SHPiK
SHOQATA PROFESIONALE E INFORMATICIENTËVE TË KOSOVËS
KOSOVO INFORMATICS SOCIETY

INSTITUTI PEDAGOGJIK I KOSOVËS

EdTech2023- Policy Recommendations

Shaping the Future of Education in a Digital World

Release Date: December 2023

Contents

1 Advancing AI in Education 3

2 Supporting Digital Evolution in Education 3

3 Innovating Classroom Practices 4

4 Enhancing Teacher Professional Development 4

5 Investing in Digital Educational Infrastructure 6

6 Fostering Skills for the Future 6

7 Promoting Digital Competence and Inclusion 7

8 Embracing AR/VR Technologies 7

9 Strengthening Data Privacy and Online Safety 7

10 Enhancing Coding and Computational Thinking Skills 8

Introduction to EdTech 2023 and Its Imperatives

The EdTech 2023 conference marked a significant milestone in the evolution of educational technology in Kosovo. This conference assembled a diverse group of experts, educators, policymakers, and technology innovators to collaboratively shape the future of education in a rapidly digitalizing world. Recognizing the transformative impact of technology in educational settings, the conference aimed to bridge gaps, foster collaboration, and set a forward-thinking agenda. In the wake of this pivotal event, the ensuing policy recommendations are not merely suggestions but urgent calls to action, aimed at harnessing the power of technological advancements to redefine and enhance the educational landscape. These recommendations cover vital areas such as AI integration, digital infrastructure enhancement, innovative teaching methods, and comprehensive teacher training, collectively forming the cornerstone in building a future-ready educational system.

This document outlines ten critical action areas, ranging from harnessing the potential of AI in education to fostering digital competence and inclusion. Each section delves into specific recommendations, supported by evidence and actionable steps, to guide Kosovo's journey towards a future-proof education system.

These recommendations are a direct outcome of the conference's collaborative efforts and are designed to be actionable steps towards a technologically advanced educational system.

1 Advancing AI in Education

Develop Ethical AI Frameworks: Integrating AI into education is an exciting, yet delicate endeavor. Comprehensive ethical frameworks should be developed to ensure transparency around AI algorithms, mitigate biases, and safeguard student data privacy. These frameworks must include educators, tech experts, and ethicists to ensure a well-rounded and practical approach.

AI Literacy Programs: AI literacy programs should be implemented for educators and students for building a comprehensive understanding and responsible use of AI in learning. The design of these programs should encompass fundamental concepts of AI, its applications in education, ethical considerations, and practical skills for using AI tools, aiming to build a foundational understanding of AI and its implications in the educational sphere.

Initiate Targeted Pilot Projects: Pilot projects should be launched in a select number of schools to explore the integration of AI-driven personalized learning systems. These projects should focus on assessing the impact of such technologies on enhancing student engagement and improving learning outcomes.

Expanding AI Applications in Education: The scope of AI should be extended beyond personalized learning to include the development of adaptive assessments and automated feedback mechanisms. These tools should offer students learning experiences that are tailored to their unique strengths and areas for improvement, providing immediate, personalized feedback.

2 Supporting Digital Evolution in Education

Cultivate a Digital Mindset

A digital mindset should be cultivated in educators and students, essential for adapting to digital advancements. An environment that promotes digital innovation, critical thinking, and ethical digital behavior should be encouraged.

Form Strategic Collaborative Partnerships

Partnerships with tech companies and NGOs should be established to introduce advanced technologies and novel educational methods into classrooms, enriching the learning experience.

Empower Educators

Comprehensive training programs for educators need to be implemented, enhancing their ability to effectively use digital tools in teaching. Workshops on digital tools, innovative teaching methods, and online platforms should be offered, ensuring educators are at the forefront of digital learning.

3 Innovating Classroom Practices

Implement Flipped Learning Methods

Shift from traditional lecture-based teaching to flipped learning models. Schools should actively integrate interactive, pre-recorded video lessons for students to engage with at home. Classroom time should then be repurposed for collaborative activities, problem-solving exercises, and discussions, all facilitated by the teacher. This approach will make classroom interactions more dynamic and focused on application and exploration.

Adopt Gamification Techniques

Introduce gamification in the learning process. Educational authorities should guide schools to incorporate game-like elements and rewards into their curriculum. These elements can include point scoring, competitive scenarios, and achievement badges to boost student engagement and motivation. This method is expected to bring renewed enthusiasm to learning and help students experience the joy of knowledge acquisition.

Creative Lesson Planning Incentives

Recognize and reward teachers who go the extra mile by integrating technology and innovative methods into their lesson plans. Establish grants or awards for exceptional technology-enhanced lesson plans, motivating educators to share their best practices and inspiring their peers. This fosters a culture of creativity and innovation, driving the continuous evolution of teaching and learning practices.

4 Enhancing Teacher Professional Development

Core Elements

Teacher Development Programmes should encompass the following key elements:

a) **Specialized Training in Digital Tools**: Offer targeted training programs for teachers to develop proficiency in using digital tools and resources. This includes training in basic and advanced computer skills, educational software, and online teaching platforms.
b) **Innovative Teaching Methodologies**: Provide workshops and courses on innovative teaching methodologies that leverage technology. This could include blended learning models, flipped classroom techniques, and the use of multimedia in lesson planning.

c) **Ongoing Professional Development**: Revise and refine the existing system of continuous professional development of teachers to ensure it effectively meets the evolving needs of the digital age. This involves:
    - **Streamlining Training Offerings**: Rationalize the array of available trainings to focus more on digital skills and innovative teaching methodologies. This will help prevent the dilution of the program's intent and effectiveness.
    - **Guided Selection Process**: Implement a system that guides teachers towards choosing professional development courses that are most relevant to digital education. This could be achieved through a recommended or mandatory course list, specifically tailored for enhancing digital skills.
    - **Quality Over Quantity**: Shift the emphasis from fulfilling minimum training hours to achieving meaningful professional growth. This might involve setting specific goals for digital skills acquisition and innovative teaching practices within the professional development framework.
    - **Monitoring and Evaluation**: Establish robust monitoring and evaluation mechanisms to ensure the professional development programs are effectively contributing to the enhancement of digital teaching skills. Regular assessments and feedback from teachers, as well as student performance metrics can help in continuously improving the program.
    - **Encouraging Specialization**: Incentivize teachers to specialize in certain areas of digital education. This could include certification programs or additional recognition for those who demonstrate expertise in specific digital skills or teaching methodologies.
d) **Incentivizing Professional Growth**: Recognize and reward teachers who actively engage in professional development and successfully integrate new skills into their teaching practice.
e) **Peer Learning and Mentorship**: Create vibrant networks of mentor teachers who can guide and support their colleagues in integrating technology into their classrooms. Encourage peer-to-peer learning through workshops, online forums, and collaborative projects. By leveraging the collective expertise and experiences of teachers, Kosovo can nurture a strong support system for continuous professional growth and knowledge-sharing.
f) **Support for Curriculum Development**: Assist teachers in developing and adapting curriculum that incorporates digital tools and innovative methodologies, aligning with modern educational standards and student needs.
g) **Access to Resources**: Ensure that teachers have access to a wide range of digital resources and tools to support their teaching and professional growth. This could include subscriptions to educational platforms, access to digital libraries, and availability of tech devices.
h) **Partnerships with Educational Institutions**: Collaborate with universities and educational institutions to offer specialized training and certification programs in educational technology and innovative teaching.
i) **Addressing the Digital Divide**: Ensure that the professional development opportunities are equitable and accessible to all teachers, regardless of their location or the resources of their school.

Focus on Quality

Shift the emphasis from simply meeting minimum training hour requirements to achieving meaningful skills development and pedagogical growth. Set clear goals for professional development programs, focusing on measurable outcomes and demonstrably improved teaching practices. Continuously monitor and evaluate these programs, incorporating feedback from teachers and students to ensure their effectiveness and relevance.

5 Investing in Digital Educational Infrastructure

Closing the Gap: To address the current barrier to digital learning due to a high pupil-to-computer ratio, a substantial investment in digital infrastructure is necessary.

Specific Reduction Targets: The goal is to reduce the pupil-to-computer ratio to 8:1 by 2028, aligning Kosovo with advanced European standards in digital education.

Expanding Technological Resources: This investment should include a variety of digital tools such as computers, tablets, and interactive educational software, ensuring a comprehensive digital learning environment.

Sustainable Maintenance and Support: Establish a system for the maintenance and technical support of these technological resources to ensure their longevity and effective use.

Training for Effective Utilization: Accompany this investment with robust training programs for educators and students, ensuring that the new technology is used to its full educational potential.

Equitable Access Across All Schools: Ensure that these technological advancements are equitably distributed across all schools, paying particular attention to rural or underserved areas to bridge the digital divide.

6 Fostering Skills for the Future

Future-Oriented Curriculum

Equip students with the skills they need to thrive in the rapidly evolving digital landscape. Revise the national curriculum to integrate essential future-oriented skills like logical thinking, computational thinking, critical thinking, problem-solving, collaboration, and digital literacy. This revision should consider:

- **Interdisciplinary Learning**: Embed learning across disciplines, with a focus on technology, digital arts, and sciences. Imagine students applying coding skills to solve math problems or analyzing historical data through virtual reality experiences.
- **Teacher Training Enhancement**: Provide educators with training in innovative teaching methods that promote these skills. Encourage project-based learning, open-ended inquiry, and collaborative problem-solving activities to hone critical thinking and adaptability.
- **Digital Literacy Emphasis**: Ensure all students become proficient in using digital tools safely and responsibly. Develop age-appropriate digital literacy programs that cover topics like online safety, data privacy, and responsible information consumption.
- **Collaborative and Project-Based Learning**: Implementing educational strategies that encourage teamwork, communication, and adaptability.
- **Industry Partnerships**: Establishing collaborations with tech companies for real-world experience and insights.
- **Inclusive Skill Development**: Making skill development opportunities accessible to all students, particularly those from marginalized communities.
- **Lifelong Learning Culture**: Encouraging continuous learning and adaptation among students and educators.

Continuous Curriculum Updates

Establish a mechanism for regularly reviewing and updating the curriculum to remain relevant and adapt to technological and economic changes. This ensures that students acquire the skills most in demand in the ever-changing landscape of the future.

7 Promoting Digital Competence and Inclusion

Bridging the Digital Divide

Ensure equitable access to technology and digital opportunities for all students, regardless of their background or socioeconomic status. Implement initiatives like providing subsidized devices to families in need, partnering with community organizations to offer digital literacy workshops, and establishing dedicated centers with internet access in underserved areas. By breaking down the digital divide, Kosovo can ensure that all students have the chance to benefit from the transformative power of technology.

Inclusive Teaching Practices

Embrace diverse learning styles and abilities in the classroom. Develop instructional methods that cater to students with different needs and learning preferences. Utilize assistive technologies and personalized learning tools to bridge gaps and create an inclusive learning environment where every student feels empowered to participate and succeed.

8 Embracing AR/VR Technologies

Exploring Potential and Pilot Programs

Augmented and virtual reality (AR/VR) hold immense potential for transforming education. Research and pilot programs should be invested to explore the best practices for integrating these technologies into teaching and learning processes. Imagine students conducting virtual field trips to historical sites, immersing themselves in complex scientific concepts through VR simulations, or collaborating on interactive projects in virtual environments. Such innovations can make learning more engaging, immersive, and effective.

Collaboration and Research

It is recommended to partner with universities, research institutions, and technology companies to develop innovative AR/VR learning experiences and conduct rigorous research on their effectiveness. Share best practices and collaborate on curriculum development to ensure the responsible and impactful integration of these technologies into education.

9 Strengthening Data Privacy and Online Safety

Legal Frameworks and Education

Comprehensive legal frameworks and educational programs should be developed to ensure student data privacy and promote safe online behavior. Clear data governance policies should be implemented to educate students and teachers on responsible online practices and equip them with the skills to

navigate the digital world safely and critically. Consider digital citizenship programs that foster ethical online behavior and responsible use of technology.

Collaboration with Experts

Collaborate with cybersecurity experts, child protection organizations, and privacy advocacy groups to develop effective prevention strategies and educational resources. Establish reporting mechanisms for cyberbullying, online harassment, and other online threats to ensure a safe and secure learning environment for all.

10 Enhancing Coding and Computational Thinking Skills

Curriculum Integration

Incorporate coding and computational thinking into the curriculum at all educational levels. This includes teaching fundamental programming languages, fostering problem-solving skills, and developing a strong understanding of computational logic.

Interactive Coding Workshops and Labs

Establish dedicated coding workshops and computer labs in schools. These facilities should provide students with hands-on experience in coding, using tools and platforms that stimulate their interest in computer science and technology.

Professional Development for Educators

Offer specialized training for teachers in coding and computational thinking. These training programs should enable educators to effectively teach coding principles and integrate computational thinking across various subjects.

Partnerships for Enhanced Learning

Form collaborations with tech companies and higher education institutions to bring real-world coding experiences into the classroom. These partnerships can provide resources, guest lectures, and opportunities for student projects.

Promoting Problem-Solving Through Technology

Encourage the application of coding and computational thinking in solving real-world problems. Implement initiatives like coding competitions and hackathons to engage students in creative and collaborative problem-solving activities.