However, challenges remain. Language barriers, time zone differences, and varying legal frameworks require careful management to ensure seamless cooperation. Successful projects often involve comprehensive planning, communication strategies, and mutual respect for cultural and operational differences.

In conclusion, the results of international cooperation in multimedia projects for mobile application creation are profound. The blending of skills, cultures, and technologies fosters innovation and global accessibility while overcoming challenges through effective collaboration. As the world continues to embrace digital transformation, such partnerships will undoubtedly play a vital role in shaping the future of mobile applications and multimedia projects.

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PERSONALIZED LEARNING THROUGH AI: GLOBAL EXPERIENCES AND STUDENT-CENTERED INNOVATIONS

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The thought of tailoring education to each learner’s needs has always intrigued us, but recent advancements in AI have taken that concept to new heights. Between 2019 and 2025, researchers working in Canada, the USA, Japan, and Ukraine have tried different versions of AI-powered personalization. Their findings suggest that new paths are opening up, but I also sense caution in how they address ethics and equitable access.

Canada’s initiatives stand out for linking AI with multicultural education. Henry Johnston, in his research, proposes that AI can promote what he calls «dynamic multiculturalism,» ensuring that cultural and linguistic nuances don’t get overlooked in standardized curricula [4, p. 34–38]. One of the more interesting parts of Johnston’s vision is the plan for AI systems to analyze cultural context before adjusting educational content. He also imagines virtual agents simulating cross-cultural encounters, which might engage students who’ve rarely seen their perspectives validated in the classroom. While I’m personally intrigued by the emphasis on equity, Johnston warns that humans must stay in the loop – no AI system can capture Canada’s diverse identities without careful oversight [4, p. 34–38]. At this point, large-scale initiatives seem limited, but smaller trials in multicultural schools offer a glimpse into how such personalization could reshape learning experiences.

Over in the United States, personalization often reflects a more system-wide focus on scale and data analytics. Aditi Bhutoria’s review compares AI-based methods across the US, India, and China, emphasizing how American solutions merge teacher input with machine-driven analytics [1, p. 2–3]. The research discusses «Human-In-

The-Loop» setups: teachers analyze AI-generated insights about student progress and then modify lesson content accordingly. Tools like Carnegie Learning's Mathia demonstrate how AI can track student performance in real time. I personally appreciate the attempt to lighten teachers' workloads, but the review also raises eyebrows about issues like digital equity. Not every school has top-notch internet, and not every district can afford the same AI platforms. These complications underscore a tension between big ambitions and local funding constraints.

Japan's approach resonates with me, given the country's longstanding tradition of rigorous education paired with test-focused methods. A Juuso Eronen and Saeun Lee's paper details a system that uses large language models (LLMs) to improve English-language practice, framing it around personalized tasks [3, p. 19–20, 23–24]. This pilot includes pre-prompts that adapt content to each student's interests – whether that's anime or sports – and even sets up playful conversations with AI robots. I'm intrigued by their link to Bloom's Taxonomy: rather than just drilling grammar, they weave in advanced cognitive tasks, hopefully breaking away from rote learning patterns. Admittedly, though, the digital divide remains a stumbling block, and teachers have to calibrate these AI-driven dialogues to avoid potential biases in automated scoring.

Ukraine's «New School» reform, set for 2025, reveals a bold ambition to modernize education through AI [5, p. 101–107]. Automation of assessments is a major focus, allowing educators to spot learning gaps on the fly. The plan also foregrounds personalized pacing; some regions of Ukraine have students who missed entire semesters due to war-related disruptions, so flexible AI modules seem downright essential. I admire the initiative's goals of bridging rural-urban divides, yet the authors Iryna Nikitina and Tetyana Ishchenko note that many schools lack up-to-date tech infrastructure [5, p. 101–107]. Training teachers to navigate AI platforms is another hurdle – there's an urgency to build those professional skills so the technology genuinely benefits learners.

Fresh case studies paint a more vibrant picture of AI-driven personalization in the UK. The Harris Federation, for example, introduced ChatGPT and Microsoft Live to adapt classroom materials on the fly, saving teachers countless hours once spent manually revising content for diverse linguistic backgrounds. Oak National Academy followed suit by developing AI-supported lesson planning and quiz creation tools, reportedly freeing educators from five hours of administrative tasks every week. Meanwhile, Canterbury High School tested an AI feedback system for student assignments, ensuring that learners received personalized comments in near-real time [2]. These experiences highlight the UK's eagerness to use AI not just for novelty but as a practical boost to everyday teaching. Yet there's no illusion here that AI alone solves all challenges. Rather, these initiatives underscore the importance of continued collaboration between government and educators to refine ethical guidelines, secure funding, and build teacher confidence in AI's classroom potential.

Global challenges and ethical imperatives in AI education.

Regardless of region, certain challenges echo throughout these studies. Data privacy and algorithmic bias top the list, especially when AI applications collect detailed student information. It's easy to overlook special needs students if the system's algorithms aren't designed with accessibility in mind. Additionally, many authors

highlight that teachers aren't optional in these AI-rich classrooms. I see this as more than just a safety net: educators bring that vital human empathy and ethical judgment.

Infrastructure also matters. Not every nation has stable, high-speed internet coverage, and not every school can purchase cutting-edge devices. Japan's generative AI experiments might feel worlds apart from the logistical hurdles of Ukraine's post-conflict regions, yet both aim to ensure that technology fosters, rather than fragments, learning opportunities.

From my vantage point, AI feels like a thrilling spark in educational reform, but it's also a fragile one. If local governments, private companies, and educators fail to collaborate on ethical standards and robust teacher training, we risk perpetuating inequities. On the other hand, if AI is shaped with empathy and inclusivity in mind, the potential is enormous. Public-private partnerships could fund widespread digital upgrades. Teacher workshops might deepen understanding of AI's intricacies, so nobody treats it as a black box. Above all, we need a commitment to «student-centered» design. To me, that means making sure technology bends toward the diverse realities of learners, not the other way around.

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EDUCATIONAL STRATEGIES FOR TRAINING IT SPECIALISTS IN THE CONTEXT OF THE STEAM APPROACH

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The information technology sector is one of the fastest-growing and most dynamic fields in the modern world. However, the rapid evolution of digital tools, programming paradigms, and user expectations creates significant challenges for higher education. Traditional educational models often fall short in preparing students for this ever-changing landscape. In this context, the STEAM (Science, Technology, Engineering, Arts, Mathematics) approach emerges as an effective strategy to equip IT