AI-SUPPORTED AND DIGITAL TOOLS IN FORMING AUTOMETODOLOGICAL COMPETENCE OF FUTURE EFL TEACHERS

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Abstract. *This article explores the role of AI-supported and digital tools in developing the automethodological competence of future teachers of English as a Foreign Language (EFL). In the context of rapid digitalization and the integration of artificial intelligence in education, teacher autonomy and methodological self-regulation have become essential competencies. The study analyzes theoretical foundations of automethodological competence, examines modern AI-based digital tools, and highlights their pedagogical potential in pre-service teacher education. The article concludes that the effective integration of AI-supported tools significantly enhances reflective practice, independent decision-making, and professional growth of future EFL teachers.*

Keywords: *artificial intelligence, digital tools, autemethodological competence, EFL teachers, teacher education.*

Annotatsiya. *Ushbu maqola ingliz tilini chet tili sifatida (EFL) o‘qituvchi bo‘lishga tayyorlanayotgan bo‘lajak o‘qituvchilarda avtomethodologik kompetensiyani shakllantirishda raqamli vositalar hamda sun’iy intellektga asoslangan vositalarning rolini o‘rganadi. Ta’limda jadal raqamlashtirish va sun’iy intellektning integratsiyalashuvi sharoitida o‘qituvchi avtonomiyasi va metodologik o‘zini-o‘zi boshqarish muhim kompetensiyalarga aylanmoqda. Tadqiqotda avtomethodologik kompetensiyaning nazariy asoslari tahlil qilinadi, sun’iy intellektga asoslangan zamonaviy raqamli vositalar ko‘rib chiqiladi hamda ularning bo‘lajak o‘qituvchilarni tayyorlashdagi pedagogik salohiyati yoritib beriladi. Maqolada sun’iy intellekt bilan qo‘llab-quvvatlanadigan vositalarning samarali integratsiyasi bo‘lajak EFL o‘qituvchilarining reflektiv amaliyoti, mustaqil qaror qabul qilish qobiliyati va kasbiy rivojlanishini sezilarli darajada oshirishi xulosa qilinadi.*

Kalit so‘zlar: *sun’iy intellekt, raqamli vositalar, avtomethodologik kompetensiya, EFL o‘qituvchilari, pedagogik ta’lim.*

Аннотация. *Данная статья исследует роль цифровых инструментов и инструментов, поддерживаемых искусственным интеллектом, в формировании автометодологической компетентности будущих учителей английского языка как иностранного (EFL). В условиях стремительной цифровизации и интеграции искусственного интеллекта в образование автономность учителя и методологическая саморегуляция становятся ключевыми компетенциями. В исследовании анализируются теоретические основы автометодологической компетентности, рассматриваются современные цифровые инструменты на базе ИИ и подчеркивается их педагогический потенциал в подготовке будущих учителей. В статье делается вывод о том, что эффективная интеграция инструментов, поддерживаемых ИИ, существенно повышает уровень рефлексивной практики, самостоятельного принятия решений и профессионального развития будущих учителей EFL.*

Ключевые слова: *искусственный интеллект, цифровые инструменты, автометодологическая компетентность, учителя EFL, педагогическое образование.*

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Introduction. The rapid development of digital technologies and artificial intelligence (AI) has profoundly transformed the field of education, with particularly noticeable changes in foreign language teaching and learning. In today's educational environment, future teachers of English as a Foreign Language (EFL) are expected to meet increasingly complex professional demands. They must not only demonstrate a high level of language proficiency and possess solid pedagogical and methodological knowledge, but also be capable of independently planning, organizing, and evaluating the teaching process. This includes the ability to consciously select appropriate teaching methods, adapt them to diverse learning contexts, and critically assess their effectiveness. Such professional independence and methodological awareness are commonly described by the concept of automethodological competence.

Literature review. Research on teacher autonomy and methodological competence has been extensively discussed in the works of Benson (2011) and Little (2007), who emphasize reflective practice and self-regulated professional development as core components of effective language teaching. Richards (2017) and Borg (2015) highlight the role of teacher cognition and informed methodological decision-making in EFL teacher education. The integration of artificial intelligence and digital technologies in education is explored by Holmes et al. (2019) and UNESCO (2021), who underline the potential of AI to support personalization, feedback, and data-driven pedagogy. These studies provide a solid theoretical foundation for examining how AI-supported digital tools contribute to the development of automethodological competence in future EFL teachers.

Research methodology. This study employs a qualitative and theoretical research design based on analytical and descriptive methods. Relevant scientific literature, policy documents, and international frameworks related to teacher autonomy, AI in education, and EFL teacher training were systematically reviewed and analyzed. AI-supported and digital tools were examined in terms of their pedagogical functions and potential contribution to automethodological competence. The findings were synthesized to draw general conclusions and pedagogical implications.

Discussion and results. In modern teacher education, autonomy is regarded as a key professional attribute that determines a teacher's readiness for lifelong learning and continuous professional development. An autonomous teacher is able to reflect on their own teaching practices, identify areas for improvement, and make informed methodological decisions without relying solely on external guidance. The integration of AI-supported and digital tools into teacher education provides new and powerful opportunities for fostering this competence. These tools enable personalized learning trajectories, support reflective practice through feedback and analytics, and allow future teachers to experiment with various instructional strategies in a safe and flexible digital environment.

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Moreover, AI-based technologies facilitate data-driven pedagogical decision-making by offering insights into learners' progress, engagement, and needs. As a result, pre-service teachers can develop a deeper understanding of how methodological choices influence learning outcomes. Therefore, investigating the role of artificial intelligence and digital tools in shaping automethodological competence is both timely and highly relevant. Such research contributes to improving teacher education programs and prepares future EFL teachers to effectively respond to the challenges of an increasingly digitalized and technologically advanced educational landscape.

The Concept of Automethodological Competence

Automethodological competence can be defined as a teacher's ability to independently plan, implement, analyze, and improve teaching methods based on learners' needs, educational goals, and contextual factors. For future EFL teachers, this competence includes: independent lesson planning and material selection; reflective evaluation of teaching practices; adaptability to diverse learning environments; continuous professional self-development.

Autonomy in methodology empowers teachers to move beyond rigid instructional frameworks and adopt flexible, learner-centered approaches. Developing this competence during pre-service training is crucial for preparing teachers for real classroom challenges.

The Role of AI in Teacher Education

Artificial intelligence has become a powerful driver of innovation in education. AI technologies such as machine learning, natural language processing, and adaptive systems provide intelligent support for teaching and learning processes.

In teacher education, AI contributes to: personalized learning pathways; automated feedback and assessment; learning analytics and performance tracking; simulation of real teaching scenarios.

These features help future EFL teachers develop self-awareness, critical thinking, and methodological independence.

AI-Supported Digital Tools for EFL Teachers

A wide range of AI-supported and digital tools play a significant role not only in developing automethodological competence but also in **enhancing the effectiveness of teaching and learning in EFL classrooms.** These tools support teachers in planning, instruction, assessment, and classroom interaction, while also improving learner engagement, personalization, and learning outcomes. For future EFL teachers, understanding how to pedagogically apply these tools is essential for effective and autonomous teaching practice.

1. Intelligent Learning Platforms. Intelligent learning platforms, including adaptive learning management systems, support teaching by organizing instructional content, monitoring learner progress, and facilitating communication between teachers and

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students. Digital platforms such as **Moodle, Canvas, Blackboard**, and **Google Classroom** help teachers manage courses, distribute materials, assign tasks, and track performance efficiently. AI-based analytics assist teachers in identifying learning gaps, differentiating instruction, and providing timely support. As a result, teaching becomes more structured, responsive, and learner-centered, while future teachers develop confidence in managing the instructional process independently.

2. AI-Based Language Assessment Tools. AI-based assessment tools significantly support teaching by reducing the time required for evaluating learners' work and by providing consistent, immediate feedback. Tools such as **Grammarly, Write & Improve, Speechace**, and **ELSA Speak** help teachers monitor learners' language development in writing and speaking. These tools enable teachers to focus more on instructional guidance and individualized support rather than routine correction. For future EFL teachers, such tools model effective assessment practices and help them design balanced, formative, and summative evaluation strategies.

3. Chatbots and Virtual Assistants. Chatbots and virtual assistants contribute to teaching by creating additional opportunities for communication practice beyond the classroom. Tools such as **Duolingo Bots** allow learners to practice dialogues, ask questions, and receive explanations at their own pace. For teachers, these tools serve as supplementary instructional resources that support language practice, vocabulary development, and conversational fluency. Pre-service teachers learn how to integrate chatbots into lessons to encourage learner autonomy and continuous practice.

4. Digital Lesson Design Tools. Digital lesson design tools assist teachers in creating engaging, interactive, and visually rich lessons. Platforms such as **Canva for Education, Nearpod, LessonUp**, and **Genially** help teachers present content clearly, incorporate multimedia elements, and design interactive activities such as quizzes and discussions. These tools enhance student motivation and participation, while also enabling teachers to adapt lessons to different proficiency levels. For future teachers, lesson design tools support experimentation, creativity, and reflective evaluation of teaching effectiveness.

5. Mobile Educational Applications. Mobile educational applications support teaching by extending learning beyond the classroom and promoting continuous language practice. Apps such as **Duolingo, Quizlet, Memrise, Busuu**, and **BBC Learning English** help reinforce vocabulary, grammar, pronunciation, and listening skills through short, interactive tasks. Teachers can use these apps for homework, revision, and self-study activities, thereby increasing learner engagement and responsibility. For future EFL teachers, mobile apps demonstrate effective strategies for blended and mobile-assisted learning and support the integration of technology into everyday teaching practice.

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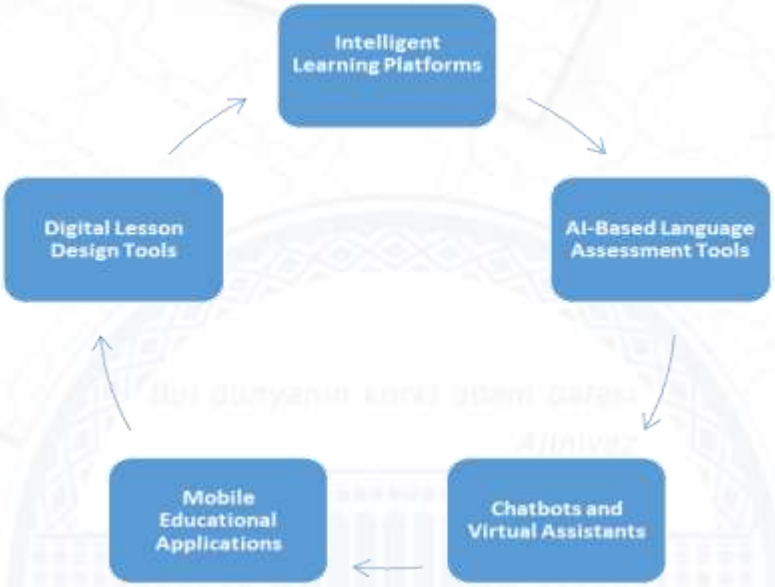
Overall, the combined use of intelligent platforms, AI-based assessment tools, chatbots, digital lesson design tools, and mobile educational applications enhances teaching quality by making instruction more personalized, interactive, and efficient. At the same time, these tools help future EFL teachers develop automethodological competence, autonomy, and confidence in making pedagogically sound decisions in diverse teaching contexts.



Developing Reflective Practice through Digital Tools

Reflection is a core component of automethodological competence, as it enables future teachers to critically examine their teaching practices and make informed methodological decisions. Digital tools such as **e-portfolios, e-journals, blogs, and AI-supported reflection platforms** create structured spaces for continuous professional reflection. Through these tools, pre-service teachers are encouraged to systematically document their teaching experiences, lesson plans, classroom interactions, and assessment practices. This documentation allows them to track their professional growth over time and develop a habit of reflective inquiry.

In addition, digital reflection tools support deeper analysis of both successes and challenges encountered during teaching practice. AI-supported reflection systems can provide prompts, guiding questions, and automated feedback that help teacher trainees identify strengths, weaknesses, and areas for improvement. By engaging in regular reflection, future teachers learn to set realistic and meaningful professional development goals, align their teaching strategies with learner needs, and evaluate the effectiveness of their methodological choices. AI-driven analytics further enhance this process by identifying patterns in teaching behavior, instructional preferences, and learner responses, thereby fostering deeper self-reflection, heightened methodological awareness, and greater professional autonomy.

Pedagogical Benefits of AI-Supported Tools

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The integration of AI-supported and digital tools into EFL teacher education offers a wide range of pedagogical benefits that positively influence both teaching and learning processes. One of the most significant advantages is the **increase in learner autonomy**, as AI-based systems encourage self-directed learning, independent practice, and personalized learning pathways. Future teachers experience firsthand how autonomy can be developed and supported through technology, which they can later apply in their own classrooms.

Another important benefit is **enhanced motivation and engagement**. Interactive platforms, mobile applications, and AI-driven feedback systems make learning more dynamic and meaningful, which increases learners' interest and participation. For pre-service teachers, these tools also promote methodological experimentation and creativity. Moreover, AI-supported tools contribute to **improved methodological flexibility** by allowing teachers to adapt instructional strategies based on real-time data and learner performance. This flexibility helps bridge the gap between theoretical knowledge and practical application, resulting in a **stronger alignment between theory and practice**. Collectively, these benefits support the holistic development of future EFL teachers as reflective, adaptive, and autonomous professionals.

Despite their numerous advantages, the use of AI-supported and digital tools in teacher education also presents several challenges and limitations. One of the primary concerns is **limited digital literacy** among some teacher trainees, which can hinder effective use of advanced technologies and reduce their pedagogical value. Without adequate training and support, digital tools may become sources of frustration rather than professional growth.

Ethical issues, particularly those related to **data privacy, security, and transparency**, also require careful consideration. The collection and analysis of learner data by AI systems raise concerns about confidentiality and responsible use of information. Additionally, there is a risk of **over-reliance on automated systems,** which may reduce critical thinking and professional judgment if AI-generated recommendations are accepted uncritically. Therefore, teacher education programs must ensure a balanced and pedagogically grounded integration of AI, emphasizing critical reflection, ethical awareness, and the irreplaceable role of human decision-making in education.

Conclusion. AI-supported and digital tools play a significant role in forming the automethodological competence of future EFL teachers. By promoting autonomy, reflective practice, and methodological flexibility, these tools prepare teacher trainees to address the complexities and demands of modern language education. When effectively integrated, AI technologies support professional growth by enhancing self-regulation, data-informed decision-making, and continuous reflection.

However, successful implementation requires purposeful pedagogical guidance, ethical responsibility, and ongoing professional support. Teacher education programs must

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focus not only on technological skills but also on developing critical thinking and reflective competence. Ultimately, the integration of artificial intelligence in teacher education enhances not only technological and methodological competence but also the professional autonomy that is essential for effective and sustainable EFL teaching.

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