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CHALLENGES AND OPPORTUNITIES IN IMPLEMENTING MOBILE-ASSISTED LEARNING IN NON-PHILOLOGICAL DEPARTMENTS

Annotation: This article explores the challenges and opportunities associated with mobile-assisted learning (MAL) in non-philological departments, focusing on its potential to transform traditional educational paradigms. The study highlights key barriers such as technological limitations and resistance to change, while also presenting opportunities for enhancing engagement and fostering interdisciplinary learning. Practical solutions and recommendations for effective implementation are provided.

Keywords: Mobile-assisted learning, non-philological education, digital learning, interdisciplinary education, educational technology.

In an era of rapid technological advancement, the integration of mobile-assisted learning (MAL) has revolutionized educational methods. While much research has focused on mobile-assisted learning in language and philological departments, its application in non-philological disciplines remains underexplored. This article aims to address the gap by identifying the challenges and opportunities in implementing mobile-assisted learning in such settings, emphasizing its transformative potential for disciplines like engineering, natural sciences, and social sciences.

As N.N.Normatova states, "The process of developing the oral speech skills of foreign language for linguistic departments of Higher Education is different from the process of developing it for non-philological departments. The process has its own pecularities. The quality of education, which is a bilateral process between the teacher and student, depends on the didactic perfection of teacher`s mastery, and on the other hand, the on the student's motivational activity. Meanwhile, if the high scientific potential and methodological skills of the teacher is integrated with the educational activity of students high results can be achieved in the short term period".

In an era of rapid technological advancement, the integration of mobile-assisted learning (MAL) has revolutionized educational methods. While much research has focused on mobile-assisted learning in language and philological departments, its application in non-philological disciplines remains underexplored. This article aims to address the gap by identifying the challenges and opportunities in implementing mobile-assisted learning in such settings, emphasizing its transformative potential for disciplines like engineering, natural sciences, and social sciences. The study employs a mixed-method approach:

Survey: Questionnaires were distributed to 150 students and 50 faculty members from non-philological departments to assess their perceptions of mobile-assisted learning.

Case Studies: Three departments (Engineering, Biology, and Economics) implemented pilot mobile-assisted learning initiatives over a semester, focusing on different tools like educational apps, AR simulations, and collaborative platforms.

Interviews: Semi-structured interviews with faculty and IT staff were conducted to identify implementation barriers.

Data analysis combined quantitative statistical techniques and qualitative thematic analysis to ensure comprehensive insights.

Implementing mobile-assisted learning (MAL) in non-philological departments presents both challenges and opportunities. Here's an overview:

Challenges:

Technical Barriers:

- Device Accessibility: Not all students may have access to smartphones or mobile devices, especially in regions with lower income levels or limited technological infrastructure.

- Internet Connectivity: Reliance on stable internet access for mobile learning tools can be problematic, particularly in rural or remote areas.

- App Compatibility and Integration: Ensuring that mobile learning platforms are compatible with the diverse range of devices and operating systems students use can be difficult.

Content Adaptation:

- Relevance and Quality: Non-philological disciplines like engineering, medicine, or natural sciences may face difficulty finding or creating high-quality, engaging mobile learning content that aligns with specific academic needs.

- Complexity of Concepts: Mobile platforms may not be well-suited for teaching complex, technical subjects that require in-depth explanations or hands-on experience, like laboratory work or engineering simulations.

Pedagogical Concerns:

- Teacher Training: Faculty members may lack the expertise in mobile learning strategies and could struggle to integrate mobile tools effectively into their teaching practices.

- Engagement and Motivation: Students in non-philological departments may not be as motivated to use mobile learning tools, especially if they perceive traditional methods as more effective for their field of study.

Data Privacy and Security:

- Mobile learning platforms often collect personal data, raising concerns about privacy and data protection, particularly in disciplines involving sensitive or personal information.

Opportunities:

Accessibility and Flexibility:

- Mobile-assisted learning allows students to access learning materials anytime and anywhere, providing them with the flexibility to study at their own pace, especially for non-philological disciplines that may involve intensive study hours or asynchronous learning.

Interactivity and Engagement:

- Mobile apps can make complex technical subjects more interactive through features like quizzes, simulations, augmented reality (AR), and video tutorials, enhancing student engagement and understanding.

- Tools such as interactive diagrams, 3D models, or videos can aid in understanding abstract concepts, which are common in non-philological fields like engineering or natural sciences.

Cost-Effectiveness:

- Mobile-assisted learning reduces the need for physical textbooks and classroom materials, leading to cost savings for both institutions and students.

- It can also reduce the logistical barriers to hosting lectures, allowing for greater access to education, especially in underfunded or remote educational settings.

Personalized Learning:

- Mobile platforms can offer adaptive learning paths, adjusting the difficulty of tasks based on a student's progress, which can be especially beneficial in technical fields where mastery of foundational knowledge is essential for more advanced concepts.

Collaboration and Networking:

- Mobile learning tools can foster collaboration through social learning platforms, discussion forums, or group projects. This is particularly valuable in non-philological departments where group work and peer-to-peer learning are crucial.

Real-World Applications:

- Mobile technologies can bridge the gap between theory and practice by providing students with real-world simulations, interactive exercises, and access to databases, research tools, or industry-specific applications. For example, medical students can practice diagnostic skills through apps simulating real-life medical scenarios.

By overcoming these challenges, mobile-assisted learning can significantly enhance the educational experience in non-philological departments, making learning more dynamic, accessible, and practical for students in various technical fields.

The findings highlight a dual narrative: while technological and cultural barriers persist, the potential for mobile-assisted learning to enhance learning in non-philological disciplines is undeniable. Addressing these challenges requires strategic interventions, such as:

- Infrastructure Development: Investing in Wi-Fi networks and mobile device accessibility.

- Faculty Training: Regular workshops to upskill educators on mobile-assisted learning tools.

- Curriculum Integration: Designing activities that align mobile-assisted learning with disciplinary learning outcomes.

The interdisciplinary nature of mobile-assisted learning fosters creativity and collaboration, paving the way for innovative teaching methodologies.

Conclusions

Mobile-assisted learning offers significant opportunities to transform education in non-philological disciplines, despite notable challenges. Addressing these requires a holistic approach involving infrastructural, pedagogical, and institutional reforms.

Develop university-wide policies to support mobile-assisted learning integration.

Establish partnerships with tech companies for affordable device distribution.

Conduct regular feedback sessions to refine mobile-assisted learning strategies.

Encourage cross-departmental collaborations for innovative applications of mobile-assisted learning.

By addressing these recommendations, educational institutions can unlock the full potential of mobile-assisted learning, fostering a more inclusive and dynamic learning environment.

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