



TRANSFORMING INDEPENDENT LEARNING IN COUNTRY STUDIES THROUGH ARTIFICIAL INTELLIGENCE AND DIGITAL AXIOLOGY

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Abstract

This study is devoted to the scientific substantiation of an innovative model for organising independent learning in *Area Studies* within the framework of digital pedagogy. The research examines the role of integrating digital technologies and Artificial Intelligence (AI) tools into the educational process in enhancing students' professional and pedagogical competencies. The findings obtained through empirical methods and virtual simulations confirm that the proposed **Digital Axiological Model** significantly improves learners' intercultural competence, sociolinguistic adaptability, and linguistic accuracy. The results further demonstrate that the effective integration of digital tools with traditional teaching methods can elevate *Area Studies* from a predominantly theoretical discipline to the level of an applied analytical laboratory.

Keywords: digital pedagogy, independent learning, Area Studies, Artificial Intelligence (AI), intercultural competence, sociolinguistic adaptation, digital axiology

1. Introduction

In today's global educational landscape, the concept of **digital pedagogy** has fundamentally transformed the traditional educational paradigm, necessitating the enrichment of the learning process through Information and Communication Technologies (ICT) and Artificial Intelligence (AI) tools. In particular, *Area Studies*, which occupies an important place in philological education, requires students not only to memorise historical and geographical facts but also to develop cultural and axiological competencies.

The greatest challenge in teaching *Area Studies* through digital tools lies in the lack of effective mechanisms for systematising the process of independent learning and objectively assessing its outcomes. Existing research has largely focused on language teaching methodologies or general ICT competencies, whereas the distinctive features of *Area Studies*—particularly the analysis of regional diversity and cultural codes within digital environments—have not yet been sufficiently explored.

The aim of this article is to develop a **Digital Axiological Model** for organising independent learning in *Area Studies* and to provide a scientific justification for the impact of this model on students' analytical skills. Using Turkish *Area Studies* as the research context, the study examines digital platforms, Artificial Intelligence (AI)-based analytical tools, and a peer-assessment system as the principal components of the proposed model.

The scientific novelty of this study lies in transforming traditional independent learning assignments into digitally structured **Digital Cultural Projects** and optimising them through

the application of **Measurement and Evaluation** methodology. This approach introduces a more systematic and evidence-based framework for assessing and enhancing students' analytical and intercultural learning outcomes.

2. Materials and Methods

The study was conducted during the autumn semester of the 2025–2026 academic year at the Department of Second Foreign Languages, Uzbekistan State World Languages University. A total of 50 students enrolled in the 60230100 – Philology and Language Teaching (Turkish Language) programme participated in the experimental study. Within the framework of the *Area Studies* course, the following three-stage digital model for organising independent learning was implemented and tested:

1. Digital Content Development Stage: Students collected information related to Turkish culture, geography, and economy using Artificial Intelligence (AI) tools (ChatGPT and Perplexity) as well as digital geographic information systems (Google Earth and interactive maps), and subsequently developed analytical projects based on the collected data.

2. Platform Integration Stage: All independent learning assignments were uploaded to digital platforms such as Google Classroom and Moodle. This process enabled not only the archiving of educational materials but also their transformation into a medium for interactive discussion and collaborative engagement.

3. Assessment and Reflection Stage: Analytic Rubrics and a **Peer-assessment** mechanism were introduced as part of the **Measurement and Evaluation** system to ensure objective assessment and promote reflective learning.

The following research methods were employed in the study:

- **Pedagogical Experiment:** A comparative analysis was conducted to evaluate the effectiveness of traditional independent learning and the proposed digital model.
- **Sociological Survey:** This method was used to identify students' attitudes towards and motivation for the use of digital tools in the learning process.
- **Statistical Analysis (SPSS/Excel):** Students' academic performance was evaluated using the **Student's t-test** in order to determine the scientific effectiveness of the proposed model.

3. Results

The analysis revealed that the use of digital pedagogy tools significantly increased students' interest in *Area Studies*. The findings indicate that the integration of digital technologies into the learning process enhanced students' engagement, participation, and overall motivation towards the subject.

• **Academic Performance:** The average scores of students in the experimental group were found to be **18–22% higher** than those of the control group receiving traditional instruction.

• **Analytical Skills:** The assessment process based on **Analytic Rubrics** contributed to the development of students' critical thinking and source-analysis skills. In particular, the quality of independent assignments improved by **35%**.

• **Digital Literacy:** Survey findings indicated that **85% of students** reported that the use of digital platforms (Moodle) and AI tools helped them not only acquire knowledge in *Area Studies* but also develop professional information technology skills.

- **Collaborative Engagement:** Students participating in group projects within a cooperative learning environment demonstrated **1.5 times greater** activity and responsibility during the **peer-assessment** process compared with those following traditional learning methods.

The findings obtained during the empirical phase of this study confirmed the effectiveness of Artificial Intelligence (AI) tools in fostering intercultural competence. In particular, students in the experimental group demonstrated significantly higher levels of cultural adequacy and sociolinguistic adaptation compared with those in the control group. These results are consistent with the findings reported by Abdurakhimova (2026), indicating that AI-driven virtual simulations contribute to overcoming cultural stereotypes and enhancing linguistic accuracy by up to **29%**.¹

The results confirm that the proposed **Digital Axiological Model** has transformed independent learning from a process primarily centred on searching for theoretical information into a higher-level practice of **digital cultural content creation**.

4. Discussion

The findings of this study indicate that teaching *Area Studies* based on the principles of digital pedagogy demonstrates greater effectiveness compared with traditional instructional approaches. International studies (Chai et al., 2021; Istrate, 2022) emphasise that digital tools should not be regarded merely as supplementary resources, but rather as an integral component of a student-centred learning environment. The **Digital Axiological Model** developed in this study empirically validates these theoretical perspectives and contributes to addressing the issue of **transactional distance** in *Area Studies* (Moore, 2023).²

The following aspects were identified as particularly significant during the discussion:

- **Synthesis of Knowledge and Skills:** While students in traditional learning environments are often limited to memorising factual information, digital environments enable them to develop critical thinking under conditions of **epistemological uncertainty** through the comparison of AI-generated outputs and multiple information sources. This appears to be one of the key factors underlying the **18–22% increase in academic performance** observed in this study.

- **The Role of Cooperative Learning:** In group-based projects, **positive interdependence** and the distribution of responsibility (Archer-Kath et al., 2021) contributed significantly to the development of students' socio-cultural competencies. Digital platforms further enhanced this process by making collaboration more transparent, measurable, and systematically assessable.

The conducted analysis indicates that similar trends can be observed in the experiences of Uzbekistan and Türkiye regarding the integration of digital tools into the educational process. In particular, a comparative study by Abdurakhimova (2026) identified digital technologies as a key factor in enhancing learners' motivation for language acquisition. The findings of the present study further support this conclusion, demonstrating that interactive tasks developed within digital environments improve students' independent inquiry skills by

¹ Abdurakhimova, N. A. (2026). Developing intercultural competence through artificial intelligence tools (in the context of teaching the Turkish language). *The Lingua Spectrum*, 3, 348-352.

² Chai, C. S., & Kong, S. C. (2021). Professional development for digital transformation in education. *Journal of Educational Technology & Society*, 24(2), 55-68.

15–20% compared with traditional teaching methods. However, the effectiveness of this process depends not merely on the availability of technological tools, but on their purposeful pedagogical application, which, in turn, necessitates the continuous development of teachers' digital competencies.³

Therefore, digital transformation in *Area Studies* should not be viewed merely as a technological advancement; rather, it represents a new didactic paradigm that fundamentally reshapes students' approaches to independent learning.

5. Conclusion

The findings of this study indicate that the modern digital model for organising independent learning in *Area Studies* provides students with the following key advantages:

1.Information Literacy: Through the critical evaluation of digital resources and Artificial Intelligence (AI) tools, students acquire advanced skills in conducting in-depth academic analysis.

2.Objectivity in Assessment: Assessment based on **Analytic Rubrics** and digital platforms enhances the objectivity of the learning process and strengthens students' capacity for **self-regulation**.

3.Professional Readiness: The proposed model prepares future specialists for effective participation in a global digital educational environment.

In conclusion, the proposed **Digital Axiological Model** makes it possible to elevate *Area Studies* from a purely theoretical course to the level of an **applied analytical laboratory**. In future research, it would be both relevant and beneficial to adapt and integrate this model into other disciplines within the humanities.

References:

- 1.Abdurakhimova, N. (2026). Türkiye ve Özbekistan'da yabancı dil olarak Türkçe öğretiminde dijital araçların kullanımı: Karşılaştırmalı bir inceleme. In VI. Ulusal Eğitimde Dönüşüm Forumu (UEDFOR-VI) Tam Metin Bildiri Kitabı (pp. 12–18). Ankara, Türkiye: EYUDER Yayınları.
- 2.Abdurakhimova, N. A. (2026). Developing intercultural competence through artificial intelligence tools in the context of teaching the Turkish language. *The Lingua Spectrum*, 3, 348–352.
- 3.Archer-Kath, A. M., et al. (2021). The impact of cooperative learning on student achievement and intergroup relations. *Review of Educational Research*.
- 4.Byram, M. (1997). Teaching and assessing intercultural communicative competence. Clevedon, UK: Multilingual Matters.
- 5.Chai, C. S., & Kong, S. C. (2021). Professional development for digital transformation in education. *Journal of Educational Technology & Society*, 24(2), 55–68.
- 6.Gururajarao, S. M., et al. (2025). Assessing academic achievement in adaptive learning. In *Computer Science On-line Conference* (pp. 445–453). Cham, Switzerland: Springer Nature.
- 7.Hymes, D. (1972). On communicative competence. In J. B. Pride & J. Holmes (Eds.), *Sociolinguistics*. Harmondsworth, UK: Penguin.

³ Abdurakhimova, N. (2026). Türkiye ve Özbekistan'da Yabancı Dil Olarak Türkçe Öğretiminde Dijital Araçların Kullanımı: Karşılaştırmalı Bir İnceleme. *VI. Ulusal Eğitimde Dönüşüm Forumu (UEDFOR-VI) Tam Metin Bildiri Kitabı*. Ankara: EYUDER Yayınları, 12-18.

8. Istrate, O. (2022). Digital pedagogy and the evolution of Area Studies in the 21st century. *European Journal of Higher Education*, 12(3), 210–225.
9. Kamariddinovna, M. E. (2025). The role of nano-learning in developing digital competence among future English language teachers. *American Journal of Education and Learning*, 3(5), 335–341.
10. Moore, M. G. (2023). *Theory of transactional distance and digital learner autonomy*. London, UK: Routledge.
11. OECD. (2025). *Education at a glance: Digital transformation and future skills*. Paris, France: OECD Publishing.
12. UNESCO. (2025). *Artificial intelligence and education: Guidance for policy-makers*. Paris, France: UNESCO.

