OPENING DOORS

——How one pioneering educator sees AI expanding opportunities for Japan's next generation

The world was a very different place 24 years ago, when Michiko Kaneko first started working as a teacher in Okinawa, Japan.

For starters, there were very few women teaching electrical engineering. When she was studying the same course at university, there were only four other women in a cohort of over a hundred students. When she started teaching, she was only the second female electrical engineering educator in the entire prefecture.

And the idea of artificial intelligence being used in the classroom back then? Literally science fiction.

> *"Teaching and dealing with students used to be a much slower process," she said. "But now with AI, it's incredibly fast."*

What surprised her most, though, wasn't the speed of the technology. It was her students. Some of them were already using AI before she was — and they were better at it than she was.

> *"We teachers didn't really have enough knowledge ourselves," she recalled. "I remember thinking: what should we do about this?"*

When she tried the tools herself, she was struck by how capable they were. AI could summarize and organize ideas more effectively than she could on her own. That impressed and unsettled her in equal measure.

> *"I thought, if we could really master this, it would be great," she said. "But if we gave it to students without the right support, they would stop thinking for themselves."*

These experiences have shaped much of her work since. Kaneko is now quietly blazing two trails: encouraging more girls to pursue careers in engineering, and pioneering the responsible use of AI in the classroom.

Both efforts, she said, are connected by a common goal: helping young people see opportunities they might never have considered before.

> *"I want students to realize that their future may be bigger than they imagine. AI can help them discover possibilities they didn't know existed," she said.*
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> *"And electrical engineering isn't something only men can do! I want more girls to discover how interesting and rewarding this field can be."*

Empowering educators to lead

Stories like Kaneko's are exactly what Microsoft's mirAI for Japan Program was designed to make possible.

Developed in partnership with CLACK, a Japanese nonprofit, mirAI for Japan is an AI skilling program built specifically for K14 education. Its goal is straightforward: give educators the knowledge, confidence, and practical skills to use AI effectively and responsibly in their schools; and in doing so, transform how students across Japan learn.

The program sits within Microsoft's broader and growing commitment to Japan. An earlier US$2.9 billion investment expanded cloud and AI infrastructure while supporting large-scale AI skilling initiatives across the country. Having exceeded its original targets, Microsoft has since announced a US$10 billion commitment to further strengthen Japan's AI capabilities, infrastructure, and workforce readiness. Equipping teachers is a central part of that vision — because no investment in technology delivers its full potential unless the next generation knows how to use it responsibly.

Satoko Hashimoto from CLACK's Partner Relationship Department says mirAI for Japan was

designed with exactly that challenge in mind.

> *"In Japan, teachers are very busy — with classroom preparation, with the needs of individual students, with everything," she said. "One of the objectives of mirAI for Japan is to help teachers use AI to ease their everyday workload, so they can focus on what matters most."*

But the program goes further than efficiency. It asks teachers to think carefully about how AI changes the nature of learning itself — and how to ensure that students develop the critical thinking skills they will need for the rest of their lives

> *"Each student has a different way of learning and different skill sets," said Hashimoto. "What we hope teachers take away from the program is the ability to use AI to support every student individually, rather than teaching the whole class as one."*

A different way of learning

For Kaneko, participating in mirAI for Japan arrived at exactly the right moment.

She had first encountered AI two years earlier, when a professor from Kyoto University of Education visited her school. The lecture opened her eyes to what the technology could do, but also deepened her concerns about how it might be misused.

In electrical engineering, she explains, a large part of the learning happens not in finding the answer, but in working through the process. Students complete projects, reflect on what they did, document what they learned. It is precisely the kind of thinking that AI, used carelessly, could short-circuit.

> *"I wondered: if students simply asked AI to do all of that reflection for them, would that really be okay?" she says. "That concern felt very significant to me."*

The mirAI for Japan Program helped her find the right approach. She teaches general concepts to the whole class, but after that, students can engage with material at their own pace, using AI as a thinking partner rather than a shortcut. If they get stuck on a problem, they can ask for a hint and keep working through it themselves. Those ready to go deeper can do that on their own too.

> *"Students' levels of understanding vary," she said. "With AI, it has become possible to adjust learning according to each student's level, something that was very difficult to do previously."*

The program also changed how she approaches assessment. Creating questions that

genuinely require students to think — rather than simply recall facts — had always been one of the more demanding parts of her job. With AI, she can now generate questions from multiple angles, testing the same concept in different ways and pushing students to reason rather than remember.

> *"The kinds of questions that make students think, 'How should I approach this?' — those are exactly the ones I want to use," she says. "AI has made it much easier to create them, and that has made my work significantly more efficient."*

The shift extended beyond her own classroom. At first, many of her colleagues were skeptical. Some had never used AI and weren't sure they wanted to. But as teachers worked through the program together, attitudes changed.

> *"Once teachers realized it could make their work more efficient and help students learn more deeply, quite a few started using it," said Kaneko.*
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Finding a voice

One former student helped Kaneko understand the technology's potential in a way she hadn't anticipated; and in doing so, illustrated something the mirAI for Japan Program puts at its heart.

The student had developmental challenges that made writing extremely difficult. He could think clearly and speak fluently, but struggled to type out even the most simple sentences.

> *"No matter how much he trained, it seemed like writing was simply something he couldn't do," Kaneko recalled. "That's just how he had lived up until that point."*

He was, however, highly skilled with computers — skilled enough to build his own.

Then one day, he handed Kaneko a piece of writing. It was thoughtful, coherent, and well-expressed. She asked him how.

He showed her AI. He had been using it to help organize and develop his ideas, and as a way to finally put his thoughts on paper (or screen).

> *"Someone who couldn't write a single sentence was suddenly producing some of the best writing in the class," she said. "We were amazed."*

Today, that student has graduated and is working in manufacturing.

She thinks about what that student's future would have looked like 24 years ago, without these tools.

> *"There were so few things he would have been able to do," she said. "Things that couldn't be compensated for by effort. He would have had no choice but to avoid them. Now, I can't imagine what else is possible for him."*

Breaking glass ceilings

Kaneko's story is one thread in a much larger transformation taking place across Japan.

Microsoft's US$10 billion commitment to the country reflects a recognition that AI will reshape nearly every sector of the economy — and that the transition will only succeed if people at every level, from students to teachers to working professionals, have the skills to navigate it.

While mirAI for Japan has given her hope for the future, Kaneko is clear-eyed about the challenges that remain. Uneven access to devices and reliable internet means that not every student benefits equally. Designing schoolwork that requires genuine thinking — rather than simply prompting AI for an answer — is a challenge that teachers are still working through.。

> *"That's our responsibility," she said. "We're in an era where we need to think carefully about how we teach and adapt."*

As both a teacher and the parent of a child currently in middle school, Kaneko thinks often about the world today's students will inherit. The pace of change is faster than anything she could have imagined when she started her career.

Yet she remains hopeful — not despite the pace of change, but partly because of it.

She believes AI can help students attempt things they might once have considered beyond them: tackling difficult technical subjects, exploring fields they had written off, or finding

ways to express ideas they had previously been unable to communicate.

> *"I want students to have hope," she said. "I want them to know there are many possibilities available to them."*

It is a message shaped by lived experience. Kaneko knows what it means to walk into a room where almost no one looks like you, and to stay anyway. She knows what it takes to imagine a future that the present doesn't yet reflect.

And today, whether she is speaking to high school students about engineering and encouraging young women to explore it as a career, or helping a student use AI as a tool rather than a crutch, she is still doing what she has spent 24 years doing: opening doors that others may not yet realize are there.