

**Scottish International Conference on Multidisciplinary Research and
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**STRATEGIES FOR DEVELOPING RESEARCH CULTURE OF FUTURE ENGLISH
LANGUAGE TEACHERS IN THE CONTEXT OF DIGITAL TRANSFORMATION**

**СТРАТЕГИИ ФОРМИРОВАНИЯ ИССЛЕДОВАТЕЛЬСКОЙ КУЛЬТУРЫ
БУДУЩИХ ПРЕПОДАВАТЕЛЕЙ АНГЛИЙСКОГО ЯЗЫКА В УСЛОВИЯХ
ЦИФРОВОЙ ТРАНСФОРМАЦИИ**

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Annotatsiya: Maqolada raqamli transformatsiya sharoitida bo'lajak ingliz tili o'qituvchilarining tadqiqotchilik madaniyatini shakllantirish masalalari yoritilgan. Tadqiqotda raqamli ta'lim muhiti, sun'iy intellekt texnologiyalari va masofaviy ta'lim vositalarining o'qituvchi shaxsining ilmiy dunyoqarashi va tadqiqotchilik kompetensiyasiga ta'siri tahlil qilinadi. Shuningdek, tadqiqotchilik madaniyatini rivojlantirishning strategik yo'nalishlari sifatida raqamli pedagogika, o'zini o'zi rivojlantirish metodlari hamda innovatsion loyiha faoliyati imkoniyatlari ilmiy asosda yoritilgan.

Kalit so'zlar: tadqiqotchilik madaniyati, raqamli transformatsiya, raqamli pedagogika, ilmiy fikrlash, innovatsion yondashuv, sun'iy intellekt, masofaviy ta'lim, kompetensiya.

Аннотация: В статье рассматриваются вопросы формирования исследовательской культуры будущих преподавателей английского языка в условиях цифровой трансформации. Анализируется влияние цифровой образовательной среды, технологий искусственного интеллекта и дистанционного обучения на развитие научного мировоззрения и исследовательской компетенции будущих педагогов. Особое внимание уделяется стратегическим направлениям развития исследовательской культуры — цифровой педагогике, методам саморазвития и инновационной проектной деятельности.

Ключевые слова: исследовательская культура, цифровая трансформация, цифровая педагогика, научное мышление, инновационный подход, искусственный интеллект, дистанционное обучение, компетенция.

Abstract: The article explores the strategies for developing a research culture among future English language teachers in the context of digital transformation. It examines the influence of digital educational environments, artificial intelligence technologies, and distance learning platforms on the formation of scientific thinking and research competence. The study emphasizes the integration of digital pedagogy, self-directed learning, and innovative project activities as strategic approaches to enhancing research culture. The article also highlights pedagogical and psychological factors that support the formation of a reflective and research-oriented teacher identity in the era of digitalization.

Keywords: research culture, digital transformation, digital pedagogy, innovative approach, artificial intelligence, distance learning, teacher education, research competence.

The 21st century has brought about a profound transformation in education driven by technological innovation and digital globalization. Within this paradigm, the professional identity of future English language teachers must evolve beyond traditional pedagogy to encompass digital literacy, critical inquiry, and research-based problem-solving. The

Scottish International Conference on Multidisciplinary Research and Innovation – SICMRI 2025

development of a **research culture** — defined as a system of values, skills, and behaviors that support scientific inquiry — is essential to this transformation [1].

In the context of digital transformation, English language teacher education programs must equip pre-service teachers not only with linguistic and methodological expertise but also with the ability to conduct independent research, interpret data, and apply evidence-based practices. According to Mishra and Koehler's **TPACK model** (Technological Pedagogical Content Knowledge), effective digital-era teaching requires the integration of technology, pedagogy, and content knowledge [2]. Hence, research culture must evolve alongside technological fluency.

Digital transformation reshapes how teachers access, create, and disseminate knowledge. Platforms such as **Google Scholar, ResearchGate, Academia.edu**, and institutional repositories provide unlimited opportunities for pre-service teachers to explore academic sources and conduct literature reviews. At the same time, AI-driven tools like **ChatGPT, Grammarly, and Scite.ai** enhance analytical thinking, improve academic writing, and stimulate intellectual curiosity [3].

As noted by Johnson et al. (2022), AI in higher education can serve as a “cognitive amplifier,” supporting teachers in developing scientific reasoning, creativity, and metacognitive awareness [4]. However, the pedagogical use of AI must be guided by ethical frameworks that ensure authenticity, originality, and critical engagement rather than dependence.

From a pedagogical perspective, research culture formation relies on inquiry-based learning, problem-solving activities, and project-based methodology. These strategies encourage pre-service teachers to formulate hypotheses, collect data, and reflect on their findings — key components of **research-oriented pedagogy** [5].

Psychologically, research competence is closely connected to **intrinsic motivation, self-efficacy, and reflective thinking**. Bandura's theory of self-efficacy (1997) emphasizes that individuals with strong belief in their capabilities are more likely to persist in research tasks and overcome academic challenges [6]. Therefore, educational programs must nurture students' confidence and autonomy through guided mentorship and collaborative research projects.

1. **Digital inquiry projects:** Integrating research-based digital projects in ELT courses (e.g., analyzing linguistic corpora or online learner feedback) helps pre-service teachers apply research methods in authentic contexts.

2. **Collaborative platforms:** Tools such as **Moodle, Microsoft Teams, and Google Workspace** facilitate collective data analysis, peer feedback, and joint publications [7].

3. **AI-supported feedback systems:** Intelligent writing assistants and data analytics platforms provide personalized guidance that fosters academic writing and critical analysis skills [8].

4. **E-mentorship models:** Connecting pre-service teachers with global research mentors through digital platforms strengthens professional identity and academic engagement [9].

5. **Digital ethics and information literacy:** Training students to use digital data responsibly and verify information sources enhances scientific integrity and research discipline.

Despite its benefits, digital transformation presents challenges such as information overload, superficial engagement with sources, and reduced critical thinking due to overreliance on AI. Therefore, the cultivation of research culture requires a balanced integration of digital and cognitive strategies. Educational institutions should:

- Embed **digital research modules** in teacher training curricula;
- Organize **virtual conferences and research hackathons**;
- Encourage **publication-oriented projects** using digital tools;
- Foster **interdisciplinary collaboration** to expand teachers' research horizons.

As Nurmukhamedova (2023) notes, “digital transformation in pedagogy must be human-centered — technology should serve inquiry, not replace it” [10]. Thus, fostering research culture means empowering teachers to think critically, question systematically, and innovate responsibly.

The digital age demands educators who are not only digitally literate but also scientifically minded and research-oriented. Developing a research culture among pre-service English

Scottish International Conference on Multidisciplinary Research and Innovation – SICMRI 2025

language teachers through innovative digital strategies is key to achieving sustainable educational progress. Such culture ensures that future teachers become **active contributors to knowledge creation**, capable of integrating research findings into classroom practice. The successful realization of this goal requires the synergy of technological tools, pedagogical innovation, and psychological support within teacher education institutions.

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