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SUMMIT
SOFIA UNIVERSITY
MARKING MOMENTUM
FOR INNOVATION AND
TECHNOLOGICAL TRANSFER

SOFIA UNIVERSITY -
MARKING MOMENTUM
FOR INNOVATION AND TECHNOLOGICAL TRANSFER

National Recovery and Resilience Plan
OF THE REPUBLIC OF BULGARIA

RESEARCH GROUP
MODERN TECHNOLOGIES

RESEARCH AREA
SOCIAL SCIENCES

GAMIFICATION IN EDUCATION AND AT THE WORKPLACE

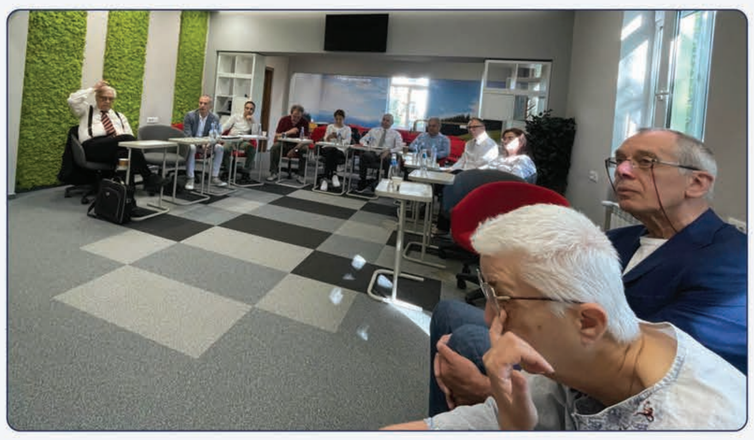
INTRODUCTION

Gamification is transforming education and workplace training by integrating game mechanics into learning environments. Research shows that well-designed gamification enhances motivation, engagement, and knowledge retention, making training more effective and enjoyable.
This current project explores how gamification fosters interactive learning, focusing on its practical application in organizational training. Through case studies, user testing, and real-world experiments, we analyse the benefits, challenges, and impact of gamified learning systems. Our scientific team's findings contribute to the development of innovative, evidence-based training solutions that improve knowledge transfer and employee performance.

PROJECT GUIDELINES

To explore the impact of gamification in education and workplace training, the project follows a structured research approach. It begins with an in-depth analysis of existing studies and real-world applications to identify key success factors. Empirical research, including surveys and interviews, provides insights into user engagement and learning outcomes in gamified environments.

Building on these findings, a prototype gamified learning platform is designed and tested in a real-world setting. The platform's effectiveness is evaluated through user feedback, performance metrics, and qualitative assessments. The findings contribute to refining the model and developing a framework for gamification-driven training. The project results are shared through scientific publications and workshops, promoting knowledge transfer and practical implementation.

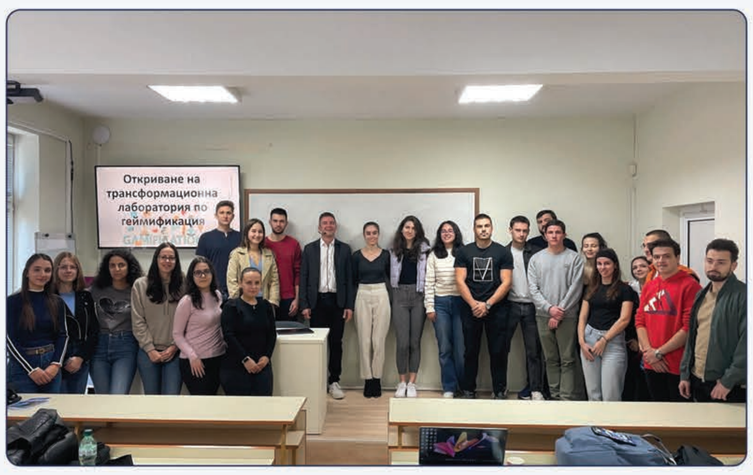


HEAD OF THE RESEARCH TEAM
PROF. NEVIANA KRASTEVA, D.SC.

MEMBERS OF THE TEAM:
PROF. TSVETAN DAVIDKOV, D.SC.
PROF. SONIA MILEVA – BOJANOVA, D.SC.
ASSOC. PROF. NORA MADJAR, PH.D.
ASSOC. PROF. VENETA ANDONOVA ZULETA, PH.D.
CHIEF ASSIST. PROF. ALEKSEY POTEBNYA, PH.D.
PH.D. CANDIDATE RUMEN PETKOV
PH.D. CANDIDATE RAYNA PEHLIVANSKA
PH.D. CANDIDATE SILVIA TONEVA
STUDENT IVAN PENDJERKOV

METHODOLOGY

"Gamification in education and at the workplace" project employed approaches and methods from various scientific disciplines, including marketing, human resource management, education, and information technology. The research methodology integrated analytical, expert, descriptive (survey-based), and qualitative methods (interviews, participant observation) for collecting, processing, and analysing empirical data.
A combination of systematic data identification and content analysis ensured that relevant secondary sources were examined, followed by expert interviews and structured observations to refine findings. Empirical research relied on both statistical and heuristic methods, ensuring validity and reliability through logical cross-checks and classification procedures.
The project also incorporated experimental and cognitive methodologies, including laboratory simulations and field experiments, to validate gamification-based learning frameworks. These methodologies enabled the real-world testing of gamification models, ensuring they were effective, engaging, and applicable to different learning and professional settings.
As an outcome, the project aims to develop a conceptual framework and a prototype gamified learning platform, designed for workplace training to make learning more engaging, interactive, and effective. The team is on a final stage to have it in fact.



RESULTS

The project has made great progress in gamification research for education and at workplace training, demonstrating its potential to boost motivation, engagement, and learning outcomes. As part of this initiative, six academic publications have been produced. Four of these are featured in Pedagogika (journal indexed in WoS), while two publications - Krasteva N., "Analysis of IKEA's Experience in Gamification in Furniture Trade Online and Offline in Bulgaria", have been presented at the 17th International Scientific Conference GREEN DEAL INITIATIVES, May 2024 (indexed in WoS and Scopus), and Davidkov T., Toneva S., "Gamification Approaches in University Education", published in Strategies for Educational and Scientific Policy, Issue 3, 2024 (indexed in WoS) - have already been recognized in international databases. Additionally, the project was presented at the Business Approaches and Marketing in Tourism in the Context of AI and Industry 5.0 conference in Plovdiv University "Paisii Hilendarski" in 2024. The findings were also presented at leading international conferences.
A major achievement was **the launch of the Gamification Transformation Lab at Sofia University**, which has become a hub for collaboration, research, and experimentation. The lab provides a space for students, researchers, and industry experts to explore game-based learning and training models. In addition, the lab has hosted structured experiments that link gamification theory with real-world applications.
The success of this project is largely due to active collaboration and continuous engagement with experts. A series of internal and external meetings with professionals in gamification and digital learning provided critical insights that shaped the research direction. Additionally, the Gamification Workshop, which involved 90 students working in 30 teams, was a powerful demonstration of how game-based learning can be applied to real-world business and educational challenges. Participants integrated AI-driven analytics to refine their strategies, highlighting the synergy between gamification and emerging digital technologies. The results from the workshop served as the foundation for a prepared publication submitted to a journal indexed in Scopus.
Another major achievement was the development and testing of a prototype gamified learning platform, designed to create more engaging and interactive training experiences. The platform was assessed through user feedback, performance analytics, and expert evaluations, showing clear benefits in terms of increased engagement and improved learning efficiency.
Future research will include additional experiments focusing on workplace gamification strategies to further explore its impact on employee motivation and productivity.

You can take advantage of the opportunities created by the project by contacting us: aleksey.potebnia@feb.uni-sofia.bg (project communication administrator)

FUTURE OF THE RESEARCH

This project has demonstrated the transformative potential of gamification in education and at workplace training. Through a combination of empirical research, expert discussions, and real-world applications, we have confirmed that gamification enhances engagement, motivation, and knowledge retention. The research has also identified key gamification elements that improve learning effectiveness, including the role of interactive storytelling, rewards systems, and adaptive learning pathways. These insights have shaped the development of new methodologies and training approaches, ensuring that gamification strategies align with modern educational and corporate learning needs.
Additionally, the findings suggest that gamification not only improves learning outcomes but also fosters collaborative problem-solving and creativity among learners. By incorporating dynamic feedback loops, real-time adaptability, and AI-driven personalization, gamified systems can cater to diverse learning styles and professional demands. The project's comparative studies highlight that organizations utilizing gamified learning platforms report higher engagement rates, improved employee retention, and more effective knowledge transfer compared to traditional training methods.
The Gamification Transformation Lab continues to serve as an innovation hub, ensuring that game-based methodologies remain at the forefront of educational research and professional training. In the future, it is expected to have its own dedicated space, further supporting students in their gamified initiatives. The lab will also expand its collaboration with industry partners and academic institutions, facilitating applied research projects that explore the impact of gamification in different organizational settings.
The next phase of research will focus on integrating gamification into workforce development programs, addressing challenges in employee training, leadership development, and corporate upskilling. Additionally, planned experiments will test the effectiveness of immersive gamification environments, such as virtual and augmented reality applications, in professional learning. These developments will further solidify the lab as a central platform for innovation, where researchers, students, and business professionals co-create solutions tailored for modern educational and corporate needs. Future research will focus on optimizing game-based strategies for specific industries and organizational settings. This includes large-scale comparative studies on the effectiveness of gamification in various professional fields, as well as the development of frameworks for measuring long-term impact. The project's findings will continue to be shared through publications, conferences, and training programs, ensuring that gamification remains a key driver of modern education and professional development.
To deepen the impact of the findings, future studies will incorporate behavioral analytics and real-time performance tracking, allowing for a data-driven approach to gamified learning enhancement. Furthermore, the team aims to explore the role of cognitive load and intrinsic motivation in gamified learning environments, examining how different mechanics influence learner engagement across age groups and professional backgrounds. Additional initiatives will pilot gamification models within international educational institutions, testing their adaptability across diverse cultural and academic settings.
By combining academic research, expert collaboration, and hands-on applications, this project has not only contributed to the field of gamification but has also provided practical solutions that can be adapted across various learning environments. The journey does not end here—this is just the beginning of a broader movement towards more engaging, interactive, and effective education and training methodologies.

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CONTRACT BG-RRP-2.004-0008 FOR THE FINANCING OF PROJECT "SOFIA UNIVERSITY - MARKING MOMENTUM FOR INNOVATION AND TECHNOLOGICAL TRANSFER" UNDER PILLAR 2 "ESTABLISHING A NETWORK OF RESEARCH HIGHER EDUCATION INSTITUTIONS IN BULGARIA", COMPONENT "INNOVATIVE BULGARIA" FROM NATIONAL RECOVERY AND RESILIENCE PLAN PART OF THE PROGRAM TO ACCELERATE ECONOMIC RECOVERY AND TRANSFORMATION THROUGH SCIENCE AND INNOVATION