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Taiwan's AI Talent Training Strategy: Focus on the Ministry of Education's Policy Promotion Plan

OBJECTIVES

Background

- "Digital Country, Smart Island"
- Digital Transformation Policy (DIGI+)
- Smart National Plan (2021-2025)



Policy Implementation

- Taiwan's "AI Action Plan 2.0"
- Taiwan Ministry of Education's Initiatives for Optimizing and Expanding AI Talent
- Ministry of Education's AI Talent Training Plan



Outcomes

- AI Research Talent
- AI Applied Talent
- Higher Education Recruitment





Background of Implementation

Background of Implementation

“Digital Country, Smart Island”

1. **2016:** Introduction of President’s policy “**Digital Country, Smart Island**”.
2. **2017: Digital Transformation Policy (DIGI+)**, also known as the Digital Nation & Innovative Economic Development Program(2017-2025).
3. **2021:** The policy was renamed the “**Smart National Plan** (2021-2025),” with the goal of becoming a smart nation that achieves innovation, inclusivity, and sustainable development by 2030.





Implementation Policies and Objectives

Taiwan's "AI Action Plan 2.0"

This action plan is part of the 'Digital Government Program 2.0' of Taiwan (2021-2025). It was developed by the Smart National Promotion Team, a cross-ministerial consultative body under the Executive Yuan.

Implementation Policies and Objectives

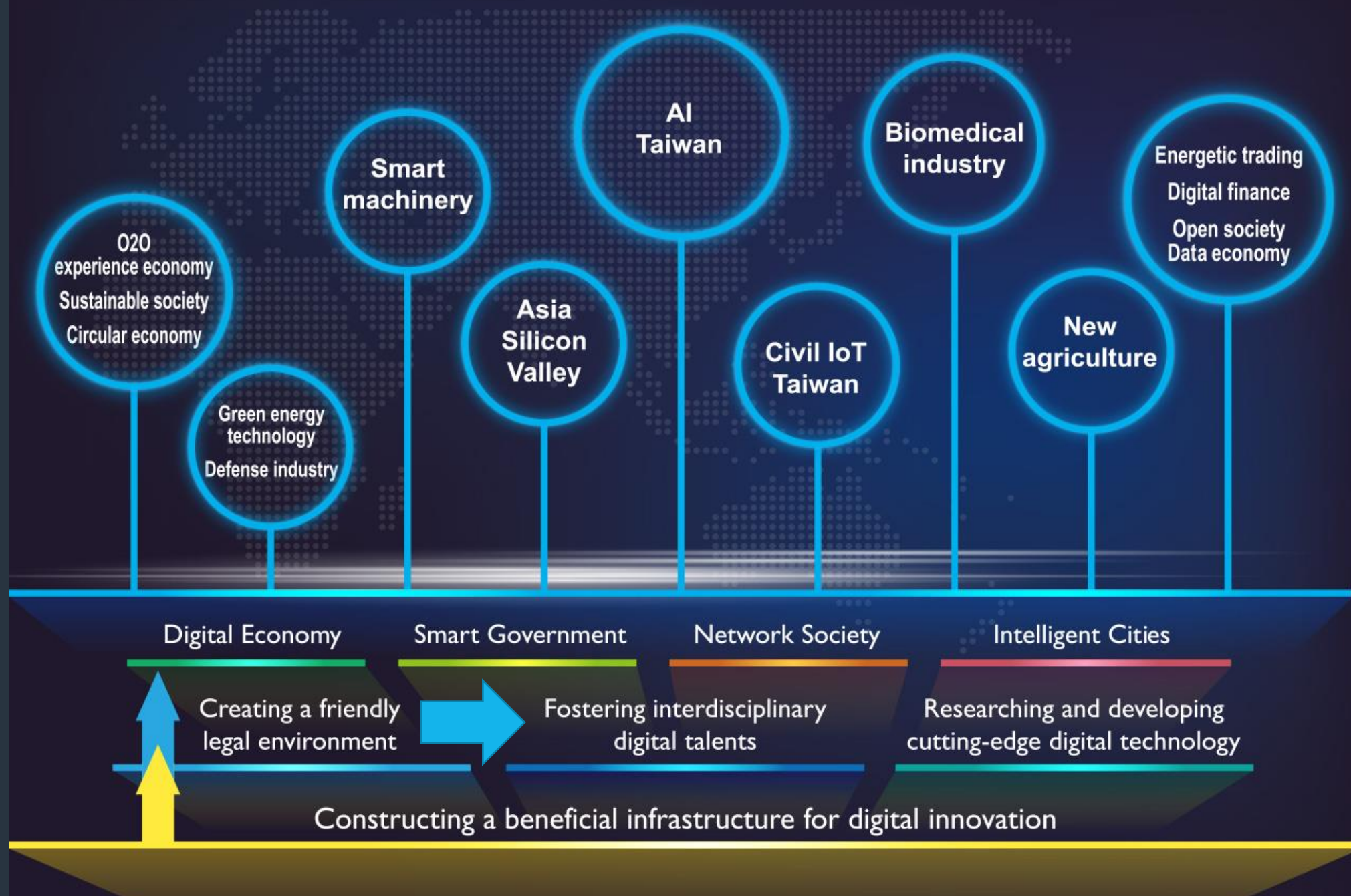
Goals of Taiwan's "AI Action Plan 2.0"

Target	Details
Industrialization and Standardization of AI	The effect of corporate adoption of artificial intelligence and the increase in production of artificial intelligence-related hardware and software exceeded 250 billion NTD .
Solving Social Problems Using AI	Develop 3-5 AI verification measures to address critical social challenges such as labor shortages and carbon neutrality.
Enhancing National AI Capabilities	Strengthen Taiwan's AI competitiveness and establish collaboration with leading AI countries.



Based on AI Talent Program

Toward a Smart Sustainable Human-centric DIGI⁺



The background features a dark blue field with a glowing, semi-transparent globe in the center. A network of thin, light blue lines connects various points across the globe and extends into the background, creating a sense of global connectivity and technology.

Policy Implementation

Taiwan Ministry of Education's Initiatives for Optimizing and Expanding AI Talent

Goals

- **Emphasis on basic education:** Development of AI capabilities for students from elementary and secondary education
- **Optimizing Higher Education:** Cultivate AI professionals to meet industrial demands; aiming for top rankings of Tortoise Media's the Global AI Index.



Figure1. 'AI treasure hunt' .Artificial Intelligence Talent Cultivation Program Website

Taiwan Ministry of Education's Initiatives for Optimizing and Expanding AI Talent

Key Initiatives

- **Basic Education:** Provide AI learning opportunities for elementary, middle, and high school students.
- **Higher education:** Focus on industry demands and enhance the professional capabilities of cross-field talents.

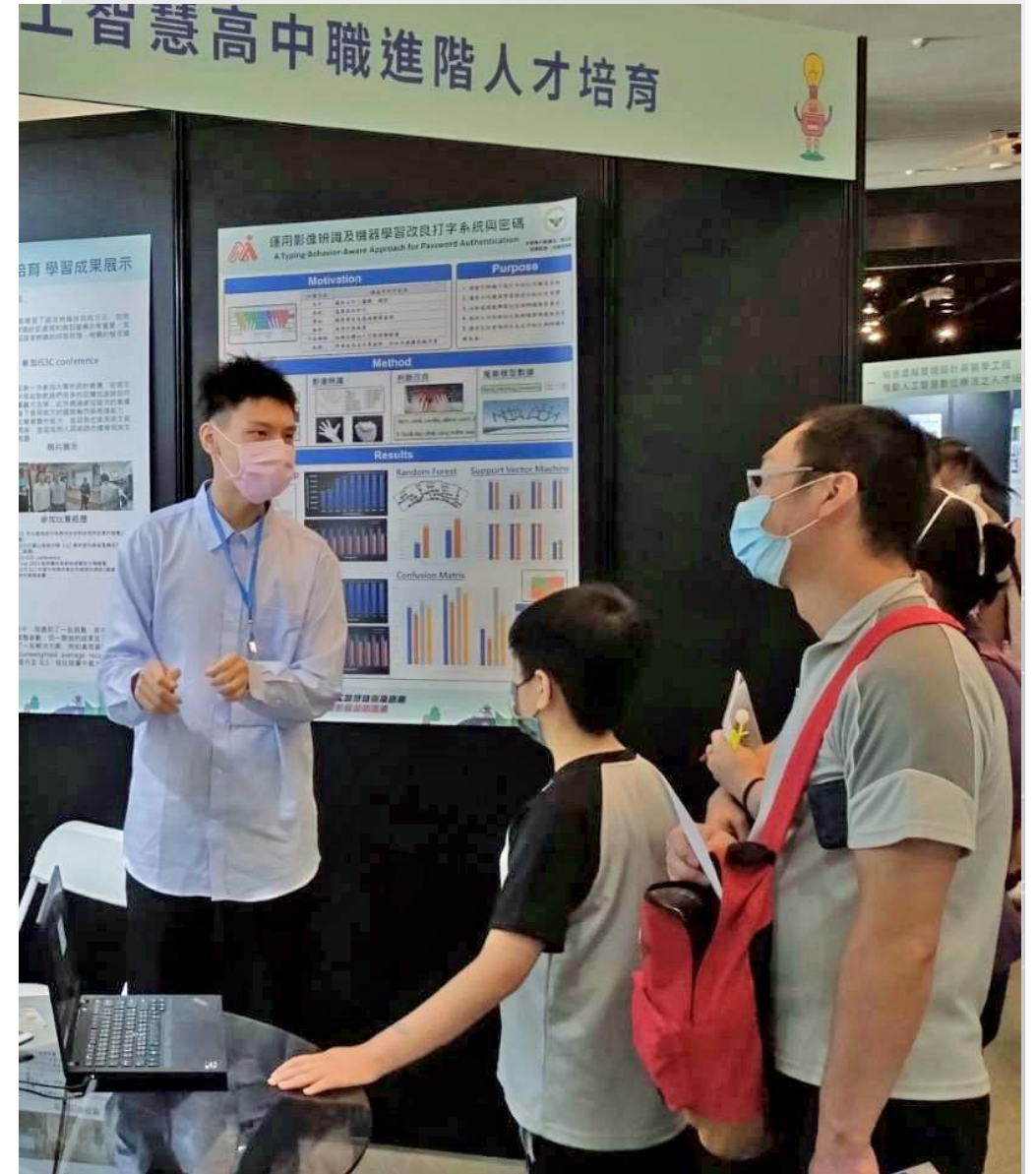


Figure 2. 'AI High School Talent Cultivate Program'. Artificial Intelligence Talent Cultivation Program Website

Ministry of Education's AI Talent Training Plan (Basic Education)

Goals

- **Training AI Seed Teachers.**
- **Developing AI Curricula for Schools:** Support AI education in elementary, middle, and high schools, including the training of high-quality human resources in general and vocational high schools.
- **AI Course development:** Develop AI textbooks and teaching plans, e.g., "Making Friends with AI."

Ministry of Education's AI Talent Training Plan (Basic Education)

Special Projects (since 2024)

- **High School AI Elective Courses:** Collaboration with universities, 23 high schools have been selected with an emphasis on online classes to ensure education opportunities for urban and rural students.
- **AI Competitions:** Holding an AI Elite Competition for elementary, middle, and high school students, in order to encourage them design AI model to think and learn.

Ministry of Education's AI Talent Training Plan (Higher Education)

Program Components

- **AI Technology and Applications Curriculum:** Develop comprehensive AI-related courses.
- **Industry-Academic Cooperation:** Facilitate partnerships between academia and industry.
- **Curriculum Analysis and Improvement:** Regularly assess and update AI-related curricula.

Ministry of Education's AI Talent Training Plan (Higher Education)

Competitions:

- **AI Data Collection and Source Marking Competitions:** Host the AI CUP, a nationwide AI competition for universities.
- **Strengthening AI talent capabilities in each area**
- **Resource Enhancement:** Improve AI practice resources and platforms.

Ministry of Education's AI Talent Training Plan (Higher Education)

Special Projects (from 2024):

- **Taiwan University AI College Alliance (TAICA):** Establish credit exchange courses in four areas across 25 universities:
 - 1) AI Exploration and Application
 - 2) AI Industrial Application
 - 3) AI Natural Language Processing
 - 4) AI Visual Processing Technology

Ministry of Education's AI Talent Training Plan (Higher Education)

Special Projects (from 2024):

- **Artificial Intelligence (AI) and Information Security Master's Talent Program for Colleges and Universities:**
 - ✓ **Expansion of Talent Training Targets:** Increase the recruitment of AI-related master's candidates by 450 per year (2020-2030), aiming to cultivate 83,000 talents in related fields by 2030.

Ministry of Education's AI Talent Training Plan (Higher Education)

Special Projects (from 2024):

➤ Artificial Intelligence (AI) and Information Security Master's Talent Program for Colleges and

Universities:

- ✓ **Artificial intelligence chip system and application talent training plan:** Establishment of alliance in three fields (AI chip medical system, on-device AI chip system, smart environment AI chip system)*Through the PBL method, products are designed according to the needs of the company and promote the training of necessary teachers and talents jointly with the company.



Accomplishments

Ministry of Education's AI Talent Training Plan

Accomplishment: Basic Education

(2022-2023)

	2022	2023
Developing AI Curricula for Schools	5,954 students participated	Over 4,000 students participated
AI Mentor	21 high school teachers participated	N/A
Training AI Seed Teachers	92 teachers participated	220 teachers participated

Ministry of Education's AI Talent Training Plan

Accomplishment: Higher Education

(2022-2023)

	2022	2023
Developing AI related Curriculum	30 Universities/ 112 classes/ 4,383 students participated	15 Universities/ 145 classes/ 5,530 students participated
AI CUP	2,651 teams/ 4,653 participants	1,987 teams/ 3,513 participants

Expected Accomplishments

1. **AI Research Talent:** Train 600 researchers annually in related fields (National Science and Technology Commission).
2. **AI Applied Talent:** Train 8,000 professionals annually in AI-related fields (Ministry of Education, Ministry of Labor, and Ministry of Digital Affairs).
3. **Higher Education Recruitment:** Increase enrollment quota of graduate-level AI and information and communication technology students by 500 each year (Ministry of Education).





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News



Taiwan's Ministry of Education to launch AI courses online

Date : 108/08/14

The Ministry of Education (MOE) will be offering courses in artificial intelligence (AI) online and expects to publish books in September.

The MOE launched Make Friend with AI, a series of online courses for elementary and junior high school students on Tuesday (Aug. 13). They are free to download online, and hard copies of the courses are slated to become available in September, said the ministry.

According to the MOE, the course's editors include professors from National Cheng Kung University and the National Taiwan University of Science and Technology. Additional workshops will be made available in December.

Date: 2019-08-13

Source: Taiwan News

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Taiwan AI Academy (AIA), established by the Taiwan AI Academy Foundation (formerly known as the Science & Technology Ecosystem Development Foundation), is a non-profit organization that aims to enhance Taiwanese industrie's competitive edge through AI-assisted solutions by providing in-person professional training.

In 2017, a group of key academic leaders visited more than twenty Taiwanese manufacturers, and helped the companie's manufacturing processes with AI-assisted solutions. The group was led by Dr. James C. Liao, President of Academia Sinica, H.T. Kung, William H. Gates professor of computer science at Harvard University and the late Dr. Sheng-Wei Chen, AIA founder and former CEO. The group recognized that urgent steps needed to be taken to transform Taiwan's industries.



Taiwan's Education Ministry announces new AI learning resources during UNESCO's Digital Learning Week

05 September, 2024 Joey Chou

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Taiwan's Education Ministry holds AI learning press conference (Photo: CNA)

In response to UNESCO's Digital Learning Week, Taiwan's Education Ministry has announced the establishment of the Taiwan Artificial Intelligence College Alliance (TAICA).

At a press conference held on Thursday, Deputy Minister of Education Benson Yeh (葉丙成) introduced a series of elective AI courses aimed at senior high students. The series includes a newly developed online auto-grading system capable of processing large volumes of student assignments.

Additionally, the third version of the digital teaching guidelines for elementary and junior high school levels, originally slated for release in October, have been published ahead of schedule. Yeh noted that this version includes digital learning leadership guidelines for principals as well as digital learning aptitude guidelines for parents aimed at helping both educators and guardians develop strategies and participate effectively in children's digital learning journey. It also provides a collection of case studies from teachers who have excelled at using generative AI in the classroom as references.

To bridge the divide between urban and rural learning, the Education Ministry will also promote generative AI teaching assistants in both junior high and elementary schools across Taiwan. Students can now receive real-time AI learning assistance by logging into the Education Ministry's Adaptive Learning website.

Ministry unveils plan to promote AI education

GAME SOLUTION: Classes would create a workforce familiar with the design and use of artificial intelligence in a professional capacity, an education official said

By Rachel Lin and Jonathan Chin / Staff reporter, with staff writer



The Ministry of Education is to unveil plans to integrate computer science studies related to artificial intelligence (AI) into public education from elementary schools through universities, Deputy Minister of Education Yeh Ping-cheng (葉丙成) said yesterday.

Taiwan must use innovation to prepare its next generation for an AI-centric economy, Yeh said a ministry-hosted international digital learning conference in Taipei.

Teachers have voiced concern that parents believe using the Internet in the classroom would mean children would play computer games too often, he said, citing his experience promoting digital learning over the past decade.



Deputy Minister of Education Yeh Ping-cheng speaks at an international digital learning conference in Taipei yesterday.

Photo: Rachel Lin, Taipei Times

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Taiwan's Ministry of Education pioneers AI education initiatives for a future-ready generation

[1 month ago](#) / [Edlyn_EDUtech_talks](#)

10 September 2024

Taiwan's Ministry of Education (MOE) has launched an initiative to integrate artificial intelligence (AI) into its elementary and middle school education systems. This effort is part of a broader strategy to establish Taiwan as a leader in AI education across Asia within the next two years, according to Deputy Minister of Education Yeh Ping-cheng. The initiative reflects Taiwan's growing commitment to fostering digital literacy and preparing students for the future of work in a technology-driven world.

AI education at all levels

The Ministry, led by Minister of Education Cheng Ying-yao, has made significant strides in advancing AI education. A key milestone is the establishment of the Taiwan AI College Alliance, designed to enhance AI curricula at the university level. This alliance connects academic institutions with cutting-edge AI developments, ensuring that university students receive top-tier education in the rapidly evolving field of artificial intelligence.

The push for AI education doesn't stop at higher education. Taiwan's high schools are beginning to offer AI courses, while younger students in elementary and junior high schools are being introduced to generative AI learning partners—interactive tools that help students explore AI concepts in an engaging way. To further motivate students, the Ministry has organised AI competitions, fostering creativity and application of AI models in real-world problem-solving scenarios.

Tailored AI programs for high school students



Thank You

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