



International Institute of Online Education (IIOE) Development Report 2019-2026



Al Bousalah for Publishing & Distribution
البوصلية للنشر والتوزيع

First Edition:2026

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ISBN: 978-9948-638-78-0

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Report Acknowledgements

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Executive Summary

As the flagship initiative of the International Centre for Higher Education Innovation under the auspices of UNESCO (UNESCO-ICHEI), the International Institute of Online Education (IIOE) was jointly launched in Shenzhen in December 2019 by UNESCO-ICHEI, 15 partner institutions from 12 countries, and 9 technology enterprises. IIOE serves as an ecosystem connecting global higher education stakeholders. Leveraging its online learning platform, IIOE develops and integrates high-quality course resources and delivers capacity-building training in digital and artificial intelligence (AI) applications. Supported by IIOE National Centres, Training Centres and Regional Centres, IIOE has established a localised operational model and a multilateral dialogue and cooperation mechanism.

IIOE has consistently adhered to the principle of "extensive consultation, joint contribution, and shared benefits", focusing on countries of the Global South. Through meticulously designed and implemented training programmes, IIOE enhances the digital and AI competencies of higher education professionals, promotes the digital transformation of higher education institutions, and deepens industry-academia collaborative talent development.

As of May 2026, the IIOE ecosystem network has expanded to 48 countries worldwide, bringing together over 190 partner institutions and more than 40 enterprises. The IIOE platform has registered over 27,000 users and 283 institutions across Asia, Africa, Latin America and other regions, and has cumulatively offered over 700 massive open online courses (MOOCs). Furthermore, IIOE's digital and AI application micro-certification training has empowered nearly 14,000 higher education personnel and has been integrated into the teacher professional development systems of partner institutions in Egypt, Ethiopia, Mongolia and other countries.

Technological foresight connects IIOE's global partners. In the face of digital and AI-enabled transformation, IIOE translates forward-looking technological vision into tangible tools and products that empower global higher education. This foresight is primarily manifested in the continuously iterating IIOE online learning platform and a "partner needs + frontier trends" dual-driven course system. Through technological foundation and cutting-edge content, IIOE has built a deep link between education supply and industry demand, becoming a key engine for partners to drive educational transformation in the digital and AI era.

Local adaptation fuels IIOE's sustained growth. By establishing a multi-tiered operational system of IIOE National Centres, Training Centres and Regional Centres, IIOE integrates high-quality global resources with the specific policy frameworks, teaching and learning contexts, and industry needs of each country. This localised operational mechanism not only ensures the institutional sustainability of IIOE trainings and programmes, but also effectively activates partners' initiative in leading educational transformation.

Multilateral cooperation yields IIOE's fruitful outcomes. IIOE is committed to maximising synergy by leveraging the complementary strengths of multiple stakeholders. From the co-construction of infrastructure foundations and high-quality training resources through industry-academia collaboration, to the fostering of regional policy consensus and practical guidance through multilateral dialogue, and to the recognition of outstanding practices and global exchange of experiences inspired by pioneer

cases, IIOE shapes a win-win collaborative community for the digital and AI-enabled development of higher education.

The core of technology empowerment lies in talent development. Guided by a technology-driven, people-centric approach, IIOE will centre on “AI + Discipline” and “AI + Industry” technology application micro-certification training, expanding the target of capacity building from higher education professionals to students and relevant practitioners. In so doing, IIOE will cultivate future-ready industrial talent. It will also continue to promote multilateral collaboration, localized operation, and mutual benefit, translating the vision of Sustainable Development Goal 4 (SDG 4) on inclusive and equitable quality education into endogenous momentum that empowers the digital and AI-enabled transformation of higher education.

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1.IIOE's Resonance with the Times: Technological Change, Educational Transformation, and the Sustainable Development Goals



1.1 Technology Reshapes Higher Education

The advancement of technology, such as generative artificial intelligence (GenAI), is triggering disruptive change, reshaping teaching and learning in higher education. This transformation is shifting the focus of education from outcome assessment to process-oriented guidance, increasingly highlighting the irreplaceable value of soft skills such as critical thinking, communication, and collaboration.¹ At the same time, the extensive adoption of digital technologies is enriching interpersonal interaction within virtual environments and driving online and hybrid education modalities from a crisis response during the COVID-19 pandemic to a normalised component of education systems.²

In this technology-led educational transformation, the digital divide pervades different countries and social groups. For instance, high-income countries are approaching universal Internet usage, with 94 per cent of the population using the Internet; in contrast, only 23 per cent of the population in low-income countries uses the Internet. High-income economies have achieved mobile phone penetration rates exceeding 95 per cent, whereas in low-income economies only 53 per cent of the population aged 10 years and above own a mobile phone.³

Groups who are unable to access and apply new technologies are not only deprived of the opportunities brought by the era of technology but also risk being “silenced” in the vast datasets on which machine learning depends. This leads to their interests being further marginalised in the digital age. The digital divide is fundamentally a manifestation of structural inequality and may continue to intensify with the rapid iteration of technology.⁴

Simultaneously, AI is profoundly reshaping the global industrial landscape, underscoring the urgent demand for future-ready talent in the labour market.⁵ To ensure that learners and workers remain continuously competitive and adaptable within a rapidly changing economic structure, it is imperative to accelerate the structural transformation of education and training systems and build a lifelong learning ecosystem aligned with future societal needs.

Against this backdrop, the digital and AI-enabled transformation of higher education requires actively bridging the multi-dimensional digital divide, fully unleashing the potential of technology empowerment, and building a talent development model that is deeply connected with industry needs.

1.2 SDG 4 and Education 2030 Framework for Action

In the United Nations 2030 Agenda for Sustainable Development, Sustainable Development Goal 4 (SDG 4) explicitly calls for ensuring inclusive and equitable quality education and promoting lifelong learning

1. UNESCO, “Guidance for Generative AI in Education and Research,” UNESCO, 2023.

2. UNESCO, “Transforming Higher Education: Global Collaboration on Visioning and Action,” UNESCO, 2026.

3. International Telecommunication Union (ITU), “Measuring Digital Development: Facts and Figures 2025”, ITU, 2025.

4. UNESCO, “AI and Education: Guidance for Policy-Makers,” UNESCO, 2021.

5. World Economic Forum (WEF), “The Future of Jobs Report 2025”, WEF, 2025.

opportunities for all, including that “by 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university” .¹



Figure1-1 SDG4: "Ensure inclusive and equitable education and promote lifelong learning opportunities for all", and the Education 2030 Agenda

UNESCO, in the Education 2030 Framework for Action, further emphasises that countries should accelerate the digitalisation and inclusive development of their education systems through various means such as capacity building, technology application, and international cooperation.² **Within this context, advancing technology empowerment and resource sharing through multilateral cooperation is becoming an important practical direction for the international community in implementing the Education 2030 agenda.**

1.3 IIOE: Advancing Educational Equity through Technology Empowerment

As the flagship initiative of the International Centre for Higher Education Innovation under the auspices of UNESCO (UNESCO-ICHEI), the International Institute of Online Education (IIOE) was jointly launched in Shenzhen in December 2019 by UNESCO-ICHEI, 15 partner institutions from 12 countries, and 9 technology enterprises. Guided by SDG 4 and the Education 2030 Framework for Action, IIOE aims to address capacity-building challenges in the digital and AI-enabled transformation of higher education, advancing educational equity by enhancing the technology application capabilities of higher education professionals and institutions.

IIOE serves as an ecosystem alliance connecting global higher education stakeholders. Leveraging its online learning platform, IIOE develops and integrates high-quality course resources and delivers capacity-building training in digital and AI applications. Supported by IIOE National Centres, Training Centres and Regional Centres, IIOE has built a localised operational model and a multilateral dialogue and cooperation mechanism. In terms of governance structure, the IIOE Secretariat performs overall coordination functions, while the Rotating Presidency Unit rotates annually among partners in different regions,³ providing strategic guidance and support for IIOE's development and the digital transformation of higher education.

1. UN General Assembly Resolution 70/1.

2. Education 2030: Incheon Declaration and Framework for Action for the implementation of Sustainable Development Goal 4: Ensure Inclusive and Equitable Quality Education and Promote Lifelong Learning Opportunities for All

3. The IIOE Rotating Presidency Units from 2020 to 2026 were: Ain Shams University (Egypt), University of Engineering and Technology, Lahore (Pakistan), University of Nairobi (Kenya), Universiti Putra Malaysia (Malaysia), Ahmadu Bello University (Nigeria), Indonesia Cyber Education Institute (Indonesia), and Mulungushi University (Zambia).



Figure1-2 UNESCO-ICHEI and partners jointly initiated IIOE on December 7, 2019



Figure1-3 UNESCO-ICHEI and partners jointly initiated IIOE on December 7, 2019

IIOE has consistently adhered to the principle of "extensive consultation, joint contribution, and shared benefits", focusing on countries of the Global South. Through meticulously designed and implemented training programmes, it enhances the digital and AI competencies of higher education professionals, promotes the digital transformation of higher education institutions, and deepens industry-academia collaborative talent development.

As of April 2026, the IIOE ecosystem network has expanded to 48 countries worldwide, bringing together over 190 partner institutions and more than 40 enterprises. The IIOE platform has registered over 27,000 users and 253 institutions across Asia, Africa, Latin America, and other regions, and has cumulatively offered over 700 massive open online courses (MOOCs). Furthermore, IIOE's digital and AI application micro-certification training has empowered nearly 14,000 higher education personnel and has been integrated into the professional development systems of partner institutions in Egypt, Ethiopia, Mongolia and other countries.

IIOE catalyses technology-enabled educational transformation and offers a collaborative paradigm for educational equity and inclusive growth. As a global public good for SDG 4, IIOE has pioneered a dynamic model of multilateral cooperation.

2. IIOE's Development: Technology Foresight, Local Adaptation, and Multilateral Cooperation



2.1 Technological Foresight Connects IIOE's Global Partners

In the face of digital and AI-enabled transformation, IIOE translates its forward-looking technological vision into tangible tools and products that empower global higher education. The technological foresight is mainly embodied in the continuously iterating IIOE online learning platform and a “partner needs + frontier trends” dual-driven course system. Through technological foundation and cutting-edge content, IIOE has built a deep link between education supply and industry demand, becoming a key engine for partners to drive educational transformation in the digital and AI era.

2.1.1 Online Learning Platform: Technological Foundation and Resource Sharing

In 2020, UNESCO-ICHEI, in collaboration with Jiker Academy, launched the IIOE online learning platform (iioe.org). This platform is committed to providing high-quality online courses and digital capacity-building resources to partner institutions, promoting the digital transformation of higher education, and enhancing the digital and AI capabilities of higher education professionals.

In 2022, UNESCO-ICHEI and platform service provider Zhixueyun conducted a comprehensive upgrade and launched IIOE 2.0, which supports six official UN languages. In 2023, the platform further integrated ChatGPT and released IIOE 3.0 with the intelligent teaching assistant i-TA, effectively enhancing user learning experiences. In 2025, IIOE 4.0 launched with an operational data dashboard function, enabling partners to plan operations more efficiently.

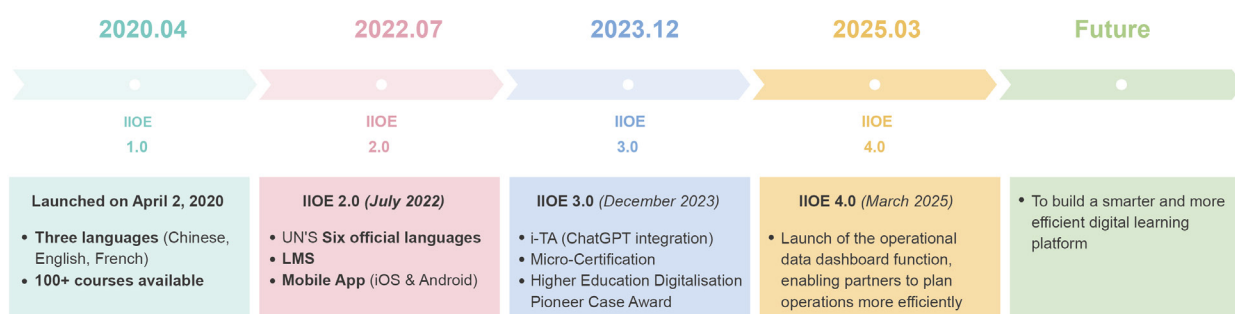


Figure2-1 IIOE platform update roadmap

The IIOE platform provides an effective digital learning environment for higher education institutions through its online learning system, digital resource management system, and intelligent learning support tools. The IIOE platform supports multilingual course publishing and learning to meet the needs of learners from different countries and regions. Concurrently, with the advancement of AI technology, the IIOE platform continuously explores the application of intelligent learning assistants, learning data analytics, and other technologies in teaching and learning support, which enhances the learning experience and teaching efficiency.

The IIOE platform also provides autonomous operation and management functions for IIOE National Centres and partner institutions. This enables them to carry out localised course development and training programmes under the IIOE technological framework, thereby forming a digital education platform system characterised by global synergy and local implementation.



Figure2-2 IIOE digital learning platform

Furthermore, the content resources on the IIOE platform undergo continuous development and iteration, with a cumulative offering of over 700 massive open online courses (MOOCs) covering key areas such as online and blended teaching, ICT fundamentals, cloud computing, big data, and AI. IIOE has thereby formed a multidisciplinary and multi-thematic learning resource repository. As of May 2026, the IIOE platform has over 27,000 registered users and 283 registered institutions across Asia, Africa, Latin America and other regions, demonstrating the platform's extensive connectivity and influence in the global higher education sphere.

2.1.2 Micro-Certification Curriculum Framework: Course Development Driven by "Partner Needs + Frontier Trends"

Relying on a "partner needs + frontier trends" dual-driven system, IIOE has progressively established four micro-certification course categories: "Higher Education Teaching Personnel Digital Competency", "GenAI for Higher Education Professionals", "AI + Discipline", and "AI + Industry". IIOE courses are available in Arabic, Chinese, English, French, Russian, Spanish, and other languages.¹ The actors in course development and localisation are increasingly diverse, including IIOE National Centres, partner institutions, enterprises, and international organisations, significantly enhancing the local adaptability of courses as open educational resources.



Figure2-3 IIOE Higher Education Teaching Personnel Digital Competency Course Series

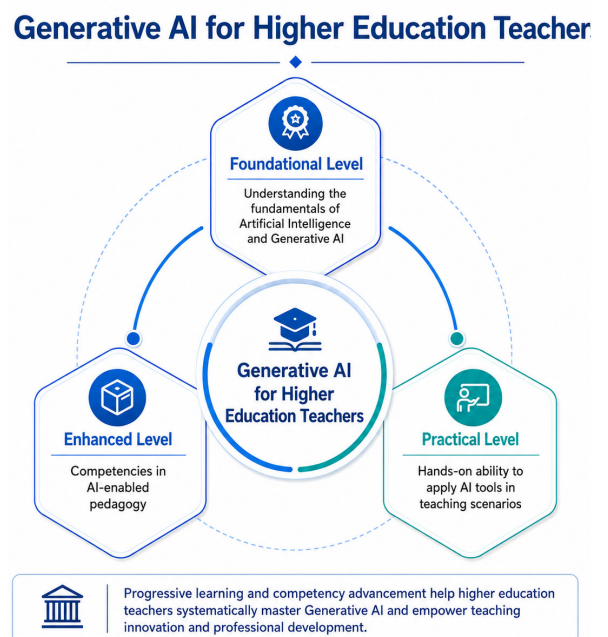


Figure 2-4 IIOE GenAI for Higher Education Professionals Course Series

1. For example, there are courses in Bahasa Indonesia developed by the IIOE Indonesia National Centre (Indonesia Cyber Education Institute), courses in Mongolian developed by the IIOE Mongolia National Centre (Mongolian University of Science and Technology), and courses in Kazakh developed by the National Center for Professional Development "Orlue", Kazakhstan.

AI + Discipline Courses

Cross-Disciplinary Integration · Empowering Sector Development · Co-Creating an Intelligent Future



More "AI + specific discipline" series will be developed in collaboration with higher education institutions, based on partner needs.

Figure2-5 IIOE "AI + Discipline" Course Series

AI + Industry Courses

Industry Integration · Applied Competencies · High-Quality Development

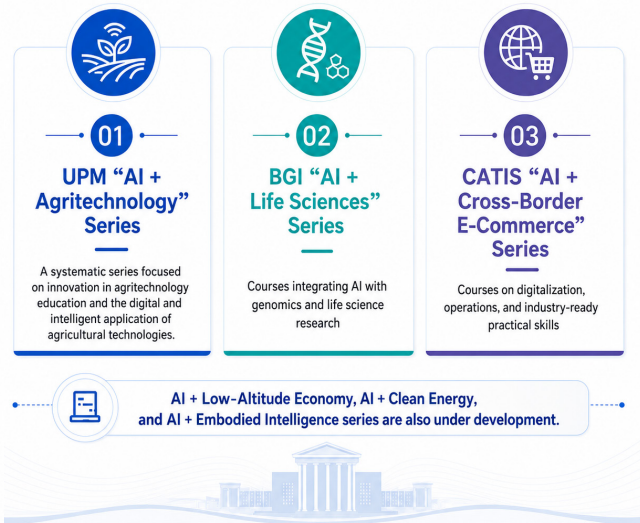


Figure2-6 IIOE "AI + Industry" Course Series

The IIOE micro-certification courses effectively fill the gap in quality digital education resources in many developing countries. They have been embedded into the teacher professional development systems of some IIOE partner institutions, achieving the institutionalisation of capacity-building programmes. The "Higher Education Teaching Personnel Digital Competency" and "GenAI for Higher Education Professionals" courses are developed based on competency items within the IIOE Higher Education Teaching Personnel Digital Competency Reference Framework.¹ Among them, the "Teacher Digital Competencies" series (comprising 21 courses as of May 2026) targets foundational gaps in digital teaching and unfamiliarity with digital tools. It aims to enhance teachers' capabilities in blended teaching, resource design, and instructional management.

The "GenAI for Higher Education Professionals" series (27 courses) primarily addresses educators' skill gaps in AI-integrated instructional design, AI prompt engineering, and tool application. After completing the courses, educators are empowered to integrate GenAI into teaching innovation and content creation, resulting in improved teaching capabilities. The "AI + Discipline" series (10 courses) explores the application of AI in academic disciplines and empowers higher education professionals to drive the innovative integration of AI with disciplinary teaching and research.

Amid the continuously expanding global talent gap, the "AI + Industry" courses bridges the divide between higher education and industry needs. This series aims to align talent cultivation precisely with the real-world demands of economic development in the digital and AI era. The "AI + Industry" courses shift from a disciplinary perspective to an industry perspective, and from a knowledge-centred approach to one oriented around industry workflows and job-specific competencies. This marks the extension of IIOE's course system from the education side to the industry side.

1. For more information on the IIOE Higher Education Teaching Personnel Digital Competency Reference Framework, please visit <https://www.iioe.org/#/branch-list-v/33420d76-a957-4f82-90b3-a0eed767ecc5>.

Courses on IIOE Platform(Partial)



Figure2-7 Courses on IIOE Platform (Partial)

Currently, IIOE has partnered with the China Association of Trade in Services, BGI Group, and Universiti Putra Malaysia to develop industry-aligned systematic courses on "AI + Cross-Border E-Commerce", "AI + Life Sciences", and "AI + Agricultural Technology". Building on existing achievements, IIOE is actively planning for courses in frontier fields such as "AI + Low-Altitude Economy", "AI + Clean Energy", and "AI + Embodied Intelligence". By broadening its partnerships, IIOE will continue to diversify the curriculum framework to meet future industry demands.

2.2 Local Adaptation Fuels IIOE's Sustained Growth

The expansion of the global network establishes the breadth of IIOE, while local adaptation taps into the depth and sustainability of its development. Only by being rooted in the local educational ecosystem can digital and AI-enabled transformation realise the shift from "externally driven" to "endogenous growth". **By establishing a multi-tiered operational system of IIOE National Centres, Training Centres and Regional Centres, IIOE integrates high-quality global resources with the specific policy frameworks, teaching and learning contexts, and industry needs of each country.** This localised operational mechanism not only ensures the institutional sustainability of IIOE trainings and programmes, but also effectively activates partners' initiative in leading educational transformation.

2.2.1 IIOE National Centre: Core Mechanism for the Localised Implementation of IIOE Trainings and Programmes

UNESCO-ICHEI has jointly established IIOE National Centres with partner institutions in 17 countries. With the support of national higher education authorities, IIOE National Centres build nationwide networks of higher education institutions, organise localised training programmes and related activities via the IIOE online learning platform and courses, comprehensively enhance the digital and AI competencies of higher education professionals, and lead and promote the digital transformation of higher education at the national level. As pivotal hubs for the implementation of the IIOE initiative, each National Centre plans its operational objectives and action plans according to the local development stage of higher education. They serve as the core mechanism to ensure the matching of IIOE's global resources and local needs.



Figure2-8 IIOE National Centres, Training Centres and Regional Centres

Table 2-1 List of IIOE National Centres

Year of Establishment	Region	Country	Partner Institution
2021	South Asia	Pakistan	University of Engineering and Technology, Lahore
2021	Southern Africa	Zambia	Mulungushi University
2022	East Asia	Mongolia	Mongolian University of Science and Technology
2022	Southeast Asia	Malaysia	Universiti Putra Malaysia
2022	Southeast Asia	Indonesia	Indonesia Cyber Education Institute
2022	West Africa	Nigeria	Ahmadu Bello University
2022	East Africa	Kenya	University of Nairobi
2022	North Africa	Egypt	Ain Shams University
2023	Central Asia	Uzbekistan	Tashkent University of Information Technologies
2023	West Africa	Senegal	Gaston Berger University
2023	North Africa	Morocco	Cadi Ayyad University
2024	East Africa	Ethiopia	Addis Ababa University
2025	West Africa	Ghana	University of Cape Coast
2025	Central and Eastern Europe	Serbia	University of Belgrade (Centre for Robotics and Artificial Intelligence in Education)
2025	Central Asia	Kyrgyzstan	Kyrgyz National University
2026	West Africa	Mali	University of Social Sciences and Management of Bamako
2026	South Asia	Nepal	Tribhuvan University

Several IIOE National Centres have integrated IIOE training into teacher professional development systems, ensuring the institutionalised implementation and sustainability of capacity-building programmes. For example, leveraging its broad network of 25 higher education institution partners

and 2 industry partners, the IIOE Egypt National Centre (Ain Shams University) has promoted systematic, institution-certified online training, cumulatively empowering over 4,000 Egyptian higher education professionals as of May 2026. To foster local innovation, the IIOE Egypt National Centre has also established the Micro-Certification Excellence Award. It encourages and recognises outstanding practices on digital and AI capacity building for higher education professionals among its network members.



Figure2-9 IIOE Egypt National Centre representatives and Deputy Director of UNESCO-ICHEI

The IIOE Ethiopia National Centre (Addis Ababa University) has formally incorporated IIOE micro-certification courses into its institutional teacher professional development system, linking them to promotion criteria and supporting teachers' career advancement.



Figure 2-10 IIOE Ethiopia National Centre team

The IIOE Mongolia National Centre (Mongolian University of Science and Technology) has adopted a "training of trainers" model to cultivate master trainers responsible for organising and implementing

localised training, cumulatively empowering over 2,500 educators. The relevant micro-certification courses have been incorporated into the university's teacher training system and are eligible for credit transfer in Master's programmes in Educational Management and Educational Studies.



Figure 2-11 IIOE Mongolia National Centre organised training on digital and AI application competencies

A range of localised empowerment activities have become important levers for IIOE National Centres to drive educational transformation. For instance, the **IIOE Nigeria National Centre (Ahmadu Bello University)** and the **IIOE Zambia National Centre (Mulungushi University)** have addressed the digital transformation needs of higher education institutions, focusing on customised training in practical technology skills through a blended training model. They have also fostered broad national consensus on AI-enabled higher education through high-level policy dialogues.



Figure2-12 IIOE Nigeria National Centre hosting training sessions



Figure2-13 IIOE Zambia National Centre signed partnership agreements with higher education institutions

In 2025, the IIOE Uzbekistan National Centre (Tashkent University of Information Technologies) provided more than 400 librarians, teachers, and students with advanced training courses and seminars on working with electronic educational databases from the world's leading publishers, as well as on the basics of using AI in academic libraries and the educational process. With the support of the Ministry of Higher Education, the IIOE Uzbekistan National Centre is connecting more than 60 universities nationwide to foster cooperation on micro-certification training and other programmes aligned with national educational development needs.



Figure2-14 Training on the use of Smart Classroom at IIOE Uzbekistan National Centre

The IIOE Indonesia National Centre (Indonesia Cyber Education Institute) is a digital learning marketplace partnering with more than 40 institutions domestically and internationally. Based on the IIOE Higher Education Teaching Personnel Digital Competency Reference Framework, it coordinated eight higher education institutions to co-develop courses, with a focus on enhancing university teachers' digital competencies in areas such as "designing and producing micro-courses", "organising and implementing online collaborative learning", and "evaluating learning based on process performance". Through policy dialogues, the IIOE Indonesia National Centre promotes the recognition

and harmonisation of micro-certification systems, including IIOE's micro-certification programme for higher education professionals, at both national and regional levels.



Figure2-15 IIOE Indonesia National Centre organised a national policy dialogue on micro-certification

IIOE National Centres play a leading role in the localised implementation of IIOE strategic projects. UNESCO-ICHEI, in partnership with the UNESCO Institute for Information Technologies in Education, launched the project "Women Leading Change in Africa: Future Higher Education Professionals and Leadership in the AI Era" . This project is implemented primarily through IIOE National Centres in Africa from 2025 to 2027. It supports the AI literacy and leadership capacity building of female higher education personnel in Africa, responding to UNESCO's global priorities of "Priority Africa" and "Gender Equality" .

Under the overall framework of the project, the IIOE Egypt National Centre, for example, has pioneered the "She Leads" Digital Education Excellence Award. This award specifically recognises female educators and researchers for their innovative use of AI and digital technologies in teaching and research. Through targeted efforts, women comprise 66 per cent of the 4000+ Egyptian higher education professionals trained through the IIOE micro-certification programmes.

2.2.2 IIOE Training Centre: Integrating High-Quality Educational Resources, Promoting Industry Talent Development, and Benefiting IIOE Members Worldwide

In addition to establishing National Centres in the Global South to promote localised programme operations, IIOE is also actively exploring the establishment of Training Centres in high-income economies. IIOE Training Centres leverage local high-quality educational resources and industrial advantages to develop cutting-edge, practical, and industry-recognised training programmes. **While empowering local talent development and supporting enterprise growth and industrial transformation, these centres also share high-quality training resources with IIOE global partners.**

IIOE has collaborated with Hong Kong Wedon Demos Group, International Leading Education Alliance, and Brest Business School to successively establish **IIOE Training Centres in Hong Kong SAR, Singapore, and France.** They focus on fintech, healthy lifestyles, Environmental, Social and Governance (ESG), and "AI + Tourism" , respectively.



Figure2-16 IIOE Hong Kong(China) SAR Training Centre officially established



Figure2-17 IIOE Singapore Training Centre officially established



Figure2-18 IIOE France Training Centre officially established

For example, the IIOE Singapore Training Centre adopts an integrated model of "University + Community + Healthy Lifestyle + AI" . It is dedicated to building a practical platform for community integration and an innovative case for health education in the AI era, receiving government recognition and policy support. By establishing a standardised curriculum framework, the IIOE Singapore Training Centre promotes the integration of "AI + Healthy Lifestyle" education into the higher education system and encourages students to actively participate in community services, thereby strengthening intergenerational bonds. Furthermore, the centre aims to share healthy lifestyle-related training resources with global partners through the IIOE platform to advance educational equity.

The establishment of IIOE Training Centres indicates that, while strengthening AI application and industrial talent development training in the Global South, IIOE is also leveraging the resource advantages of institutions in high-income economies. This will help enrich the IIOE "AI + Industry" training content, promote the implementation of training programmes in more countries and territories, and build a new ecosystem to foster North-South linkages for industry-academia collaborative talent development. Looking ahead, IIOE will continue to support the establishment and effective operation of Training Centres.

2.2.3 IIOE Regional Centre and Other Partners: Accelerating Resource Sharing and Deepening Policy Coordination

In collaboration with influential regional organisations, IIOE facilitates the wide dissemination of educational resources and policy coordination, building a regional operational system with catalytic impact. For example, the IIOE Arab Regional Centre, established by UNESCO-ICHEI and the Association of Arab Universities, relies on the association's extensive university network and influence to address common needs for higher education digital transformation within the region. By integrating high-quality local resources, it scales up training in educators' digital and AI competencies, promotes the recognition of IIOE training at the regional level, and facilitates cross-border alignment

of standards and policies. Meanwhile, UNESCO-ICHEI is actively working with the Southeast Asian Ministers of Education Organization and the Southern African Regional Universities Association to establish the **IIOE Southeast Asia Regional Centre** and **IIOE Southern Africa Regional Centre**, respectively. Both are expected to be operational in 2026.

Some IIOE partner organisations, through the localisation of IIOE resources, have successfully transitioned from "singular training" to "systematic empowerment". For instance, the **Inter-University Council for East Africa (IUCEA)** used IIOE "GenAI for Higher Educational Professionals" micro-certification course series to conduct training of trainers. It implemented hybrid empowerment activities on AI literacy and pedagogical methodology for master trainers from various East African universities. Based on regional needs, IUCEA also developed GenAI course resources and learning pathways adapted to the East African region. Moreover, online training was organised via the IIOE platform for over 140 member institutions of IUCEA, driving the advancement of digital teaching



Figure2-19 IUCEA actively promoted capacity-building programmes for higher education professionals and exchanges among universities in East Africa

concepts and models in the region. Looking ahead, IUCEA will locally host IIOE training content to better scale its reach, targeting academics in the region on a cohort basis over the next five years.

The National Center for Professional Development "Orlue", Kazakhstan translated the GenAI courses jointly developed by the UNESCO Institute for Information Technologies in Education and UNESCO-ICHEI into Kazakh, and localised course materials in line with the country's key educational priorities. Through the Orleu online course platform, over 324,000 teachers nationwide enrolled in the training, among whom more than 252,000 teachers (77 per cent) completed the courses and obtained certificates. Orleu has integrated the training programme into the national in-service teacher training system, providing institutional support for its rapid roll-out.

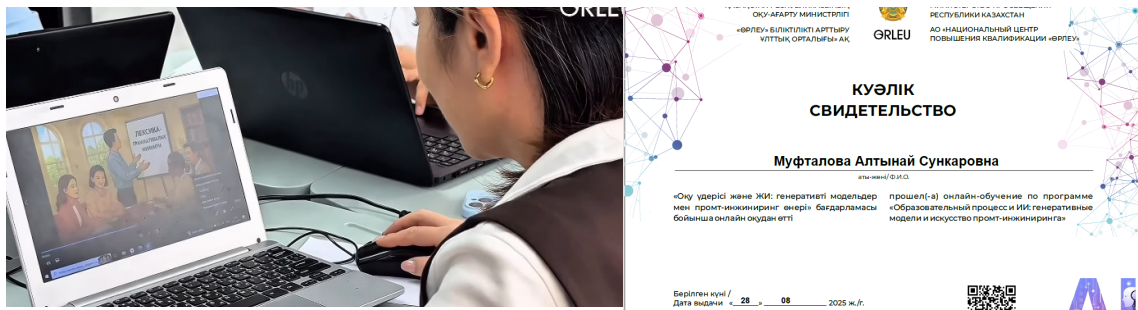


Figure 2-20 National Center for Professional Development "Orlue", Kazakhstan provided AI training using course resources developed by UNESCO-ICHEI and UNESCO IITE

2.3 Multilateral Cooperation Yields IIOE's Fruitful Outcomes

IIOE has consistently adhered to the principle of "extensive consultation, joint contribution, and shared benefits", committed to maximising synergy by leveraging the complementary strengths of multiple stakeholders. From the co-construction of infrastructure foundations and high-quality training resources through **industry-academia collaboration**, to the fostering of regional policy consensus and practical guidance through **multilateral dialogue**, and to the recognition of outstanding practices and global exchange of experiences inspired by **pioneer cases**, IIOE has established a collaborative empowerment system. This spirit of synergy ensures that every innovation resonates within the IIOE ecosystem, shaping a win-win collaborative community for the digital and AI-enabled development of higher education.



Figure 2-21 IIOE Collaborating Principles

2.3.1 Enterprise Cooperation: From Infrastructure Enhancement to High-Quality Resource Co-Development

Industry-academia cooperation is a key pillar in promoting the digital and AI-enabled transformation of higher education. IIOE has partnered with technology enterprises to achieve fruitful results in areas such as infrastructure development and resource co-construction. For example, the Smart Classroom Project, with academic support from the Southern University of Science and Technology, hardware and software facilities provided by enterprises, and technical standards set by UNESCO-ICHEI, has been implemented at IIOE partner institutions.

Unlike traditional support models centred primarily on hardware provision, the Smart Classroom Project provides a comprehensive solution that integrates software and hardware with an application-oriented approach and continuous iteration. In addition to hardware facilities, it simultaneously provides teaching systems, smart office software, and other digital application tools. By upgrading the teaching and learning environment, it drives the transformation of pedagogical models. To date, Smart Classrooms have been constructed and put into use in 17 countries. Looking forward, UNESCO-ICHEI will actively seek in-depth cooperation with prospective enterprises to continuously establish benchmark Smart Classrooms at IIOE partner institutions. Through demonstration effects, the project will support and empower the digital transformation of local education ecosystems.

Table 2-2 Partner Enterprises and Higher Education Institutions of the Smart Classroom Project

Partner Enterprise	Region	Country	Partner Higher Education Institution
WEDON Education	Asia	Pakistan	University of Engineering and Technology, Lahore
		Cambodia	Royal University of Phnom Penh
		Sri Lanka	University of Colombo
	Africa	Egypt	Ain Shams University
		Djibouti	University of Djibouti
		Ethiopia	Addis Ababa University
China Education Informatization Industry Alliance	Asia	Mongolia	Mongolian University of Science and Technology
		Indonesia	Bandung Institute of Technology
	Africa	Uganda	Makerere University
		Kenya	University of Nairobi
		Gambia	University of The Gambia
		Nigeria	Ahmadu Bello University
MAXHUB	Asia	Nepal	Tribhuvan University
		Malaysia	Universiti Putra Malaysia
Guangzhou Dazzleview Intelligent Technology Co., Ltd.	Asia	Kyrgyzstan	Kyrgyz National University
		Uzbekistan	Tashkent University of Information Technologies
OS-EASY	Africa	Ghana	University of Cape Coast

In terms of resource co-construction and talent development, IIOE engages with industrial frontiers, partnering with leading enterprises and industry associations to develop “AI + Industry” micro-certification programmes. For example, UNESCO-ICHEI and BGI Group jointly developed the IIOE “AI + Life Sciences” course series based on real enterprise business scenarios, effectively bridging the gap between academic theory and workplace requirements. UNESCO-ICHEI will also explore collaboration with BGI Group to develop “Life and Health Sciences Literacy” micro-certification courses for university faculty, administrators, and continuing education learners. This aims to empower higher education professionals to become early adopters and communicators of cutting-edge health technologies, thereby enriching the “AI + Industry” curriculum matrix across the dual dimensions of talent cultivation and health literacy enhancement.

UNESCO-ICHEI and the China Association of Trade in Services co-developed the IIOE “AI + Cross-Border E-Commerce” micro-certification programme, aiming to cultivate local employment and entrepreneurial talent essential for industrial development in pilot countries. Furthermore, UNESCO-ICHEI has collaborated with partner enterprises such as Alibaba Cloud and SenseTime & Shangyu Technology to jointly build “GenAI for Higher Education Professionals” and “AI + Discipline” micro-certification courses, continuously expanding IIOE’s suite of empowerment resources.



Figure2-22 IIOE courses developed jointly with the industry (Partial)

2.3.2 Multilateral Dialogue: Facilitating Joint Initiatives and Cooperation Guidelines

Leveraging its advantages as an international platform for multilateral dialogue, exchange, and cooperation, IIOE partners with UNESCO, international and regional organisations, higher education institutions, and other stakeholders to organise regional high-level policy dialogues, IIOE annual partnership meetings, thematic consultations, and other events on higher education development. These meetings provide an opportunity for all parties to share good practices in higher education digitalisation, explore technological innovation pathways and implementation solutions, as well as promote multilateral coordination and the achievement of cooperation consensus across regions and institutions. The outcomes of the meetings offer solid support and practical guidance for the digital transformation and high-quality development of higher education.

Since 2024, UNESCO-ICHEI has collaborated with IIOE National Centres, partner institutions,

relevant national higher education authorities, international organisations, and other partners to convene regional high-level policy dialogues. This helps establish a long-term mechanism for multi-stakeholder dialogue and exchange within regions, assisting relevant national bodies in formulating sound, practical, and effective policies and strategies for the application of AI in higher education. As of June 2026, five regional high-level policy dialogues have been successfully held in Southeast Asia (Jakarta, Indonesia, April 2024), Central Asia (Tashkent, Uzbekistan, June 2024), Africa (Dakar, Senegal, December 2024), East Asia (Ulaanbaatar, Mongolia, June 2025), and South Asia (Kathmandu, Nepal, May 2026). This dialogue mechanism will continue to be extended to Latin America and the Caribbean, the Arab region, Southern Africa, and other regions in the future.



Figure2-23 On April 25th, 2024, Southeast Asia Regional High Level Policy Dialogue was held in Jakarta, Indonesia themed “Leading Effective Integration of GenAI in Higher Education”



Figure2-24 On June 24th, 2024, High-level Policy Dialogue in Central Asia was held in Tashkent, Uzbekistan, themed “Facilitating GenAI-Driven Higher Education Transformation”

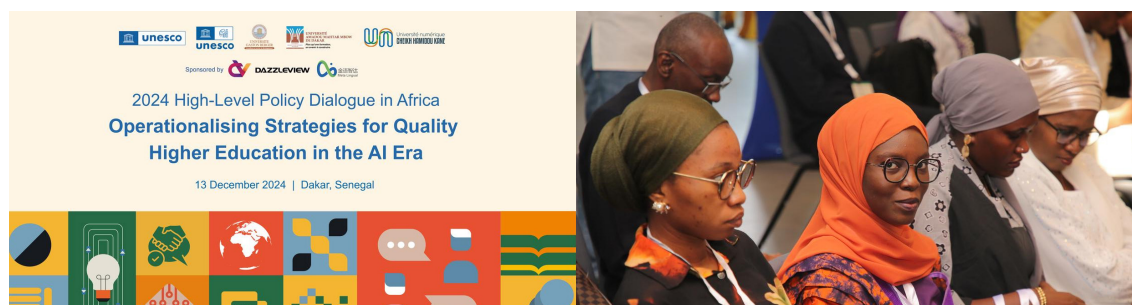


Figure2-25 On December 13th 2024, High-level Policy Dialogue in Africa was held in Dakar, Senegal, themed “Operationalising Strategies for Quality Higher Education in the AI Era”



Figure2-26 On June 30th 2025, High-level Policy Dialogue in East Asia was held in Ulaanbaatar, Mongolia, themed "Fostering an AI-enabled Higher Education Ecosystem."



Figure2-27 On May 20th 2026, Leadership Policy Dialogue in South Asia was held in Kathmandu, Nepal, themed "Charting Responsible and Innovative AI Integration in Higher Education"

2.3.3 Pioneer Case Award: Recognition, Inspiration, and Influence

In 2023, UNESCO-ICHEI launched the IIOE Higher Education Digitalisation Pioneer Case Award. **The Award is rooted in IIOE, an evolving educational digital ecosystem jointly built by global partner institutions. It recognises, encourages, and shares outstanding practices emerging from the digital transformation of higher education.** Based on long-term collaboration with partners and localised educational contexts and needs, the Award continuously identifies innovative practices that are adaptable and transferable, thereby promoting the collective progress of the entire IIOE ecosystem



Figure2-28 2023.12.07-09 The awarding ceremony of the 2023 IIOE Higher Education Digitalisation Pioneer Case Award

UNESCO-ICHEI convened an International Review Committee composed of experts from the UNESCO system, higher education institutions, enterprises, and other fields. Committee members conduct anonymous reviews of submitted cases from diverse professional perspectives. All evaluation decisions are made through majority consensus, ensuring the professionalism and impartiality of the review process. **Innovation, inclusiveness, equity, and sustainability - these four dimensions collectively constitute the evaluation framework for the Pioneer Case Award. They embody the pursuit of educational equity, the encouragement of collaborative innovation, and the emphasis on long-term mechanisms, aiming to inspire global innovation through local practices.**

The inaugural Award in 2023, supported by the BYD Charity Foundation, was themed on **Reform and Innovation in Blended Learning in Higher Education**, actively echoing the global shift in educational modalities towards blended models. The Award attracted participation from 83 institutions, and 9 enterprises across 42 countries, ultimately selecting 22 winning cases that showcased the dynamic exploration of developing countries amidst the wave of digitalisation. The Award focused on key dimensions such as classroom teaching innovation, resource development, student support, institutional governance, and educational equity. It encouraged the formation of flexible learning pathways responsive to the future needs of education, enhancing quality while ensuring flexibility, and helping to narrow educational disparities both between and within countries.



Figure2-29 2025.09.01 The award ceremony of the BGI Group · 2025 IIOE Higher Education Digitalisation Pioneer Case Award

The theme for the BGI Group · 2025 IIOE Higher Education Digitalisation Pioneer Case Award was **"IIOE Ecosystem-Driven Promising Practices: Empowering Workforce, Innovation, and Collaboration"**. It focused on four key areas: developing digital and AI competencies through IIOE micro-certification, enabling localised digital empowerment initiatives through IIOE National Centres, leveraging smart classroom operations for teaching and learning innovation and excellence, and strengthening global industry-university collaboration for higher education digital empowerment. This edition drew submissions from 48 higher education institutions and 13 enterprises across 29 countries, recognising 22 exemplary practices. They collectively showcased the forefront achievements of Global South countries in building educators' digital and AI competencies, curriculum innovation, and digital infrastructure upgrading.

3. IIOE's Future Directions: Technology Empowerment, Multilateral Collaboration, Localised Operation, and Mutual Benefit



The core of technology empowerment lies in talent development. Guided by a technology-driven, people-centric approach, IIOE will centre on "AI + Discipline" and "AI + Industry" technology application micro-certification training, expanding the target of capacity building from higher education professionals to students and relevant practitioners. IIOE will cultivate future-ready industrial talent and play a more proactive and leading role in the digital and AI-enabled transformation of higher education.

IIOE will deepen the ties of industry-education integration. By partnering with enterprises and industry associations, IIOE will help build a localised talent development system that aligns educational provision with industrial demand through a complete pipeline of "learning, practical training, and employment/entrepreneurship". Consequently, learners will acquire transferable, hands-on industry experience beyond micro-certifications, empowering them to become the visionary leaders driving transformation in strategic emerging sectors.

IIOE will further strengthen the pivotal roles of National Centres, Training Centres, and Regional Centres in the ecosystem. Through this multi-tiered, interlinked network, IIOE will continuously promote the alignment of frontier resources with the specific needs of higher education digital transformation, fostering localised, differentiated, and sustainable operational models.

Simultaneously, IIOE will further expand its network, which already spans 48 countries and brings together over 190 institutions and more than 40 enterprises. While deepening its presence in Asia and Africa, IIOE will strategically extend to other regions in the Global South, and actively initiate dialogue and collaboration with higher education institutions and organisations in high-income economies.

IIOE will also steadily expand its global expert network by building a diversified expert pool, providing cutting-edge content support and intellectual assurance for the digital and AI-enabled transformation of higher education and industry-academia collaborative talent development.

On this foundation, IIOE will strive to achieve recognition of its training programmes by the governments and industry bodies, transitioning from project-based to long-term institutional initiatives. At the same time, it will accelerate the translation of project outcomes into actionable knowledge. IIOE will produce benchmarking standards and guidelines, thereby enhancing its agenda-setting capacity in the digital and AI-enabled transformation of higher education.

As a steadfast implementer of the UNESCO Education 2030 Framework for Action, IIOE has upheld the principle of "extensive consultation, joint contribution, and shared benefits". Through the innovative pathway of "technological foresight, local adaptation, and multilateral cooperation", IIOE translates SDG 4's vision of inclusive and equitable quality education into endogenous momentum that empowers the digital and AI-enabled transformation of higher education globally.

As discussions are now being launched for the post-2030 education landscape, IIOE will be following these closely and contributing to the envisaged ecosystem of higher education beyond 2030. In

this process, IIOE will actively implement the guiding principle of “establishing a human-centred role for digital technologies and AI” , forging a vivid example of building a “new social contract for higher education” and advancing higher education as a transformative force shaping the future of humanity and the planet.¹

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ISBN 978-9948-638-78-0



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