ISILA Impact on BMU

“Improving the quality and sustainability of learning using early intervention methods based on learning analytics”

Project No. 2023-1-FI01-KA220-HED-000159757

Co-funded by
the European Union

Project ref. number	2023-1-FI01-KA220-HED-000159757
Project title	**ISILA - Improving the quality and sustainability of learning using early intervention methods based on learning analytics**
Document title	ISILA Impact on BMU
Document Type	Report
Document version	1.0.0
Planned date of delivery	31/3/2026
Language	English
Dissemination level	Public
Number of pages	9
Partner responsible	BMU
Author(s)	Jovana Jović, Olga Pavlović
Revised by:	Sonsoles López-Pernas
Abstract	This document presents the institutional context, implementation, and impact of the ISILA project at Belgrade Metropolitan University. It outlines contributions to intervention design, multimodal data integration, curriculum redesign, and stakeholder engagement, highlighting improvements in teaching practices, research capacity, dissemination activities, and alignment with the university’s long-term digital transformation strategy.
Keywords	BMU, ISILA, Institutional Impact, Erasmus+

Table of Content

1 Institutional Context

Belgrade Metropolitan University (BMU) is a higher education institution that provides both online and traditional instruction across four faculties and offers all three levels of studies: undergraduate, master’s, and PHD programs. The university operates two campuses, in Belgrade and Niš. One of BMU’s key strategic priorities is the development of personalized and data-informed learning, as well as the continuous improvement of teaching quality through advanced digital tools and learning analytics methodologies.

To support these strategic goals, BMU maintains an internal development team responsible for enhancing its proprietary EMS and LMS solutions. Although the university currently uses LAMS as its primary learning management system, valued for its support of DITA learning objects, BMU is actively developing a modern LMS that will allow deeper integration of learning analytics, multimodal data, and intervention methods. In this context, the practices, tools, and models developed through the ISILA project represent an important resource that the institution intends to incorporate into its future systems and teaching processes.

BMU contributions to the ISILA project included the development of intervention methods, teacher training materials, multimodal data integration, and the design of pilot curricula. Piloting was conducted at the Faculty of Information Technologies, where three courses: Object-Oriented Programming 1 and Introduction to Web Technologies, originally designated as the primary pilot courses, and Distributed Systems, which was additionally included due to the extraordinary situation in Serbia and to ensure the proposed number of students defined at the project proposal. The findings from these courses are already proving valuable, as they can be applied to additional courses and integrated into BMU’s evolving LMS. The project aligns directly with BMU’s long-term priorities, particularly its strategic commitment to personalization in e-learning, which is one of the university’s three core strategic goals.

2 Impact on Teaching and Learning Practices

Participation in the ISILA project has led to noticeable improvements in teaching practices at BMU. Course curricula were redesigned to incorporate multimodal learning data, with carefully structured activities and clearly defined points for data collection, something that was previously limited by the constraints of the LAMS platform. Teachers began adopting new approaches, including timely interventions, personalized messages, and elements of active learning to better support students throughout the semester.

Student monitoring became more precise thanks to multimodal dashboards and the integration of data from LAMS, SRL surveys, YouTube analytics, and tools such as csv2xAPI, as well as additional modules like the xAPI-YouTube solution. This enabled earlier recognition of engagement patterns and more effective responses from instructors. Analytical insights helped refine course pacing, redesign activities, and improve future curricula. The adoption of these practices extended beyond the initially involved courses. Findings from the ISILA project encouraged broader interest among faculty members, leading to increased use of video analytics, more structured monitoring practices, and the institutional integration of communication channels such as Discord.

3 Impact on Research and Development

The ISILA project strengthened research and development activities at Belgrade Metropolitan University by providing access to much richer data than before, when analyses were based only on limited LAMS logs. Now, multimodal data are available, including SRL survey results, detailed interaction patterns, video analytics, and xAPI records, which greatly expand the possibilities for research. Although the project was not primarily focused on developing new research skills among teachers, it gave them access to more structured and diverse data that opened new directions for future studies.

These collected data provide a basis for further research on how course content, curriculum design, and video materials influence learning. This will help improve teaching materials and learning practices. The findings are especially important for developing personalized and adaptive learning systems, including future recommendation systems at the university level. BMU plans to integrate all ISILA results into a unified personalized learning system, rather than treating learning analytics as a separate research activity. The project also encouraged new collaboration and idea-sharing with partners from different educational contexts, which further enriched the university’s research environment.

4 Dissemination and Visibility

This section outlines the overall dissemination strategy implemented by Belgrade Metropolitan University (BMU) to ensure broad visibility, institutional embedding, and effective communication of ISILA project activities and results. While detailed

evidence, including links, publication records, and performance indicators, is provided in the dedicated dissemination document, the following overview presents the main dissemination mechanisms and strategic approach adopted at institutional level.

4.1. Publication of results on the ISILA website

All relevant activities, outputs, and interim results generated by BMU were regularly communicated to partner SU, responsible for maintaining and updating the official ISILA project website and central communication channels. This structured coordination ensured consistency of visual identity, clarity of messaging, and alignment with the consortium-wide dissemination strategy.

Through this centralized publication process, BMU’s contributions were integrated into the broader European visibility of the project, ensuring that institutional activities were positioned within the collective framework of ISILA achievements.

4.2. Linking from the institutional website to the ISILA website

BMU established a dedicated project page within its official institutional website under the section “International Cooperation” and the subsection “Projects,” where all international and European initiatives involving the university are systematically presented:

https://www.metropolitan.ac.rs/o-univerzitetu/projekti/isila-improving-the-quality-and-sustainability-of-learning-using-early-intervention-methods-based-on-learning-analytics/

The ISILA project page includes a concise description of the project objectives, information about consortium partners, and a direct link to the official ISILA website. This positioning situates ISILA within BMU’s strategic portfolio of international collaborations and ensures transparent and continuous public access to project information.

By embedding the project within its formal institutional structure, BMU reinforced the visibility of ISILA not merely as a temporary initiative, but as part of its broader commitment to innovation in teaching and digital transformation.

4.3 Promotion through institutional communication channels

Beyond website publication, BMU disseminated ISILA-related activities through its official institutional communication channels, including the university website and social media platforms such as LinkedIn, Facebook, and Instagram.

Major project milestones, such as piloting activities, multiplier events, conference presentations, and transnational project meetings, were communicated to internal

and external audiences. These communication efforts targeted multiple stakeholder groups, including students, academic staff, external educators, and the wider professional community.

The dissemination approach combined informational updates, event announcements, and reporting on implemented activities, thereby ensuring both awareness-raising and demonstration of practical application. All dissemination outputs, including links and engagement metrics, are comprehensively documented in the project’s dissemination record.

4.4 Organization of dissemination and knowledge-transfer activities

In addition to digital communication, BMU organized several knowledge-transfer and dissemination-oriented activities aimed at promoting the project’s innovative teaching methods and learning analytics–based interventions.

Piloting activities were conducted within selected courses, engaging both students and teaching staff in the practical application of developed methodologies. These activities served not only as implementation actions but also as demonstrative examples of pedagogical innovation within the institution.

Following the piloting phase, BMU organized an internal workshop for academic staff to present project methodologies, share lessons learned, and encourage broader institutional uptake. This activity contributed to strengthening internal capacity and fostering interest in the application of learning analytics in other courses.

Furthermore, an external workshop was delivered for educators from other institutions, facilitating exchange of experiences and discussion on the transferability and scalability of ISILA approaches in diverse educational settings.

Together, these dissemination and knowledge-transfer actions enhanced the visibility of the project, supported peer learning, and contributed to the broader promotion of innovative digital teaching practices.

5 Sustainability and Future Use of Results

The methodology developed through the ISILA project will remain a permanent part of course planning and student monitoring processes at Belgrade Metropolitan University, together with all tools used during the project.

BMU will continue using the learning dashboards and multimodal analytics tools, including xAPI-YouTube, csv2xAPI, the LRS, and LAMS integrations, which will be applied across an increasing number of courses. These tools are becoming a regular

part of teaching practice and will support ongoing monitoring of student engagement and progress.

All ISILA results will be integrated into the new BMU LMS, where teachers will be able to select different multimodal data sources and include them in their course design according to the needs of each course. The BMU will continue to rely on analytical insights to improve teaching activities and student support, with the possibility for the system to gradually offer recommendations for appropriate types of interventions based on learning data.

6 Stakeholder Engagement and Collaboration

Belgrade Metropolitan University (BMU) actively facilitated structured interaction among key institutional stakeholders throughout the implementation of the ISILA project. Engagement included academic staff, course coordinators, institutional administrators, and researchers involved in teaching innovation and quality assurance processes.

During the piloting phase, collaboration between teachers and project team members enabled continuous exchange regarding the application of learning analytics–based interventions, interpretation of student data, and pedagogical adjustments. This interaction strengthened internal dialogue on evidence-based student monitoring and supported the development of more structured approaches to identifying and addressing learning risks.

Internal workshops further created a forum for broader academic staff to discuss the practical implications of learning analytics, share concerns, and explore potential integration into additional courses. These discussions contributed to raising institutional awareness of data-informed teaching practices and encouraged cross-departmental knowledge exchange.

Engagement with external educators through dedicated workshops expanded the dialogue beyond the institution, allowing comparison of practices and reflection on transferability in different educational contexts. This external perspective supported critical evaluation of ISILA methodologies and reinforced their relevance for broader adoption.

Through these collaborative mechanisms, BMU strengthened institutional capacity for systematic student monitoring and fostered a culture of dialogue around digital innovation in teaching. The structured involvement of multiple stakeholder groups

contributed to embedding ISILA results within the institutional framework and supported their potential long-term sustainability.