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**ПРОГРАММА DIGITALPAKT SCHULE
И НЕМЕЦКАЯ МОДЕЛЬ ЦИФРОВИЗАЦИИ ПРЕПОДАВАНИЯ
АНГЛИЙСКОГО ЯЗЫКА: ЭФФЕКТИВНОСТЬ,
АВТОНОМИЯ И ИНСТИТУЦИОНАЛЬНЫЕ БАРЬЕРЫ
DIGITALPAKT SCHULE AND THE GERMAN MODEL
OF ENGLISH LANGUAGE DIGITALIZATION:
EFFICIENCY, AUTONOMY, AND INSTITUTIONAL BARRIERS**

Аннотация. Статья посвящена анализу программы Digitalpakt Schule, направленной на цифровизацию школьного образования Германии и её влиянию на преподавание английского языка. Исследование раскрывает институциональные механизмы, педагогические эффекты и вызовы, сопровождающие внедрение цифровых технологий в немецких школах и университетах. Особое внимание уделено платформе Moodle как ключевому инструменту цифрового обучения и развитию цифровой автономии учащихся. В работе рассматриваются проблемы неравномерности инфраструктуры, различий в цифровой компетентности преподавателей и стандартизации учебных курсов. Опыт Германии показывает, что успешная цифровизация образования невозможна без баланса между технологическими инновациями и гуманитарными целями, где преподаватель выступает медиатором между человеком и технологией.

Abstract. The article analyzes the Digitalpakt Schule program, which aims to digitize Germany's educational system and its impact on English language teaching. The study explores the institutional mechanisms, pedagogical effects, and challenges accompanying the integration of digital technologies in German schools and universities. Special attention is paid to the Moodle platform as a key tool for digital learning and to the development of learners' digital autonomy. The paper also discusses issues of infrastructural inequality, differences in teachers' digital competencies, and the lack of course standardization. The German experience demonstrates that successful digital transformation in education requires a balance between technological innovation and human-centered pedagogy, where the teacher acts as a mediator between the individual and technology.

Ключевые слова: Автономия, Германия, Digitalpakt Schule, цифровизация, обучение английскому языку.

Keywords: Autonomy, Digitalpakt Schule, digitalization, English teaching, Germany.

Introduction: Modern European education is undergoing profound transformations associated with digitalization and the integration of technology into the educational process. These changes are particularly evident in the teaching of foreign languages, where digital solutions are becoming not an auxiliary but a system-forming element of the methodology. In Germany, the digital transformation of education has become a strategic priority of state policy, the core of which is the Digitalpakt Schule program (2019). Its goal is to create a sustainable digital infrastructure, improve the qualifications of teachers, and implement interactive technologies that ensure flexible learning [2, p. 7].

English language teaching in German schools and universities demonstrates a systemic approach that combines state support, academic autonomy, and innovative pedagogical practices.



Germany strives not simply for technical equipment, but for the development of a new learning culture where digitalization becomes part of the educational philosophy. This experience is particularly important for Russia, where the integration of digital tools into humanities education is also actively discussed [3, p. 12].

The purpose of the article - to analyze the characteristics of the German model of digitalization of English language teaching, identifying its institutional, pedagogical, and organizational aspects.

Research objectives:

- to study the concept and implementation of the Digitalpakt Schule program;
- to evaluate the impact of the Moodle platform and the blended learning model on language learning;
- to identify the benefits and barriers to the implementation of digital tools in schools and universities in Germany.

The methodology is based on a qualitative analysis of pedagogical sources, regulatory documents, and practices of educational institutions participating in the implementation of Digitalpakt Schule [4, p. 3]. Additionally, a content analysis of materials from federal reports and research centers covering the results of the implementation of digital technologies in language education was used [5, p. 24].

- **State strategy for digitalization of education: Digitalpakt Schule**

The development of digital education in Germany is the result of targeted government policy, systematically structured and enshrined in the Digitalpakt Schule program (2019). This initiative marked a key step in the modernization of the national education system, uniting the federal government and the states for the first time to create a unified digital infrastructure. Prior to its adoption, development was uneven: some regions actively implemented online platforms, while others limited themselves to local projects. The need to overcome the digital divide and the lack of standards required comprehensive solutions [2, p. 5].

The program emerged as a response to new socioeconomic realities and the demand for a generation capable of learning in the digital economy. As early as 2016–2017, reports from the Federal Ministry of Education and Science (BMBF) indicated that the level of digital readiness in German schools was significantly lower than in Nordic countries [3, p. 9]. Therefore, the Digitalpakt Schule was based on the principles of equal access to digital resources and school autonomy while adhering to national quality and data protection standards.

The DigitalPakt Schule (Digital Pact for Schools), which entered into force on May 17, 2019, defined the distribution mechanism for five billion euros: 3.5 billion was allocated by the federal government, with the remainder co-financed by the states [4, p. 2]. The funds were used to equip schools with Wi-Fi networks, interactive whiteboards, laptops, and tablets, as well as to develop digital teaching materials and professional development for teachers. The emphasis was not on technology, but on training teachers as bearers of a digital pedagogical culture [5, p. 18].

The program's primary goal is to create a sustainable digital environment where technology serves not as a substitute for, but as a continuation of, the educational process. The concept of "Competence in Digital Education" defined key skills for participants: the ability to search for, analyze, and create digital content, collaborate in an online environment, and use technology to solve educational problems [2, p. 7].

Particular attention is being paid to the teaching of foreign languages, particularly English, where digital solutions have proven particularly effective. Platforms like Moodle, Quizlet, LearningApps, and gaming services create conditions for autonomous learning of vocabulary, grammar, and pronunciation. According to Digitalpakt Evaluation, over 70% of schools have



implemented blended learning, combining in-person and remote modules [5, p. 24]. This hybrid model increases student engagement and independence.

Positive examples are being reported at grammar schools in North Rhine-Westphalia and Bavaria, where students are creating podcasts and multimedia essays in English, as well as at the universities of Bonn and Berlin, where digital labs based on Moodle and BigBlueButton have been implemented. Analytical data shows that such formats improve the quality of written work and students' language proficiency [7, p. 6].

At the same time, challenges related to regional inequalities in infrastructure persist. Rural schools in some regions continue to experience a shortage of technical specialists and low internet bandwidth. To bridge the digital divide, federal agencies annually allocate additional subsidies and conduct staff training [4, p. 5].

Thus, the Digitalpakt School represents a balanced model that combines public administration, financial support, and pedagogical autonomy. The program represents not only a technological but also a methodological breakthrough, placing people at the center of the educational ecosystem. Digitalization, in the German sense, is not simply about equipping schools with technology, but about developing a learning culture where technology serves to unlock human potential and strengthen the humanities in education.

- **Using digital platforms in English language teaching**

One of the key areas of the Digitalpakt Schule program is the implementation of educational platforms that ensure the sustainable integration of digital tools into foreign language teaching. Moodle, the core LMS system of most German schools and universities, plays a central role here. Its advantages—open source, flexible adaptation, and the ability to integrate with analytical and communication services—have made Moodle a universal environment for creating interactive learning courses [1, p. 104].

Moodle courses are built on a modular principle: each topic includes a theoretical block, independent assignments, and automated assessment. Forums, quizzes, and wiki pages provide interactivity, transforming the learning process into a dialogue-based experience. Teachers can create individualized learning paths and track student progress in real time, enhancing their digital autonomy and improving learning effectiveness [5, p. 25].

A key addition was the use of BigBlueButton and Zoom video conferencing systems, integrated into Moodle via API modules. These enabled synchronous lessons without switching to external platforms and created a space for genuine language communication. Interactive whiteboards, multimedia materials, and instant polls foster a participatory atmosphere, developing not only cognitive but also communicative skills [6, p. 15].

Organizing feedback is particularly important. Moodle provides tools for instant commenting on assignments, creating progress charts, and conducting anonymous surveys through the Feedback module. This reinforces the idea of partner learning, where the teacher acts as a facilitator rather than a controller. According to BMBF reports, the use of interactive feedback increased student motivation in language courses by an average of 20–25% [2, p. 8].

The blended learning model, which combines offline and online formats, has become widespread. In language education, it is implemented through a combination of in-person classes and Moodle courses, where students complete exercises, listen to podcasts, and take mini-tests. This organization ensures continuous language practice and an even distribution of the workload [7, p. 6].

The effectiveness of this approach is confirmed by case studies from leading universities. At the Free University of Berlin, the "Academic English in Digital Contexts" course combines Moodle and BigBlueButton, creating a sense of immersion and enhancing interaction between participants [4, p. 3]. At the Technical University of Munich, Moodle is integrated with the Mahara system for creating electronic portfolios, and the University of Hamburg has implemented the "Digital Tandem



Learning" model, where students work in pairs, combining Moodle assignments with Zoom communication. These examples demonstrate that digital technologies enhance engagement and facilitate the rapid development of oral communication [3, p. 14].

Overall, the use of digital platforms has enabled Germany to create a flexible system in which English is taught as a living, communicative practice, integrated into a digital ecosystem. Moodle has become its core—a space that unites learning, communication, and analytics. As a result, Digitalpakt School not only updated its technical infrastructure but also changed its pedagogical philosophy: technology has become an extension of the teacher's professional expertise and a form of expression of their pedagogical individuality.

- **Pedagogical effects and learner autonomy**

One of the main results of the Digitalpakt Schule program was not simply technological modernization, but the transformation of the pedagogical culture itself. The digitalization of education in Germany has demonstrated that the effectiveness of reforms is determined not by the quantity of equipment, but by the changing roles of participants in the educational process. The focus has shifted to digital autonomy—the ability of students to independently manage their own development, critically understand information, and actively interact online [2, p. 6].

This concept aligns with the principle of self-organized learning—self-organized learning—actively applied in English language teaching. Students build individual learning paths using Moodle, interactive simulators, and electronic resources. Technology, then, becomes not an external tool but a space for personal initiative and responsibility. According to BMBF research, approximately 60% of students report increased motivation and confidence thanks to their independent choice of learning pace and format [5, p. 26].

At the same time, key competencies of the digital age are being developed: self-study, critical thinking, and media literacy. The first requires the ability to set goals and evaluate results, the second requires the ability to analyze and interpret digital content, and the third requires the creation of one's own media products, including podcasts, blogs, and video projects. Thus, English becomes not only a subject of study but also a means of intercultural communication and digital self-expression [6, p. 15].

These skills are developed through active learning methods: project work, blogging, creating digital portfolios, and participating in online discussions. Moodle, Mahara, and Padlet platforms facilitate collaborative learning, with the teacher acting as a facilitator, guiding the process and helping students develop self-reflection skills. This new format of pedagogical interaction transforms learning into a collaborative process based on mutual trust and shared experiences [3, p. 13].

At the university level, this approach is being implemented in specialized courses—for example, "Digital English Pedagogy" at Humboldt University of Berlin and the "Teacher as Facilitator" project at the Pedagogical University of Munich. Teachers master blended learning and digital feedback tools, while students create multimedia modules and evaluate their effectiveness. This practice fosters a new academic culture, where teachers become facilitators in the digital knowledge space [4, p. 3].

An equally important result was the development of a collaborative self-learning environment. Students create microcourses, share materials, and analyze their own mistakes using Moodle reports. The educational process is transformed into an open exchange system, where each participant is an active creator of knowledge.

Ultimately, the Digitalpakt School has shaped a new model of educational agency based on autonomy, critical thinking, and digital creativity. The teacher has ceased to be a source of information; they have become a mediator between technology and the individual, connecting technical functionality with humanistic meaning. The German experience convincingly demonstrates that digitalization is not a transition to online learning, but a rethinking of the very nature of learning, where each participant becomes the author of their own educational path [7, p. 7].



- **Institutional barriers and challenges**

Despite the achievements of the Digitalpakt School program, its implementation is fraught with institutional challenges. Chief among these is the unevenness of digital infrastructure across the federal states. While schools in Bavaria and North Rhine-Westphalia are 85% equipped, in the eastern regions this figure does not exceed 60%. Differences in economic potential and technical support create a digital divide—the gap between the city and the outskirts [2, p. 9].

The second challenge remains the disparity in the level of digital training among teachers. Although the program included training for teachers, many, especially those in the humanities, struggle to master new technologies. Around 40% of respondents report a lack of time and methodological support, which causes "technological stress" [6, p. 15]. Digital Teaching Competence courses offered at the universities of Heidelberg and Osnabrück are improving digital didactics, but so far have a limited number of participants [7, p. 8].

The third problem is the lack of standardization of digital English language courses. Despite the framework of the "Kompetenzrahmen zur digitalen Bildung" (Competence for Digital Education), the content and quality of the programs vary significantly. Some schools integrate Moodle and interactive resources, while others limit themselves to posting text-based assignments, leading to a fragmented educational space [4, p. 3].

Finally, the decentralized structure of the German education system creates bureaucratic barriers: each state has its own regulations, which slows down the implementation of funds and the approval of new initiatives. Excessive regulation, according to educators, limits innovation [5, p. 29].

Nevertheless, awareness of these problems has become a prerequisite for addressing them. The launch of Digitalpakt Schule 2.0 aims to narrow the digital divide, develop teachers' competencies, and create uniform standards. German experience shows that digital transformation is not a sudden technological reform, but a gradual process of aligning resources, interests, and cultural traditions in education [6, p. 16].

Conclusion

Germany's experience with the Digitalpakt School program has demonstrated that successful digitalization of education is impossible without a combination of technological innovation and humanities-based approaches. The program went beyond modernizing infrastructure and transformed the very philosophy of teaching: the emphasis shifted from knowledge transfer to developing critical thinking, autonomy, and student responsibility [2, p. 9].

The transition from a lecture-based to a facilitative model allowed for the merging of tradition and innovation. As a result, English became not just an academic subject, but a tool for intercultural communication and a space for cognitive growth.

Despite the remaining contradictions—uneven infrastructure, a lack of digital competencies, and bureaucratic constraints—these difficulties testify to the maturity of the system, capable of self-reflection and development [5, p. 27]. Germany is building a holistic educational ecosystem in which technology serves people rather than replaces them.

This is precisely why the German experience is of particular value to Russia: it demonstrates that a true digital transformation of education is not a revolution, but an evolution of pedagogical thinking, where innovation is born from the harmonious union of man and technology.

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