions for each student and the subsequent analysis of the answers is also used.

6.2 Impact

This course serves as an example of best practice by integrating HRM content, collaborative learning, and the acquisition of digital skills essential for the labor market. A developed or advanced level of quality was achieved for almost all criteria (Table 2).

Problem-based learning (PBL) and collaborative learning (CL) are pedagogical methods that significantly improve the learning process by encouraging active participation, analytical thinking and the ability to work in teams. Both methods share a common goal: to promote a deeper understanding and practical application of knowledge through interactive and student-centered learning environments. Both principles were applied in the *Human Resource Management* course. From a teacher's point of view, these methods empower students to become active, lifelong learners equipped with the skills they need to succeed in their personal and professional lives.

The survey conducted for the course resulted in excellent ratings in several crucial categories. Students indicated that the Moodle learning system organized learning materials and assignments effectively and clearly. The teacher's management of e-tivities and communication with students (via the forum or e-mail) throughout the course were also rated as very satisfactory. The multimedia learning resources were found to be particularly useful, as was the use of collaboration tools such as Aha Slides.

7 Discussion and Conclusions

The aim of this paper was to provide practical insights and experience sharing on the implementation of three online and blended learning courses at UNIRI, highlighting innovative approaches and instructional designs applicable in higher education along with the educational technology used. All three courses are constantly being improved based on feedback from students.

Analysis of the case studies presented shows that the combination of different forms of learning content, teaching methods and digital tools facilitates a personalized approach, leads to positive results and creates an overall positive learning experience. As far as the e-learning model is concerned, the blended and especially the HyFlex model allows the course schedule to be adapted to the different situations of the students, which increases the availability of the courses. In synchronous online courses, selecting the right tool is essential to foster active student participation and collaboration during lectures. Teachers should consider paid versions to have appropriate functionalities available. Asynchronous activities offer flexibility, but teachers should constantly engage with students to sustain their motivation and interest.

Innovative teaching approaches like project and work-based learning have a positive impact on student motivation. Students appreciate the chance to apply their acquired knowledge in practical, real-world situations. Engaging students in collaborative learning and problem-based activities enhances their involvement and development of communication, problem-solving, and critical thinking skills. Combining various digital tools in that process also provide more dynamic and thus more interesting learning environment. Combining ongoing formative and summative assessments with gamification is effective for motivating students to actively engage in course activities. The

functionalities offered by Moodle (Merlin) LMS are very useful in automatically providing feedback to students and awarding digital badges, thereby reducing the teacher's workload when working with a considerable number of enrolled students.

It can be concluded that leveraging a blend of diverse learning content, innovative teaching methods, and advanced digital tools has become essential to create a personalized and effective learning experience. These findings also emphasize the importance of acquiring many skills for remote education. The Virtual Edu project is expected to contribute significantly to the development of competencies for remote educators.

Acknowledgements

References

1. Guo, P., Saab, N., Post, L.S., Admiraal, W.: A review of project-based learning in higher education: Student outcomes and measures. Int. J. Educ. Res. 102, 101586 (2020). https://doi.org/10.1016/J.IJER.2020.101586.
2. Owen, C.: Problem-Based Learning. In: Learning and Teaching in Higher Education: Perspectives from a Business School. pp. 139–151. Edward Elgar Publishing Ltd. (2019). https://doi.org/10.4337/9781788975087.00027.
3. Dalrymple, R., Kemp, C., Smith, P.: Characterising work-based learning as a triadic learning endeavour. J. Furth. High. Educ. 38, 75–89 (2014). https://doi.org/10.1080/0309877X.2012.699516.
4. Salmon, G.: E-tivities. Routledge (2013).
5. Vrcelj, A., Hoić-Božić, N., Holenko Dlab, M.: Use of Gamification in Primary and Secondary Education : A Systematic Literature Review. Int. J. Educ. Methodol. 9, 13–27 (2023).
6. Beatty, B. J.: Hybrid-flexible course design. EdTechBooks (2019).
7. Hoic-Bozic, N., Holenko Dlab, M., Mornar, V.: Recommender System and Web 2.0 Tools to Enhance a Blended Learning Model. IEEE Trans. Educ. 59, (2016). https://doi.org/10.1109/TE.2015.2427116.
8. Zuvic-Butorac, M., Roncevic, N., Nemcanin, D., Nebic, Z.: Blended E-Learning in Higher Education: Research on Students' Perspective. In: Strategic Human Resource Management at Tertiary Level. pp. 1–30. River Publishers (2022). https://doi.org/10.1201/9781003357223-1.
9. University of Rijeka, https://uniri.hr/en/home/, last accessed 2024/05/29.
10. Gregory, J., Salmon, G.: Professional development for online university teaching. Distance Educ. 34, 256–270 (2013).
11. Donath, L., Holenko Dlab, M., Mircea, G., Muntean, M., Neamțu, M., Rozman, T., Sîrghi, N.: Investigating perceptions regarding the need for upskilling in remote education: A PLS-SEM analysis. J. Econ. Comput. Econ. Cybern. Stud. Res. 58, (2024).

12. University of Rijeka: Framework for e-course development and evaluation, https://uniri.hr/wp-content/uploads/2021/05/Framework-for-the-Development-and-Quality-Assessment-of-e-Courses.pdf, (2021).
13. VirtualEdu project, https://www.virtual-edu.eu/, last accessed 2024/03/18.
14. European Certification and Qualification Association: Rules and Process Steps for the Certification of ECQA Training Organization. (2010).
15. Merlin LMS, https://moodle.srce.hr/, last accessed 2024/05/29.