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Digital Leadership in Higher Education:

Navigating AI, Smart Campuses & Institutional Transformation

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DX.Sea Webinar - 1

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ERAMUS+ CBHE Project: DX.Sea

DX.Sea – Accelerating Digital Transformation for Higher Education Institutions in Southeast Asia

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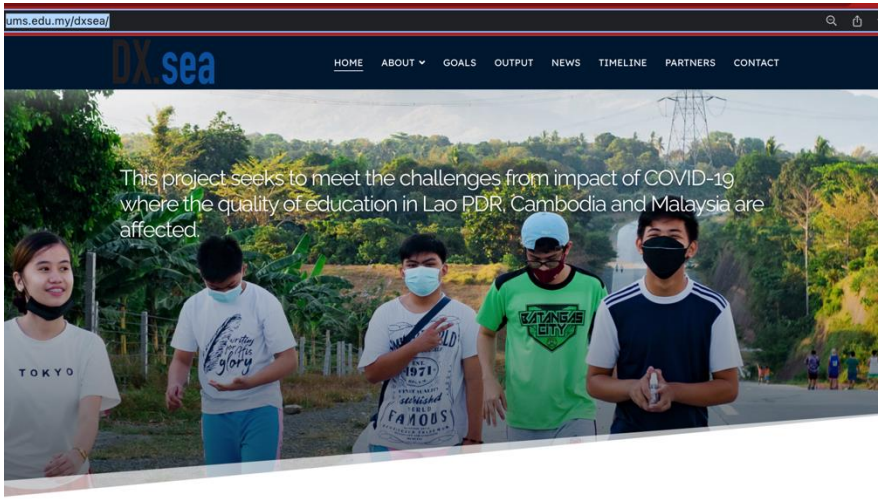

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KEY OBJECTIVES: Capacity Building Focus

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• Enhancing Digital Competence - Training university leaders, lecturers and ICT staff.

• Closing the Digital Divide: Enhancing lecturers' digital teaching methodologies.

• Improving the Quality of Digital Learning - Creating sustainable digital learning ecosystems.

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Digital Transformation and Digital Leadership in Higher Education

- *Introduction - DX*
- *Digital-first Universities*
- *Digital Leadership*

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Content

The Digital Shift: How Technology Has Changed Our Daily Lives

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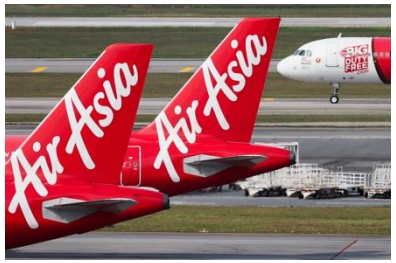
✅ Digital transformation (DX) is impacting all sectors:

- **Logistics & Transportation** → Ticketing, e-hailing, courier services, smart city mobility
- **Healthcare** → AI in diagnostics, patient records and monitoring, clinic management
- **Tourism** → Online Booking, AI-assisted One-stop-Flight-Car Rental-Airport Transfer-Hotel-Attractions-Insurance, Smart travel assistants, navigation, AI-assisted travel itinerary
- **Public Services** → Passport, Immigration
- **Financial Services** → Cashless, banking services, transactions, e-wallet
- **Commence** – AI-assisted advertising, marketing and sales



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DX in Higher Education: How Should University Leaders Respond?

- ✅ Digital transformation in higher education
  - *Are we embracing DX at the same pace as in other sectors?*
- ✅ Can we apply these same transformation principles to higher education?
  - *If customer service is now powered by AI chatbots, can universities provide AI-powered academic advising?*
  - *If national ID systems are moving to digital verification, can universities adopt AI-powered identity verification?*
  - *If AI can detect fraud in financial transactions, can AI monitor academic integrity in exams and assessments?*
- Are we keeping up with our own expectations?

Don't Miss AI Week with Four Free Webinars

Artificial intelligence is transforming higher education, affecting how we teach, how students learn, and how institutions operate. How can colleges and universities respond effectively? "AI Week" (March 24–27, 2025), brought to you by AAC&U's Institute on AI, Pedagogy, and the Curriculum, features four expert-led webinars designed to help you navigate AI's rapidly evolving role in higher education. **Participation is free!**

AI Week Webinars

The State of AI in Higher Education and What Is to Come
March 24, 4:00 p.m. ET
Hear from higher education leaders on AI's impact, the trends they're observing, and the strategic decisions guiding their institutions in 2025 and beyond. **Learn more and register.**

How Colleges Are Responding to AI
March 25, 3:00 p.m. ET
Learn how other campuses are moving forward in the new era of human learning. **Learn more and register.**

Writing and Writing Instruction in the Era of AI
March 26, 1:00 p.m. ET
Explore how AI is transforming writing instruction and assessment, and discover strategies to help students develop essential communication skills for academic, professional, and digital contexts. **Learn more and register.**

Navigating the AI Revolution
March 27, 2:00 p.m. ET
Gain insights from leading experts on how institutions respond to AI's rapid evolution and what the future holds for teaching, learning, and academic integrity. **Learn more and register.**

What Are Digital-First Universities?

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Digital-first universities are institutions that **prioritize digital technologies** at the core of their teaching, learning, administration, and overall student experience.

Instead of merely adapting digital tools to existing traditional models, these universities design their academic and operational strategies around digital transformation from the outset.

Key Characteristics of Digital-First Universities

- **Online & Blended Learning as the Norm**
- **Cloud-Based & AI-Powered Education Platforms**
- **Digital Credentials & Micro-Certifications**
- **Data-Driven Decision Making**
- **Strong Industry & Public-Private Partnerships**
- **Seamless Integration of Emerging Technologies**

DX Case Studies of Digital-First Universities

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Universities	Key Digital Transformation Initiatives
Massachusetts Institute of Technology (MIT) – USA	✅ MIT Open Learning & MITx – AI-powered digital courses with adaptive learning. ✅ Digital Twins in Research & Education – Uses AI simulations to replicate real-world scenarios.
University of Edinburgh – UK	✅ AI-Driven Adaptive Learning – AI personalizes coursework based on student interactions. ✅ Digital Student Services – Automated chatbot advisors & AI-powered enrollment processing.
Delft University of Technology (TU Delft) – Netherlands	✅ AI-Powered Learning Environments – Uses AI for automated assessments & grading. ✅ Cloud-Based Research & Learning – Fully digital learning labs for engineering students. ✅ Blockchain-Based Digital Credentials – Secure degree verification with AI integration.
National University of Singapore (NUS) – Singapore	✅ AI-Powered Personalized Learning – Uses machine learning to customize courses. ✅ Virtual Campus & AI Chatbots – Automates student inquiries & administrative processes. ✅ Micro-Credentials & Flexible Digital Learning – Stackable degrees via digital platforms.
University of Queensland (UQ) – Australia	✅ AI-Driven Course Design – Uses data analytics & AI to improve course delivery. ✅ Smart Campus AI – IoT-powered student tracking & environmental monitoring. ✅ Digital-First Assessments – AI-driven grading & proctoring for exams.
Arizona State University (ASU) - USA	✅ ASU+ GSV Innovation Hub – Uses AI & Big Data to enhance learning personalization. ✅ AI-Driven Predictive Analytics – Flags at-risk students & suggests personalized interventions.

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Digital Leadership Competencies in Higher Education

- *Digital Leadership (DLX) Competencies*
- *DLX Assessment*

Understanding Digital Leadership

- ✅ University leaders must drive change!
  - *"What is one digital transformation challenge in your university, and how do you think leadership can address it?"*
- ✅ What is Digital Leadership?
  - It's not just about technology but **vision and culture change**.
  - It's about **developing a strategy** for sustainable digital transformation that improves student experiences, faculty engagement, and institutional efficiency.
- ✅ Core Responsibilities of Digital Leaders:
  - **Setting a Vision** – Aligning digital transformation with institutional goals.
  - **Driving Cultural Change** – Overcoming resistance and fostering innovation.
  - **Ensuring Ethical Leadership** – Promoting the responsible, inclusive, and secure use of digital technologies.
  - **Building Digital Competency** – Fostering a culture of digital readiness and continuous learning.

Digital Leadership Competency Self-Assessment

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- **Objective:** Help participants reflect on their own **digital leadership strengths & gaps**.
- **Scoring:** Participants rate **each competency on a scale from 1 (low) to 4 (high)**.
- **Survey Questions (Digital Leadership Competencies Assessment)**

QR Code

https://uwyo.sjc1.qualtrics.com/jfe/form/SV_emVfZyI7nIIQ9uK

Essential Digital Leadership Competencies for University Leaders

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Digital Leadership Competency	Description	References
1 Digital Vision & Strategic Leadership	Ability to develop, communicate, and execute a university-wide digital transformation strategy aligned with institutional goals.	• *MIT Sloan Digital Leadership Model* • *International Society for Technology in Education (ISTE)* • *Jisc Digital Learning Framework* • *Deloitte's Digital Maturity Model (DMM)* • *McKinsey's Change Management Framework* • *International Association of Universities (IAU)* • *Educause AI Adoption Model* • *European Commission Digital Education Action Plan (2021-2027)*
2 Technology & Data Literacy	Understanding AI, learning analytics, and emerging technologies to drive innovation and informed decision-making.	
3 Cybersecurity, Ethics & AI Governance	Ensuring responsible AI adoption, protecting data privacy, and maintaining cybersecurity compliance.	
4 Student-Centric Digital Learning & Pedagogy	Enhancing online learning, blended models, and digital pedagogy to improve student engagement and success.	
5 Change Management & Digital Culture	Leading institutional change, overcoming resistance, and fostering a culture of continuous digital adaptation.	
6 Agile & Adaptive Leadership	Developing resilience and flexibility to respond to rapid technological shifts in higher education.	
7 Collaboration & Digital Partnership Development	Engaging with industry, government, and global institutions to drive digital innovation and research partnerships.	
8 AI & Automation in University Operations	Integrating AI-powered chatbots, faculty workload automation, and smart campus solutions for efficiency.	

Digital Leadership Rubric

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Score	Level	Description & Next Steps
35 – 40	**Visionary Digital Leader** 🚀	You lead digital transformation at your institution, aligning technology with academic and operational strategies. You foster a digital-first culture and effectively integrate AI, automation, and data analytics into learning and administration.
28 – 34	**Proactive Digital Leader** 💡	You have a solid foundation but may need to enhance expertise in AI governance, digital ethics, or change management. You are driving DX, but institutional challenges may slow progress.
20 – 27	**Developing Digital Leader** 📈	You recognize the importance of digital transformation but may lack a clear institutional strategy or support. Digital adoption is inconsistent, and faculty/staff engagement may be limited.
11 – 19	**Emerging Digital Leader** 🌱	You are in the early stages of digital leadership and may not yet have a strategic approach to digital transformation. There may be resistance to change, and institutional digital adoption is minimal.
10 or Less	**Limited Digital Readiness** ⚠️	You have minimal engagement in digital transformation, and your institution may not yet have a clear vision for digital change. There is little to no integration of AI, automation, or digital learning strategies.

Mapping AKEPT Leadership and Digital Leadership Competencies

AKEPT Leadership Domains	Digital Leadership Competencies
Personal Effectiveness – Self-Confidence, Integrity, Adaptability	Digital Agility, Growth Mindset, AI Ethics & Governance
Cognition – Analytical Thinking, Strategic Thinking, Problem-Solving	Data-Driven Decision-Making, Digital Strategy, AI-Powered Problem Solving
Leading – Visionary Leadership, Team Development, Decision-Making	Leading Digital Culture, Change Management, AI-Driven Institutional Decisions
Impact and Influence – Communication, Networking, Advocacy	Digital Stakeholder Engagement, AI-Powered Institutional Branding, EdTech Collaboration
Achievement and Action – Result Orientation, Initiative, Innovation	AI-Powered Personalized Learning, Smart Campus & Digital Growth, Institutional Innovation

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Digital Maturity Assessment (DMA)

What is Digital Maturity Assessment (DMA)?

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- A structured evaluation of a university's readiness for AI, digital governance, smart campus solutions, and digital teaching & learning**.**
- Evaluates university **readiness** for AI and digital transformation.
  ✅ Identifies gaps in:
  - 1 ***Digital Infrastructure*** *(Cloud-based LMS, AI-powered research tools).*
  - 2 ***AI in Teaching & Learning*** *(Adaptive learning, AI-assisted grading).*
  - 3 ***AI-Driven Student Services*** *(Chatbots, AI-powered career counseling).*
  - 4 ***Digital Leadership & Governance*** *(AI in decision-making, predictive analytics).*
  - 5 ***Faculty & Staff Digital Competencies*** *(Digital training, AI ethics, cybersecurity).*
- ✅ Helps universities prioritize AI-powered initiatives.

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Five Levels of Digital Maturity (Adapted from Various Models)

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5-Level DMA	Deloitte Digital Maturity Model (DMM)	MIT Sloan Digital Maturity Model	Jisc Digital Capability Framework	Educause Digital Transformation (Dx) Model
1 **Digital Awareness** (Recognizing the need but with minimal digital adoption)	**Initial / Foundational** (Basic awareness, ad-hoc digital adoption)	**Beginners / Digitally Passive** (Minimal strategy, reactive leadership)	**Emerging** (Recognizes digital transformation but lacks structure)	**Reactive** (Digital is not a priority, fragmented adoption)
2 **Digital Experimentation** (Pilot projects and fragmented adoption)	**Developing / Tactical** (Some experimentation, but not structured)	**Digitally Engaged** (Early adoption in isolated projects)	**Developing** (Digital projects exist, but no clear strategy)	**Exploratory** (Some structured digital initiatives, but uncoordinated)
3 **Digital Enablement** (Basic policies, LMS, blended learning in place)	**Operational** (Digital strategy starts aligning with operations)	**Digitally Maturing** (Digital technologies integrated, but still evolving)	**Established** (Institution-wide digital practices exist, but gaps remain)	**Enabling** (Digital transformation embedded in some core processes)
4 **Digital Integration** (Structured digital strategy, AI-powered analytics, digital decision-making)	**Advanced** (Data-driven decision-making, AI integration, institutional-wide digital adoption)	**Digitally Advancing** (Strong governance, digital leadership culture)	**Leading** (Full-scale implementation, strong digital governance)	**Transformative** (Data and AI widely used for learning & decision-making)
5 **Digital Leadership & Innovation** (Fully digital-first university, AI-powered systems, regional/global leadership)	**Innovative / Optimized** (AI, automation, and smart campus leadership)	**Digital Leader** (Institution is a pioneer in digital transformation)	**Transformational** (AI-driven, data-led, sets benchmarks for others)	**Innovative** (Leading AI-driven, digital-first university)

Digital Maturity Assessment

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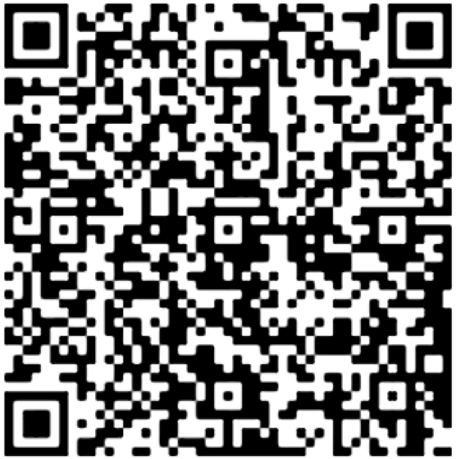
- Where does your institution stand on the **digital maturity scale?**
- **Scan the QR code on the screen and take a few minutes to complete the survey.**
- Let's find out where your institution stands and what steps can be taken to advance digital transformation

QR Code



Scan this QR Code to preview your survey on your own device.

https://uwyo.sjc1.qualtrics.com/jfe/form/SV_1Bwg4mgOQS31dk2

Digital Maturity Assessment (DMA) Rubric for Universities

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Digital Maturity Rubric (Score) 0-100	DMA Level	Description & Key Features
0 – 20 Digitally Lagging Institution ⚠️	1 **Digital Awareness**	No structured digital strategy; digital tools are used ad-hoc. AI, smart campus, and automation are not priorities. High resistance to change, and faculty/staff lack digital training.
21 – 40 Emerging Digital Institution 🌱	2 **Digital Experimentation**	Some digital projects exist, but they are isolated and lack strategic direction. LMS and online learning tools may be present, but AI and automation are minimally implemented. Leadership is reactive to digital change.
41 – 60 Developing Digital Institution 📈	3 **Digital Enablement**	Basic digital policies and tools (LMS, blended learning, some administrative automation) exist, but digital efforts remain siloed. AI-driven tools are not fully adopted, and integration across faculties is inconsistent.
61 – 80 Advanced Digital Integrator 💡	4 **Digital Integration**	Structured digital strategy with AI, LMS, and smart campus technologies in place. Faculty and student engagement in digital learning is strong, but full automation, AI governance, and cybersecurity still require improvement.
81 – 100 Digital Leader 🚀	5 **Digital Leadership & Innovation**	Pioneer in digital transformation, integrating AI, automation, and data-driven decision-making across teaching, research, and administration. Smart campus solutions, predictive analytics, and AI-powered learning are widely implemented, with global collaborations.

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Transitioning into an AI-Powered Digital-First University

- A Roadmap for University's Digital Transformation Strategy

Strategic Roadmap for Achieving an AI-Powered Digital-First University

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Level	Characteristics	Key Strategic Actions
🚀 **Digital Leader (81–100)**	AI, automation, and data-driven decision-making are fully embedded. Leads in digital education innovation.	✓ Scale **AI-driven learning & research**. ✓ Expand **global partnerships & EdTech collaborations**. ✓ Invest in **blockchain credentials & predictive analytics**.
💡 **Advanced Digital Integrator (61–80)**	AI, LMS, and smart campus solutions exist but need full integration.	✓ Strengthen **AI governance & faculty AI training**. ✓ Expand **AI-powered student services** (advising, career guidance). ✓ Enhance **cybersecurity & ethical AI frameworks**.
📈 **Developing Digital Institution (41–60)**	Basic digital tools exist, but AI adoption is inconsistent.	✓ Standardize **AI integration** across teaching & research. ✓ Invest in **learning analytics & automation**. ✓ Strengthen **faculty AI & digital skills training**.
🌱 **Emerging Digital Institution (21–40)**	Digital adoption is fragmented, with limited AI implementation.	✓ Develop a **formal AI strategy** with leadership buy-in. ✓ Launch **pilot AI initiatives** for teaching & student support. ✓ Improve **digital governance & cybersecurity policies**.
⚠️ **Digitally Lagging (0–20)**	No structured digital strategy; minimal AI adoption.	✓ Start with **basic AI literacy & faculty training**. ✓ Identify **small, scalable digital projects**. ✓ Benchmark with **AI-driven universities** for best practices.

Key Takeaways: The Future of Higher Education is Digital-First

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- ✅ **Digital Transformation is Inevitable**
  - – Higher education must evolve like other industries (finance, healthcare, logistics, business etc).
- ✅ **Digital Leadership is Critical**
  - – Strong leadership is needed to drive cultural change, innovation, and institutional transformation.
- ✅ **AI-Driven Universities are the Future**
  - – AI-powered learning, smart campus solutions, and automation enhance efficiency and student outcomes.
- ✅ **Digital Maturity Varies**
  - – Universities fall into different levels of **Digital Maturity**, but all institutions must advance toward digital integration.
- ✅ **Strategic Roadmap is Essential**
  - – A structured **AI-powered digital-first strategy** ensures sustainable transformation.

Moving Forward: What's Next?

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🔷 Where does your institution stand in **Digital Maturity?**
🔷 What steps can your university take to become a **digital-first institution?**
🔷 How can you contribute as a **digital leader** in your institution?

- Let's drive the future of higher education **together!** 🚀
- *"A truly digital-first university isn't just about using technology—it's about reimagining education, empowering learners, and leading the transformation. The future belongs to institutions that innovate, adapt, and embrace change." Nordin Yahaya*

"We are preparing students for jobs that don't yet exist, using technologies that haven't been invented, to solve problems we don't even know are problems yet."
– Richard Riley, Former U.S. Secretary of Education

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THANK YOU

FOR YOUR ATTENTION

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