



GenAI in education: International frameworks and regional experiences

TE_REG Report 1 (WP2a1) Exploratory Report on GenAI and Learning and Teaching

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Overview

This exploratory report forms part of the TE_REG project (Teacher Education Regenerated). It focuses on mapping how GenAI (generative artificial intelligence) is currently discussed, framed, and considered in relation to learning and teaching at international, European, and regional levels. The report corresponds to TE_REG Report 1 (WP2a1), and its primary aim is to provide a descriptive overview that serves as groundwork for further analytical reflection in TE_REG Report 2 (WP2a2).

The report is structured in three parts. The first part presents a selection of international and European documents that discuss or touch upon GenAI in education. These documents have been chosen because they offer frameworks, visions, or recommendations that are relevant for understanding how educational systems might respond to the opportunities and challenges of GenAI.

The second part summarizes the findings of five regional reports developed within the TE_REG project. These reports explore how GenAI is currently addressed in policy documents, teacher education curricula, and professional discussions in Finland, Flanders (Belgium), Hessen (Germany), Montenegro, and Portugal. The abstracts provided here are intended to help readers orient themselves before reading the full reports.

The third part offers a descriptive comparison. It identifies patterns, shared concerns, and differences that emerge when looking across the international frameworks and regional reports. The focus is on mapping and describing. This report is intended as a resource that lays the foundation for further reflection and discussion in the next phase of the project.

The material presented in this report is based on document analysis and, in the case of the regional reports, also on focus groups and consultations with stakeholders. To process the volume and complexity of the documents within the scope of this design project, we made deliberate use of GenAI tools (specifically ChatGPT 4.0 and Copilot). In doing so, we not only studied GenAI as a subject of inquiry, but also applied it as a tool to support the research and design process itself. We complemented this with an extensive review round involving all project partners to ensure that the information presented here is factually accurate and correctly reflects the data gathered through document analysis and focus group discussions.

3.1 International frameworks on GenAI in relation to learning and teaching

3.1.1 UN & UNESCO

UNESCO: Beijing Consensus on Artificial Intelligence and Education (2019)

The 2019 ‘Beijing Consensus’ represents one of the earliest global frameworks addressing AI in relation to education. It recognises AI as a technology that may reshape teaching, learning, and education management, offering both opportunities and challenges. The document highlights potential benefits such as personalised learning, new forms of assessment, and expanded access to education, while also noting risks related to equity, data privacy, cultural diversity, and teacher preparedness.

Education systems are encouraged to promote human-centred uses of AI that enhance learning processes rather than replace human interaction. It underlines the importance of teachers' roles in guiding AI-supported learning, adapting pedagogical practices, and safeguarding ethical values. Teacher education is described as key in preparing educators to engage with AI critically and effectively, with attention to both technical and pedagogical dimensions.

UNESCO: Recommendation on the Ethics of Artificial Intelligence (2021)

Offering a global ethical framework for AI across sectors, including education, this Recommendation situates AI as a tool that should align with human rights, inclusiveness, and sustainability, and calls attention to both the potential and the risks of AI in shaping educational practices. While not focused exclusively on GenAI, the recommendation addresses issues highly relevant to its use in teaching and learning, such as transparency, accountability, cultural sensitivity, and the preservation of human agency.

The document recognises teachers as key figures in ensuring that AI supports ethical, inclusive, and meaningful learning. It points to the need for educational environments where AI complements rather than replaces the relational, ethical, and creative dimensions of teaching and learning.

UN: Principles for the Ethical Use of AI in the UN System (2022)

This principled document sets out shared values and principles for AI adoption across sectors. It highlights values such as human-centred AI, peace, sustainable development, and human rights. Education is mentioned in relation to general objectives such as inclusion and sustainable development, but the resolution provides no specific guidance for learning, teaching, or educational practice. The document serves primarily as a principled framework, offering shared values and orientation rather than operational direction for education systems.

UNESCO: Guidance for Generative AI in Education and Research (2023)

The 2023 UNESCO Guidance for Generative AI in Education and Research provides UNESCO's first dedicated global policy recommendations on the role of generative AI (GenAI) in education. It describes GenAI as a transformative force that prompts rethinking of learning and teaching and proposes a human-centred and pedagogically appropriate interaction approach. In this vision, GenAI is seen as supporting educational goals set by people, contributing to inclusion, equity, pluralism, and critical thinking, while respecting human agency and judgement.

The guidance outlines a policy framework in which governments are encouraged to consider regulation, privacy protection, and equitable access. Education systems are invited to reflect on how GenAI tools can be validated for pedagogical relevance and transparency, and how capacity can be developed for ethical and effective use. Teachers are positioned as central actors in this process, with a focus on developing the knowledge and judgement to integrate GenAI thoughtfully in practice. The report highlights creative uses of GenAI that contribute to higher-order thinking, collaborative learning, and innovation, while also drawing attention to possible risks such as superficial learning, over-reliance, or harm to learners' rights.

UNESCO: AI Competency Framework for Teachers (2024)

In order to engage with (Gen)AI in educational settings in constructive and thoughtful ways, teachers benefit from defined knowledge, skills, and attitudes; that is the main idea of the AI

Competency Framework for Teachers. These competencies are organised around areas such as (Gen)AI literacy, ethical awareness, pedagogical integration, and critical use of AI tools.

The document presents teacher education as an important context for developing these competencies, helping future educators understand how (Gen)AI may affect learning processes and how it can be used to design inclusive, ethical, and meaningful learning experiences. The framework encourages reflection on how GenAI tools can support higher-order thinking and creativity, while being mindful of challenges such as bias, over-reliance, or erosion of human judgement.

UNESCO: AI Competency Framework for Students (2024)

In line with the Teachers' Competency Framework, this Framework for Students defines competencies that may help learners navigate AI-rich environments responsibly and effectively. It highlights the role of education in equipping students with AI literacy, critical thinking, ethical reasoning, and the ability to engage with AI in ways that support democratic values, diversity, and sustainability.

While not centred on teaching practice, the framework indirectly informs teacher education by pointing to the knowledge and skills that teachers may need to foster in their students, including how to guide learners in using GenAI tools for meaningful learning rather than superficial outputs.

UN: General Assembly Resolution on Artificial Intelligence (2024)

The UN General Assembly Resolution on Artificial Intelligence (2024) sets out broad, globally agreed principles for the development and use of AI across sectors, including education. The resolution highlights values such as human-centred AI, peace, sustainable development, and human rights. In relation to learning and teaching, it affirms these principles without offering detailed guidance or specific recommendations for educational practice. The document serves primarily as a high-level political framework, providing general orientation rather than operational direction for education systems.

3.1.2 OECD

Digital Education Outlook: Towards an Effective Digital Education Ecosystem (2023)

The 2023 Digital Education Outlook investigates how education systems are progressing from basic digital adoption towards a deeper digital transformation. The report is prompted by the recognition that integrated digital tools often replicate traditional practices rather than fundamentally reshape teaching, learning, and educational governance. Most OECD countries are still navigating challenges in moving towards fully coherent, interoperable, and inclusive digital education ecosystems: some form of digital education strategies can be seen, but coherent system-level approaches – where tools, actors, governance structures, and policies align – are still rare.

There are quite a few challenges and reasons for concern: gaps in digital infrastructure, limited interoperability across systems, insufficient integration of digital tools into pedagogy, a lack of clear regulatory frameworks for GenAI in education, data privacy, algorithmic bias, and unequal access.

Opportunities identified in the report include the potential for personalising learning, enhancing inclusion, supporting equity, improving teaching quality, increasing system efficiency, and enabling lifelong learning. Digital tools – including GenAI – are highlighted for their capacity to support adaptive learning pathways, offer targeted interventions, and strengthen formative assessment. The report presents GenAI as both a disruptive and enabling technology that could redefine the roles of teachers and learners and transform educational processes, provided its use is guided thoughtfully.

A central theme is the importance of building effective digital education ecosystems: systems in which digital tools, data, technology governance, teacher competencies, and institutional supports operate in harmony to enhance learning and teaching. The report advocates for stronger policy frameworks, more inclusive governance, investment in teacher capacity building, and multi-stakeholder collaboration to ensure digital transformation serves educational goals and societal values.

The OECD Outlook urges countries to focus on safeguarding human agency, ethical use of data, and maintaining the relational dimensions of education while embracing the opportunities of digital and AI technologies.

Generative AI in the Classroom: From Hype to Reality (2023)

In this paper, it is noted that ‘the hype’ often centers on claims that GenAI will rapidly revolutionise education, automate teaching tasks, and deliver personalised learning at scale with minimal human input. The reality today, however, is that the use of GenAI in classrooms remains experimental, with uneven access, limited integration into pedagogy, and significant challenges related to reliability, bias, and educational value. The paper identifies opportunities where GenAI could support writing, summarising, language learning, problem solving, and personalised learning pathways. At the same time, it highlights risks such as factual errors, over-reliance, and inequities in access. Teachers are seen as central in helping students critically engage with GenAI, understand its limits, and use it responsibly. The document stresses the need for teacher education that prepares educators to assess GenAI tools, integrate them thoughtfully into teaching, and model ethical use, supported by clear policies that ensure GenAI complements, rather than replaces, human-led educational aims.

AI and the Future of Skills (Volumes 1 & 2) (2021 & 2023)

The AI and the Future of Skills project by the OECD sets out to systematically assess the capabilities of artificial intelligence and robotics in relation to human skills, with the ultimate aim of informing education and labor market policies.

Volume 1 (2021) lays the foundation for this work by mapping out taxonomies of human skills and proposing initial methods to gauge how AI compares to humans in domains such as cognitive abilities, social-emotional skills, and task performance. It highlights the need for a clearer understanding of AI’s limits and strengths at the task level, in order to anticipate where AI might complement or challenge human roles in work and learning.

Volume 2 (2023) builds on this foundation by refining the methodological approach and exploring practical avenues for assessing AI’s capabilities. This volume presents a mix of expert assessments and direct system evaluations. It includes analyses of AI’s performance on education tests (PIAAC, PISA), occupational certification tasks, and benchmarks from AI research. The report underscores that while AI systems show remarkable progress – particularly

in narrow, well-defined tasks – they fall short in replicating complex human capabilities like mentoring, adaptive teaching, and integrated reasoning. This point is given particular weight because it addresses widespread assumptions about AI’s potential to replace educators: the report stresses that – in 2023 – core human capacities for relational, ethical, and pedagogical judgement remain beyond the reach of current AI.

The findings point to the importance of developing robust, multi-dimensional indicators of AI capabilities, combining expert insight with direct measures. The work so far highlights both the promise and limitations of current evaluation approaches, setting the stage for a future integrated assessment framework that can support informed decision-making on education and workforce development in the AI era.

The Potential Impact of Artificial Intelligence on Equity and Inclusion in Education (2024)

AI technologies, including GenAI, might affect fairness and access in education. Potential benefits include customised learning for diverse needs and improved accessibility, while risks include amplifying biases and widening gaps in access to high-quality digital tools. The report underscores the role of educators in mediating AI use so that it supports inclusive learning environments. It points to the importance of policies and teacher preparation that enable thoughtful integration of AI, ensuring that digital tools are used to promote, rather than undermine, equity and inclusion in learning and teaching.

3.1.3 EU

Coordinated Plan on Artificial Intelligence (2021)

The Plan sets out the European Union’s joint approach for advancing AI development, deployment, and regulation across sectors, including education. It invites Member States to integrate AI in education systems with the aim of strengthening digital skills and AI literacy at all levels, enhancing teacher training and capacity for responsible AI use, promoting educational innovation through AI-powered tools, and ensuring that AI applications in learning are inclusive, ethical, and human-centred. The plan calls for investments in infrastructure, the creation of national AI strategies that include education, and stronger cross-country cooperation to share knowledge and best practices. While it does not provide detailed guidance on classroom teaching or pedagogy, the document outlines priority areas for AI-supported educational transformation: building trust, ensuring equity, modernising systems, and fostering collaboration between education, research, and technology stakeholders.

Artificial Intelligence Act (2024)

The AI Act establishes harmonized rules to ensure that AI systems in the EU, including those used in education, are trustworthy, human-centric, and aligned with fundamental rights. The focus on human-centric AI reflects the EU’s aim to ensure that technologies like GenAI support human agency, autonomy, and dignity — particularly in education, where teaching and learning depend on relational, ethical, and developmental interactions. The Act introduces a risk-based framework that imposes strict requirements on high-risk AI systems and transparency obligations for AI tools used in educational settings. It highlights the responsibility of schools, teachers, and education authorities to ensure that AI is applied in ways that respect students’ rights, safeguard data privacy, and promote inclusiveness. While the Act does not set pedagogical guidelines, it provides a legal foundation for integrating AI in education in ways that align with democratic values and social well-being.

Ethical Guidelines on the Use of AI and Data in Teaching and Learning (2022)

The Guidelines provide practical guidance for educators and school leaders on how to engage with AI and data ethically, responsibly, and inclusively. They call for critical reflection on fairness (ensuring AI does not reinforce bias or inequality), transparency (making AI's functioning and decision-making understandable), and trustworthiness (ensuring AI aligns with educational values and behaves predictably). A central message is that AI should complement – not replace – human judgment. This is seen as essential because educational decisions often require ethical reasoning, empathy, and sensitivity to context, which AI systems cannot provide. While human judgment is not without flaws, the Guidelines highlight that unchecked reliance on AI risks amplifying errors or biases at scale. Teachers and school leaders are therefore expected to retain oversight and responsibility, ensuring that AI tools support inclusive learning, learner well-being, and democratic values rather than undermining them.

3.2. Five EU regional reports

The five regional TE_REG reports on GenAI and its relation to learning and teaching describe how educational systems in Finland, Flanders (Belgium), Hessen (Germany), Montenegro, and Portugal are engaging with the opportunities, challenges, and emerging practices linked to GenAI in education. Each report explores local policy frameworks, institutional responses, and examples of practice as they relate to the use of GenAI in schools and teacher education. We focus the reports at the policy level where political decisions about education are made. For Finland, Portugal, and Montenegro, this is the national level. For Belgium, the reports address the Flemish level, as education is a responsibility of the communities. Similarly, for Germany, the focus is on Hessen, reflecting the significant autonomy of the Länder in educational matters.

First, a short abstract is provided for each regional report, summarizing the main characteristics and developments in each context. These summaries offer an orienting insight into how GenAI features in current thinking and practice in learning and teaching across the participating regions. The full reports form an integral part of this WP2a1 report and can be consulted in the subsequent sections for further detail and documentation.

Finland

Finnish teacher education and schools are responding to GenAI within a framework of professional trust, academic autonomy, and research-based practice. National policy documents and guidance from the Finnish National Agency for Education and Ministry of Education and Culture encourage critical, ethically aware, and pedagogically meaningful use of AI, but leave room for local interpretation. There is no national curriculum mandate for GenAI; instead, institutions develop their own strategies based on “AI in education – legislation and recommendations”. Teacher education programmes have started to address AI literacy and critical engagement, often linking GenAI discussions to broader themes of digital competence and ethical technology use. The report describes early-stage initiatives, with universities experimenting with training modules, research projects, and guidelines for student use of GenAI tools, while schools explore practical applications in areas like language learning and personalised feedback.

Flanders (Belgium)

The Flanders exploratory report describes a dynamic policy and practice landscape shaped by the European AI Act and the Flemish AI Policy Plan. Vision and policy documents, including the Flemish Knowledge Centre Digisprong's vision on responsible AI, stress balanced use of AI in education, integrating opportunities with awareness of risks. They call for embedding AI in school policy, creating AI-ready networks, and ensuring continuous professional development for digital and AI competences. Multiple initiatives translate these frameworks into practice, led by Digisprong, education umbrella organisations, private providers, and individual teachers. Examples include digital tools (e.g., Digisnap, ICT policy planners), webinars, and AI sprints. Higher education institutions show varied levels of integration, with some offering dedicated AI-related training or modules in teacher education programmes. Approaches are non-mandatory and shaped by institutional priorities, often on a voluntary pilot basis. The report highlights active engagement at multiple levels but also notes variability in visibility, coherence, and perceived urgency across institutions and actors.

Hessen (Germany)

The Hessen report presents an overview of national and regional efforts to address AI in education within Germany's federal system. It refers to guidance from the Hessian Ministry of Education, to joint principles from the national Kultusministerkonferenz (KMK; the Standing Conference of the Ministers of Education and Cultural Affairs), and to illustrative examples such as the Bavarian Ministry's guidelines to show how different regions contribute to the broader federal dialogue. The report describes initiatives in teacher training that focus on ethical reflection, technical understanding, and pedagogical integration of AI tools. The authors refer to models such as Joscha Falck's 'five dimensions' and DiKoLANKI as examples of structured, reflective frameworks that combine technical, pedagogical, and ethical dimensions. The report highlights the importance of balancing opportunities for personalisation and efficiency with careful attention to data protection, fairness, and educational equity. While concrete policies on GenAI in teaching are still evolving, Hessen's approach combines national guidance with local flexibility, encouraging teacher agency and professional dialogue.

Montenegro

In Montenegro, engagement with GenAI in education is at an early stage, taking place within a context where digitalisation strategies are still evolving. National policies on AI and digital education acknowledge the importance of preparing learners for AI-influenced futures, but do not yet provide detailed guidance for GenAI in learning and teaching. Teacher education programmes are starting to introduce digital and AI-related content, primarily focused on general digital literacy and ethical considerations, rather than specific pedagogical integration of GenAI. The report notes that individual schools and educators show varying levels of awareness and experimentation, often relying on personal initiative rather than system-wide support. Challenges include limited infrastructure, lack of targeted training, and the need for clearer frameworks to guide the educational use of GenAI.

Portugal

In Portugal, digital transformation is recognised as a policy priority, reflected in national strategies such as the National Digital Skills Initiative. However, specific references to GenAI in official documents remain limited. Teacher education incorporates digital competence development, and some institutions are beginning to address AI literacy and critical engagement with GenAI tools. The report describes initial practices in schools where GenAI is explored in

areas like language learning and creative writing, often through pilot projects or individual initiatives. It highlights a growing interest in understanding the pedagogical and ethical dimensions of GenAI, alongside challenges linked to teacher training, resource availability, and the integration of AI in school development plans.

3.2.1 Finland

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<https://te-reg.eu/wp-content/uploads/go-x/u/ae975ea5-1424-4194-92f7-735cfe0ea830/University-of-Helsinki-Finland-GenAI-Exploration.pdf>

3.2.2 Flanders (Belgium)

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https://te-reg.eu/wp-content/uploads/go-x/u/af05c446-47b9-403a-b4d1-522b34b482f7/WP2a1-GenAI-in-Education-Flanders_OVERVIEW_20250518.pdf

3.2.3 Hessen (Germany)

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3.2.4 Montenegro

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3.2.5. Portugal

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3.3. Conclusion

3.3.1 International frameworks on teacher standards

Shared concerns can be observed about how GenAI should be positioned in relation to learning and teaching. All frameworks present GenAI as a tool that should support educational goals in ways that respect human dignity, promote inclusivity, and contribute to democratic values and learner well-being. AI is consistently described as something that should assist, rather than replace, human involvement in education. (Gen)AI tools cannot by themselves address the full complexity of learning and teaching decisions. This is because, as these documents make clear, educational decisions often require sensitivity to context, ethical reasoning, and relational understanding – dimensions that AI systems, which operate on data patterns without human-like empathy or moral judgment, are not equipped to manage independently.

While there is a broad common ground, each framework places its own particular emphasis. UNESCO documents give strong attention to the ethical dimensions of GenAI in education, linking AI use to human rights, sustainability, peace, and global citizenship. They encourage whole-school approaches and promote education as a shared public good. OECD documents focus on preparing learners and teachers to navigate complexity and uncertainty in AI-influenced societies, highlighting the need for adaptive professional practices, co-agency between students and teachers, and the creation of digital ecosystems that enable inclusive, flexible learning environments. The EU frameworks, in turn, place greater emphasis on regulatory coherence and system-level strategies. They highlight the role of legal frameworks, such as the AI Act, in ensuring trustworthy AI use, alongside the importance of capacity building, partnerships, and policy alignment.

Across these different perspectives, international frameworks identify both opportunities and challenges linked to GenAI. They describe how GenAI could contribute to more personalised learning, increased accessibility, and creative engagement with knowledge. At the same time, they draw attention to risks such as bias, inequity, and over-reliance on AI-generated content, and underline the importance of maintaining human responsibility and ethical oversight in education systems.

3.3.2 Five regional reports

The five regional reports present a varied picture of how GenAI is addressed in learning and teaching across different European contexts. In Finland, AI Guidelines were developed in cooperation with experts from the education sector, researchers, and other stakeholders. GenAI is explored through local initiatives and pilot activities, reflecting a context of professional autonomy and trust. Flanders shows a rather structured policy environment, with clear links to European legislation and coordinated actions at different system levels, although implementation still varies across institutions. In Hessen (Germany), national guidance is combined with regional and institutional models, with various documents and tools offering structured, yet non-mandatory, approaches for reflection and practice. Montenegro presents a context where GenAI appears in policy discourse but where specific frameworks for learning and teaching are still emerging, with current focus on awareness-raising within broader digitalisation strategies. Portugal demonstrates growing interest in GenAI within a national digital transformation agenda, with some institutions and schools exploring its potential, though formal references in national education policy remain limited for now.

Across all regions, common attention can be seen – though with differing weight – to teacher education, ethical reflection, and the potential of GenAI to support personalised learning. Differences lie in how tightly GenAI-related practices are linked to formal policies and in the degree of system-level coordination. Flanders (Belgium) and Portugal align more closely with structured national or European strategies, while Finland, Montenegro and Hessen (Germany) show more localised or emergent approaches tied to pilots and research, where national guidance exists, but application depends largely on regional or institutional needs and choices.

3.3.3 Regional reports and international frameworks

When comparing the regional reports with the international frameworks, clear commonalities can be observed. Both levels underline that GenAI should contribute to educational goals, support human agency, and operate within ethical and inclusive practices. GenAI is seen as a tool that should complement, not replace, human judgment, with teachers positioned as

facilitators, guides, and critical interpreters of AI tools. There is shared recognition of opportunities linked to personalisation, improved accessibility, and the support of creative expression and innovative thinking, alongside concerns about risks such as bias, inequity, and over-reliance on AI-generated outputs.

At the same time, notable differences appear. International frameworks place greater and more explicit emphasis on connecting GenAI to broader social purposes, including sustainability, intercultural dialogue, and democratic resilience. These themes feature with varying prominence across the regional reports. Flanders (Belgium) and Portugal, for example, link GenAI developments to national strategies on digitalisation and inclusion, while Finland and Montenegro focus more on local experimentation or awareness building. The degree of system-wide coordination also differs: international frameworks promote regulatory coherence, capacity building, and shared strategies, whereas regional responses range from structured, policy-driven models to contexts where local initiatives take the lead and formal alignment is still evolving.

References

European Commission. (2021). Coordinated plan on artificial intelligence 2021 review. Brussels: European Commission.

European Commission. (2022). Ethical guidelines on the use of artificial intelligence and data in teaching and learning for educators. Luxembourg: Publications Office of the European Union.

European Parliament and Council of the European Union. (2024). Artificial Intelligence Act (Regulation (EU) 2024/1689). Official Journal of the European Union, L 168, 1–161.

OECD. (2021). AI and the future of skills: Volume 1 - Capabilities and assessments. Paris: OECD Publishing.

OECD. (2023). AI and the future of skills: Volume 2 - Capabilities and assessments. Paris: OECD Publishing.

OECD. (2023). Digital education outlook: Towards an effective digital education ecosystem. Paris: OECD Publishing.

OECD. (2023). Generative AI in the classroom: From hype to reality. Paris: OECD Publishing. Retrieved from

OECD. (2024). The potential impact of artificial intelligence on equity and inclusion in education. Paris: OECD Publishing.

UN General Assembly. (2024). Resolution on artificial intelligence (A/RES/78/267). New York: United Nations.

UNESCO. (2019). Beijing consensus on artificial intelligence and education. Paris: UNESCO.

UNESCO. (2021). Recommendation on the ethics of artificial intelligence. Paris: UNESCO.

UNESCO. (2023). Guidance for generative AI in education and research. Paris: UNESCO.

UNESCO. (2024). AI competency framework for students. Paris: UNESCO.

UNESCO. (2024). AI competency framework for teachers. Paris: UNESCO.

United Nations. (2022). Principles for the ethical use of artificial intelligence in the United Nations system. New York: United Nations.