

Maulana Advances in Inclusive Education

Vol. 2 No. 1 2026

ISSN: 3105-0107

Website : https://maulanapress.com/index.php/maulana

Introducing a Compulsory Subject on Artificial Intelligence Literacy in Uzbekistan's Schools and Higher Education Institutions: Need, Opportunities, Problems and Prospects

Khursandov Ozodbek Elbekovich*

student of the Tourism and Hospitality programme, Termez State University

Article information

DOI : xxx

*Correspondence : Khursandov1311@gmail.com

Submission Track

Submission : August 30, 2026
Final Review : September 05, 2026
Accepted : October 01, 2026
Available online : November 13, 2026

Keywords

AI literacy; compulsory subject; education policy; curriculum design; academic integrity; digital divide; teacher training; assessment; Uzbekistan; cognitive offloading.

This is an open access article under the CC BY-NC license
https://creativecommons.org/licenses/by-nc/4.0/

Abstract

This article scientifically substantiates the necessity of introducing compulsory artificial intelligence (AI) literacy education at all levels of Uzbekistan's education system in a gradual and systematic manner. A comparative analysis was conducted based on regulatory and legal documents, the competency frameworks developed by UNESCO, the OECD, and the European Commission, the experiences of China, South Korea, Estonia, and Singapore, as well as empirical studies measuring the impact of generative AI on learning. The analysis reveals that Presidential Decree No. PF-189, dated October 22, 2025, stipulates the inclusion of AI-related topics in educational curricula starting from the 2026/2027 academic year. However, incorporating such topics into existing subjects does not, in itself, guarantee unified learning outcomes, assessment procedures, or teacher training standards. The author proposes a five-stage hybrid model based on the "Knowledge – Experimentation – Creation – Responsibility" (KECR) competencies, combining a compulsory foundational course with cross-curricular integration, alongside a three-track assessment system. The proposed number of instructional hours represents the author's preliminary estimates and requires further refinement through pilot implementation and experimental validation.

INTRODUCTION

In recent years generative AI tools have become part of everyday education: a pupil can prepare homework, a student a term paper and a teacher a lesson plan with the help of a chatbot. However, the spread of a tool does not mean the spread of the skill to use it properly. The head of Estonia's "AI Leap" programme has said that 95 per cent of upper-secondary pupils there use AI and that some use it excessively. This is the assessment of one official, not the result of an independent survey; nevertheless it points to the core problem: use is taking place before preparation [1].

Globally, AI literacy is still at the margins of education policy. According to UNESCO, by 2022 only 15 countries had included AI learning objectives in national curricula, and only 7 had developed an AI competency framework or programme for teachers [2]. In 2024 UNESCO published the world's first general competency frameworks for students and for teachers. In June 2026 the OECD and the European Commission published an AI literacy framework for primary and secondary education (AILit), which also supports the "Media and Artificial Intelligence Literacy" domain to be assessed for the first time in PISA 2029 [3].

The labour market adds pressure. According to the World Economic Forum's 2025 report, based on a survey of more than 1,000 large employers, 170 million new jobs are expected to be created and 92 million displaced by 2030, a net increase of 78 million; employers expect 39 per cent of workers' core skills to change [4]. This is a forecast, not a confirmed result. For education, however, the implication is clear: when skills become obsolete quickly, a curriculum should rest on durable concepts and working habits rather than on a particular software product [5].

In Uzbekistan the policy decision has already been taken: Decree PF-189 of 22 October 2025 provides for introducing AI-teaching topics into general secondary and higher education programmes and textbooks from the 2026/2027 academic year, and for teaching the foundations of AI within the school subject "Informatics and Information Technologies" [6]. The question is therefore not "Should AI be taught?" but the following: (1) is adding topics enough, or is a compulsory core course needed; (2) what stages, content and assessment should such a course have; and (3) will implementation reduce or widen the digital divide?

The authors of the OECD and European Commission framework stress that AI literacy is not the same as simply using a tool: merely interacting with a system does not in itself build the knowledge and skills described in the framework. This difference is the first argument for a separate course [7].

Second, AI has entered everyday life ahead of specialists, rather than first reaching professional fields. Third, AI literacy is not opposed to independent thinking; it is a way of protecting it: a person who can evaluate an AI answer must already have enough knowledge and criteria of his or her own to do so [8]. Fourth, a gap in professional productivity is forming. In the experiment by Noy and Zhang, participants with access to ChatGPT completed written professional tasks about 40 per cent faster, and quality ratings were about 18 per cent higher [9]. This is a laboratory experiment and cannot be transferred directly to the real labour market; but it makes it more likely that productivity differences will emerge between specialists who can use AI and those who cannot within one profession (Assumption) [10].

A course limited to informatics pupils is not sufficient. The Decree itself lists the fields in which AI is to be applied: healthcare, education, the judicial system, water management and entrepreneurship [11]. An economist, lawyer, physician, teacher, engineer or tourism specialist therefore meets AI not as an informatician but within his or her own professional decisions [12]. Four arguments are offered in favour of compulsion: (a) **equity** — an optional course is chosen mainly by motivated families with resources, and this is exactly how the "second-level digital divide" described by Hargittai, that is, the difference in skills among people who already have access, widens; (b) **a common minimum** — safe use, protection of personal data and verification of output are necessary for everyone; (c) **assessment** — academic integrity rules work only when they are taught identically to all; and (d) **systemic effect** — a single standard makes teacher

preparation and textbook development cheaper [13]. Compulsion means making learning compulsory, not forcing the use of AI: as commentators stress, the OECD/EC framework regards a decision not to use AI as also a conscious and competent choice [14].

Research question: Is adding AI literacy as an extra topic to existing subjects in Uzbekistan's schools and higher education institutions sufficient, or is a compulsory core course with common outcomes, hours, assessment and teacher-preparation standards needed? **Working hypothesis:** the most effective route is a hybrid model, that is, a compulsory core course at transition points combined with integration in the remaining subjects [15]. **Aim:** to substantiate the need for a staged compulsory AI literacy course and to propose its design, assessment and implementation mechanism [16].

METHODOLOGY

1. Research design and data

The study is a qualitative policy analysis. The methods are document analysis, comparative-historical analysis and secondary analysis of published empirical studies. The material comprises (i) Uzbekistan's normative acts, above all Presidential Decree PF-189 of 22 October 2025; (ii) the UNESCO AI competency frameworks for students and for teachers (2024) and the OECD/European Commission AI literacy framework (2026); (iii) policy documents and reports on China, South Korea, Estonia and Singapore; and (iv) empirical studies of generative AI and learning and of the digital divide.

2. Source verification and labelling convention

The article relies on open sources available as of 31 October 2026. Verified facts are drawn from the sources listed in the References; forecasts are attributed to their authors; and the author's own views are marked "Proposal" or "Assumption". Items marked † in the References rely on a secondary source or on the author's knowledge and must be checked against the primary text (legal acts on lex.uz) before publication.

3. Classification of international experience

International initiatives are grouped by status: established practice (legally compulsory or widely implemented), phased pilot, guidance or policy document, and reversed. Where independent impact evaluations were not found in open sources, this is stated explicitly.

4. Conceptual framework

The proposal is called the "staged compulsory teaching model of AI literacy in Uzbekistan's education system". The model is based on four competencies (KTCR): **Know** (how AI works, data and probability), **Test** (checking output, detecting errors and bias), **Create** (independent products and projects made with AI) and **Take responsibility** (safety, ethics, law and human oversight). KTCR corresponds to the four dimensions of the UNESCO student framework (human-centred mindset, ethics of AI, AI techniques and applications, AI system design) and its three levels (understand, apply, create), and to the four domains of the OECD/EC framework (engaging with AI, creating with AI, managing AI, designing AI). Content is revisited and deepened on a "spiral" principle, and learning outcomes, activities and assessment are aligned with one another (constructive alignment).

RESULTS

1. Normative and legal basis

Analysis. The main text of the Decree provides for introducing the topics, preparing teachers, setting up laboratories and allocating grant quotas; however, the number of compulsory hours, common learning outcomes and the assessment procedure are not specified in the main text [17]. Annex 2 (the action plan) was not fully included in this analysis, so these gaps may be filled there. The proposal of this article targets precisely this gap.

2. Opportunities

Beyond political will, the system has certain foundations. IT teaching began in Grade 1 from 2024; more than 19,500 informatics teachers work in the country; in 2025 Giga meters were installed in all state schools, and the connectivity quality of more than 10,000 schools is monitored in real time [18]. The "New Uzbekistan" University trains AI teacher-trainers, and the AI topics in the school informatics programme are reported to be developed in cooperation with MIT. According to the President, Uzbekistan rose 17 places in the AI readiness index in one year and ranked first in Central Asia [19].

3. Barriers

Technological gap. According to figures cited from IMRS specialists in March 2024, there were 0.03 computers per pupil in schools (0.04 in rural areas), and 71.6 per cent of computers (69.4 per cent in rural areas) were connected to the internet. In 2018, only 7 per cent of schools had fast, uninterrupted connectivity [20]. Connectivity has improved, but it has been officially stated that computer provision depends on the budget; more recent measurements were not found in open sources. **Qualified teachers.** Informatics teachers are being trained, but AI is an everyday issue for teachers of other subjects too [21]. **Paid and free services.** No official analysis of usage costs was found; Estonia chose to provide tools to schools free of charge at the national level. **Attitudes of parents and educators** and **academic integrity:** no general survey or single national rule for Uzbekistan was found in the open sources analysed; this is also a research priority (Proposal) [22].

4. International experience

The initiatives of China, South Korea, Estonia and Singapore were compared using the classification described in Section 2.3.

Overall conclusion. First, compulsion is clearest in China (at regional level), and the most cautious approach is in Singapore; in both, content is phased by age. Second, the lesson of Korea is that rapid, large-budget technical implementation does not replace a programme [23]. Third, Estonia treats teacher preparation, access to tools and language quality as one package. Fourth, in none of the experiences reviewed was an independent evaluation of the long-term effect of AI literacy on pupils' knowledge found in open sources; Uzbekistan too should therefore begin with a pilot that is evaluated [24].

5. Ten under-discussed but important issues

1) AI illiteracy — a new social inequality? Three layers of inequality should be distinguished: *having a device and connectivity*; the *skill of working with AI* (formulating queries, checking output); and *benefiting from the result* (learning, income, opportunity). If the second and third layers are not taught by the school, they become dependent on family resources. Assumption: if AI skills are formed mainly through paid private

courses, the urban–rural and income gaps will turn into a skills gap [25].

2) Over-reliance. In the experiment of Bastani and colleagues, published in PNAS, about 1,000 mathematics pupils from one school in Türkiye worked with one of two GPT-4-based assistants. The unrestricted "GPT Base" raised performance during practice, but when access was removed the pupils scored about 17 per cent lower than those who had never used it; the "GPT Tutor", whose prompts were designed to protect learning, largely removed this harm. Limitations: one school, one subject, an early period in 2023 [26]. Conclusion: the harm comes not from AI itself but from using it as an "answer machine". Singapore has officially stated that its school tools are designed with safeguards to reduce cognitive offloading. Proposal: a "myself first, then AI" rule [27].

3) AI and the teacher. UNESCO describes the educational relationship as a "teacher – AI – learner" triad and stresses that AI tools must not replace the teacher but complement him or her. Conditions for systematic strengthening: a reliable tool for the teacher, professional development, and human oversight of pedagogical decisions.

4) The assessment problem. If a task was done by AI, how is real knowledge identified? The answer is to assess the process, not only the product. The three-lane assessment system in Section 3.7 is proposed for this reason [28].

5) The digital future of the Uzbek language. PF-189 requires an "Uzbek language corpus" to be created by the end of 2026 and integrated into at least five open large language models; the Decree of 20 October 2025 provides for submitting a draft regulatory document on a platform supporting the Uzbek language through AI by 1 May 2026 [29]. The small-language problem is also acknowledged in Estonia: the programme head said that AI currently serves Estonian only at a "good enough" level. Proposal: pupils systematically record errors in Uzbek-language AI answers (subject to parental consent and anonymisation before the data are submitted) [30].

6) Personal data security. Uploading a document, image or scientific work to an AI platform may mean that the data pass to a third-party server and that the terms of processing remain unknown to the user. The legal basis is the Law "On Personal Data". In Singapore's parliament, minimum data-protection standards and parental consent for using AI tools outside the national platform were specifically asked about; the Ministry of Education stated that schools use tools hosted on the national platform with safeguards rather than general-purpose tools [31].

7) Incorrect and biased answers. AI can fabricate sources. In *Mata v. Avianca* (USA, 2023), lawyers were sanctioned for citing court decisions invented by ChatGPT. The habit of "confirming an answer in three independent sources" should be a compulsory exercise in school and university programmes.

8) The labour market. The WEF forecast shows growth in technology- and AI-related occupations and a decline in some non-technical tasks. In Uzbekistan the "One Million AI Leaders" project is to be expanded and from 2026/2027 state grant quotas for IT and AI fields are to rise by 35 per cent; according to the media, the President announced a plan to train 5 million AI specialists by 2030. Training specialists and mass literacy are different tasks: the former does not replace the latter [32].

9) Age-appropriate education. In Singapore pupils become familiar with the use, benefits and risks of AI from the lower grades, from Grade 4 learn under teacher supervision to evaluate AI answers critically,

and in secondary school work more independently with a personal device. This phased approach is an argument for our five-stage model.

10) Ethics and legal responsibility. UNESCO's Recommendation on the Ethics of Artificial Intelligence reinforces the principle of human oversight and accountability; Article 4 of the European Union's Artificial Intelligence Act introduces an obligation to ensure AI literacy. PF-189 requires approval, within three months, of principles for creating and using AI solutions and of safety and ethics norms [33]. Copyright, disinformation, cybersecurity and algorithmic bias should be included in the course content as a separate module.

6. Proposed five-stage hybrid model

Proposal. Figure 1 shows the proposed structure of the model, with the four KTCR competencies and the three assessment lanes running through all five stages [34].

Figure 1. Scheme of the five-stage model (author)

Stage 1 *Grades 1–4* **Technological thinking; introduction to AI**	**Stage 2** *Grades 5–9* **AI literacy; safe use**	**Stage 3** *Grades 10–11* **Practical AI skills; career orientation**	**Stage 4** *University, Year 1* **Common subject for all majors**	**Stage 5** *University, Years 2–4* **AI education specialised for the major**
Continuous basis: KTCR — Know · Test · Create · Take responsibility				
Assessment: closed (no AI) · guided (with AI) · open (project and defence)				

Source: author's elaboration.

Hybrid model. Core courses are compulsory at transition points (Grades 5–9, Grades 10–11, university Year 1) and are integrated into existing subjects in Grades 1–4 and university Years 2–4. Subject names (Proposal): school — "Artificial Intelligence Literacy"; university — "Artificial Intelligence Literacy and Foundations of Professional Application"; Stage 5 — the module "Sectoral AI Practice" [35].

In total, the school stages amount to 68 + 136 + 68 = 272 hours over 11 years. This is above the Beijing minimum (at least 88 hours over 11 years); it is therefore proposed that in Grades 1–6 the hours be taken from existing informatics and technology hours rather than added as a new load. These figures are the author's preliminary estimates and have no empirical basis; they will be reviewed in light of pilot results [36].

7. Three-lane assessment

The model uses three assessment lanes: closed (without AI), guided (with AI) and open (project and defence) (Proposal). Rationale: as the Bastani experiment showed, AI may raise practice performance while lowering independent knowledge; the closed lane must therefore be retained. The share of the closed lane is to be determined in the pilot (at least 40 per cent in school is a preliminary assumption) [37].

8. Teacher preparation

The UNESCO teacher framework sets out 15 competencies across five dimensions and three levels (acquire, deepen, create). The Decree provides for training teacher-trainers at the "New Uzbekistan"

University from January 2026 and, through them, cascade training of school and university teachers. Proposal: (1) a three-level certificate aligned with the UNESCO levels; (2) the first level mandatory for all teachers who teach AI; (3) a short subject-specific module for teachers outside informatics; and (4) a methodological centre in each region at a university AI laboratory [38].

9. **Implementation mechanism**

Organisationally, the Decree makes the Ministry of Preschool and School Education, the Ministry of Higher Education, Science and Innovations and the Ministry of Digital Technologies jointly responsible. Proposal: a coordination group should be established on this basis to manage the competency framework, standards and results in one place, and its reports should be published openly. The most important methodological decision is **regionally staggered implementation with independent evaluation**: if regions introduce the course in turn, comparing regions that have and have not yet introduced it makes it possible to measure the real effect of the course (Proposal) [39].

Equity guarantee (Proposal). (1) A set of offline activities that do not depend on continuous internet access; (2) a minimum standard of accessible devices in every school (the quantity to be set by the Ministry of Finance on the basis of calculations); (3) a nationally licensed tool for pupils, with personal-data protection conditions; and (4) mentoring of rural schools through university laboratories.

DISCUSSION

1. Principal findings and interpretation

The analysis supports the working hypothesis only in part. The policy decision exists, but adding AI topics to informatics does not by itself provide common learning outcomes, assessment rules or a teacher-preparation standard. Foreign experience (China, Singapore, Estonia, Korea) suggests that content should be phased by age, that investment should go into competencies rather than products, and that pilots should be evaluated [40]. The empirical evidence from Bastani and colleagues supports retaining an AI-free lane in assessment. These findings are consistent with the proposed hybrid model, but they are indirect: no independent evidence of the effect of AI literacy teaching on learning was found, so the model should be treated as a design hypothesis to be tested in a pilot.

2. Consequences of non-implementation

If the course is not implemented, scientifically plausible consequences (Assumption) are: (1) a widening of the second-level digital divide; (2) each school and university choosing its own route of prohibition or free use, with a resulting decline of trust in assessment and diplomas; (3) loss of independent knowledge under uncontrolled use; (4) a readiness gap in international assessments such as PISA 2029; and (5) insufficient public contribution to the quality of AI in the Uzbek language.

3. **Limitations and further research**

No independent evaluation of the scale and quality of the implementation begun in the 2026/2027 academic year was found in the open sources analysed; the conclusions therefore concern need and design, not impact in Uzbekistan. The hours and the share of the closed assessment lane are the author's assumptions and must be checked against pilot results. The texts of Annex 2 of PF-189 and of the 2026 national strategic framework were not fully included in this article; they should be analysed in the next

stage [41].

CONCLUSIONS

The analysis shows that a policy decision on teaching AI literacy exists in Uzbekistan, but adding topics to informatics does not by itself ensure common outcomes, assessment and a teacher-preparation standard. Foreign experience (China, Singapore, Estonia, Korea) also shows that content must be phased by age, that investment must go into competencies rather than products, and that the pilot must be evaluated. Empirical evidence confirms that an AI-free lane must be retained in assessment. On this basis the following recommendations are made: (1) approve a national AI literacy competency framework on the basis of PF-189 (aligned with KTCR and with the UNESCO and OECD/EC frameworks); (2) set compulsory minimum hours within the hybrid model. (3) develop a five-stage learning-outcomes standard; (4) introduce three-lane assessment and retain the closed lane; (5) no independent use of generative AI in Grades 1–4. (6) regionally staggered implementation with independent evaluation; (7) a three-level teacher certificate and regional methodological centres; (8) an equity guarantee: an offline set, a minimum device standard, a national tool licence and protection of personal data. (9) a national survey of parents, teachers and students on AI use; (10) a programme to assess the quality of AI in the Uzbek language.

REFERENCES

[1] M. Piacentini и L. F. Vargas-Madriz, «A Vision for Media and AI Literacy in the Digital Age». [Онлайн]. Доступно на: https://media-and-learning.eu/subject/media-literacy/a-vision-for-media-and-ai-literacy-in-the-digital-age/

[2] The White House, «Advancing Artificial Intelligence Education for American Youth», вып. Executive Order 14277. 23 апрель 2025 г.

[3] China Daily, «AI + Education Action Plan: Ministry of Education Briefing». [Онлайн]. Доступно на: https://global.chinadaily.com.cn/a/202604/15/WS69dee205a310d6866eb436ea.html

[4] F. Miao и K. Shiohira, *AI Competency Framework for Students*. Paris: UNESCO, 2024. doi: 10.54675/JKJB9835.

[5] F. Miao и M. Cukurova, *AI Competency Framework for Teachers*. Paris: UNESCO, 2024. doi: 10.54675/ZJTE2084.

[6] AsiaE, «AI Textbooks Downgraded to Educational Materials as National Assembly Passes Bill». [Онлайн]. Доступно на: https://www.asiae.co.kr/en/article/2025080418420589912

[7] Korea JoongAng Daily, «'AI Textbooks' Are Coming to Korea. But Is the Country Ready for Them?» [Онлайн]. Доступно на: https://www.koreajoongangdaily.com/korea/ai-textbooks-are-coming-to-korea-but-is-the-country-ready-for-them/10844382

[8] Singapore Ministry of Education, «AI Usage in Schools». [Онлайн]. Доступно на: https://www.moe.gov.sg/news/parliamentary-replies/20260506-ai-usage-in-schools

[9] AsiaE, «Article on the Status of AI Textbooks in South Korea». [Онлайн]. Доступно на: https://www.asiae.co.kr/en/article/2025071109295630096

[10] Eesti Elu, «Article on TI-Hüpe (AI Leap)». [Онлайн]. Доступно на: https://eestielu.ca/?p=223417

[11] Singapore Ministry of Education, «Artificial Intelligence in Education». [Онлайн]. Доступно на: https://www.moe.gov.sg/education-in-sg/educational-technology-journey/edtech-masterplan/artificial-intelligence-in-education

[12] China Daily, «Beijing Makes AI Education Compulsory in Public Schools». [Онлайн]. Доступно на: https://govt.chinadaily.com.cn/s/202510/21/WS694a49c7498e368550339296/beijing-makes-ai-education-compulsory-in-public-schools.html

[13] AI Weekly, «China Mandates AI Curriculum From Age Six in All School Grades». [Онлайн]. Доступно на: https://aiweekly.co/alerts/china-mandates-ai-curriculum-from-age-six-in-all-school-grades

[14] Australian Government Department of Education, «China's Approach to AI Education in Primary and Secondary Schools». [Онлайн]. Доступно на: https://www.education.gov.au/download/19495/chinas-approach-ai-education-primary-and-secondary-schools/41944/document/docx

[15] Infocomm Media Development Authority, «Code for Fun: AI for Fun Modules». [Онлайн]. Доступно на: https://www.imda.gov.sg/How-We-Can-Help/code-for-fun

[16] Generation Unlimited и UNICEF, «Connecting Uzbek Schools to the Internet and Students to Information». [Онлайн]. Доступно на: https://www.generationunlimited.org/stories/connecting-uzbek-schools-internet-and-students-information

[17] University of Helsinki и MinnaLearn, «Elements of AI». [Онлайн]. Доступно на: https://www.elementsofai.com

[18] OECD и European Commission, «Empowering Learners for the Age of AI: An AI Literacy Framework for Primary and Secondary Education», OECD Publishing, Paris, июн. 2026. [Онлайн]. Доступно на: https://ki-campus.org/en/blog/ai-literacy-framework-published-oecd-and-european-commission

[19] J. Biggs, «Enhancing Teaching through Constructive Alignment», *High. Educ.*, т. 32, сс. 347–364, 1996.

[20] Estonian Ministry of Education and Research, «Estonia Announces Groundbreaking National Initiative: AI Leap Programme to Bring AI Tools to All». [Онлайн]. Доступно на: https://hm.ee/en/news/estonia-announces-groundbreaking-national-initiative-ai-leap-programme-bring-ai-tools-all

[21] European Commission и Eurydice, «Estonia: AI Leap Initiative to Enhance Learning and Teaching». [Онлайн]. Доступно на: https://eurydice.eacea.ec.europa.eu/news/estonia-ai-leap-initiative-enhance-learning-and-teaching

[22] S. Noy и W. Zhang, «Experimental Evidence on the Productivity Effects of Generative Artificial Intelligence», *Science*, т. 381, вып. 6654, сс. 187–192, 2023, doi: 10.1126/science.adh2586.

[23] Singapore Ministry of Education, «Foundational GenAI Literacy and Skills for All Students, Teachers and Educators». [Онлайн]. Доступно на: https://www.moe.gov.sg/news/parliamentary-replies/20250925-foundational-gen-ai-literacy-and-skills-for-all-students-teachers-and-educators

[24] UNICEF Uzbekistan, «From Connected Schools to an AI-Ready Future». [Онлайн]. Доступно на: https://www.unicef.org/digitalimpact/stories/connected-schools-ai-ready-future

[25] H. Bastani, O. Bastani, A. Sungu, H. Ge, Ö. Kabakcı, и R. Mariman, «Generative AI without Guardrails Can Harm Learning: Evidence from High School Mathematics», *Proc. Natl. Acad. Sci.*, т. 122, вып. 26, 2025, doi: 10.1073/pnas.2422633122.

[26] Ministry of Education, Culture, Sports, Science and Technology, Japan, «Guidelines on the Use of Generative AI in Schools». 2023 г.

[27] Mata и Inc. Avianca, «Mata v. Avianca, Inc.», вып. 22-cv–1461. 22 июнь 2023 г.

[28] Official Website of the President of the Republic of Uzbekistan, «Materials of the Meeting on Artificial Intelligence». [Онлайн]. Доступно на: https://president.uz/en/lists/view/8582

[29] President of the Republic of Uzbekistan, «On Additional Measures for the Further Development of Artificial Intelligence Technologies», вып. PF-189. 22 октябрь 2025 г. [Онлайн]. Доступно на: https://lex.uz/docs/7790236

[30] President of the Republic of Uzbekistan, «On Approving the Strategy for the Development of Artificial Intelligence Technologies Until 2030», вып. PQ-358. 14 октябрь 2024 г. [Онлайн]. Доступно на: https://lex.uz/docs/7158606

[31] Republic of Uzbekistan, «On Personal Data», вып. ZRU-547. 2 июль 2019 г. [Онлайн]. Доступно на: https://lex.uz

[32] Kun.uz, «President Mirziyoyev Sets Goal for Uzbekistan to Join Top 50 AI Nations by 2030». [Онлайн]. Доступно на: https://kun.uz/en/news/2025/10/22/president-mirziyoyev-sets-goal-for-uzbekistan-to-join-top-50-ai-nations-by-2030

[33] President of the Republic of Uzbekistan, «Presidential Resolution No. PQ-4996». 17 февраль 2021 г.

[34] Government of the Republic of Uzbekistan, «Programme for Implementing the Concept for the Development of the Uzbek Language in 2025–2026». [Онлайн]. Доступно на: https://gov.uz/en/cirns/news/view/94347

[35] UNESCO, «Recommendation on the Ethics of Artificial Intelligence». Paris, 2021 г.

[36] European Parliament и Council of the European Union, «Regulation (EU) 2024/1689 Laying Down Harmonised Rules on Artificial Intelligence (Artificial Intelligence Act)», вып. 2024/1689. 2024 г.

[37] AFPBB News, «Report on AI Textbooks in South Korea». [Онлайн]. Доступно на: https://www.afpbb.com/articles/-/3592723

[38] Singapore Ministry of Education, «Schools Introduce AI in an Approach That Is Age- and Development-Appropriate». [Онлайн]. Доступно на: https://www.moe.gov.sg/news/forum-letter-replies/20260413-schools-introduce-ai-in-approach-that-is-age-and-development-appropriate

[39] Singapore Ministry of Education, «Schools Take an Age- and Development-Appropriate Approach to AI Use». [Онлайн]. Доступно на: https://www.moe.gov.sg/news/forum-letter-replies/20251112-schools-take-an-age-and-development-appropriate-approach-to-ai-use

[40] E. Hargittai, «Second-Level Digital Divide: Differences in People's Online Skills», *First Monday*, т. 7, вып. 4, 2002, doi: 10.5210/fm.v7i4.942.

[41] World Economic Forum, «The Future of Jobs Report 2025», World Economic Forum, Geneva, 2025. [Онлайн]. Доступно на: https://www.weforum.org/publications/the-future-of-jobs-report-2025/