Press release

The University of Osaka

Fujitsu Japan Limited

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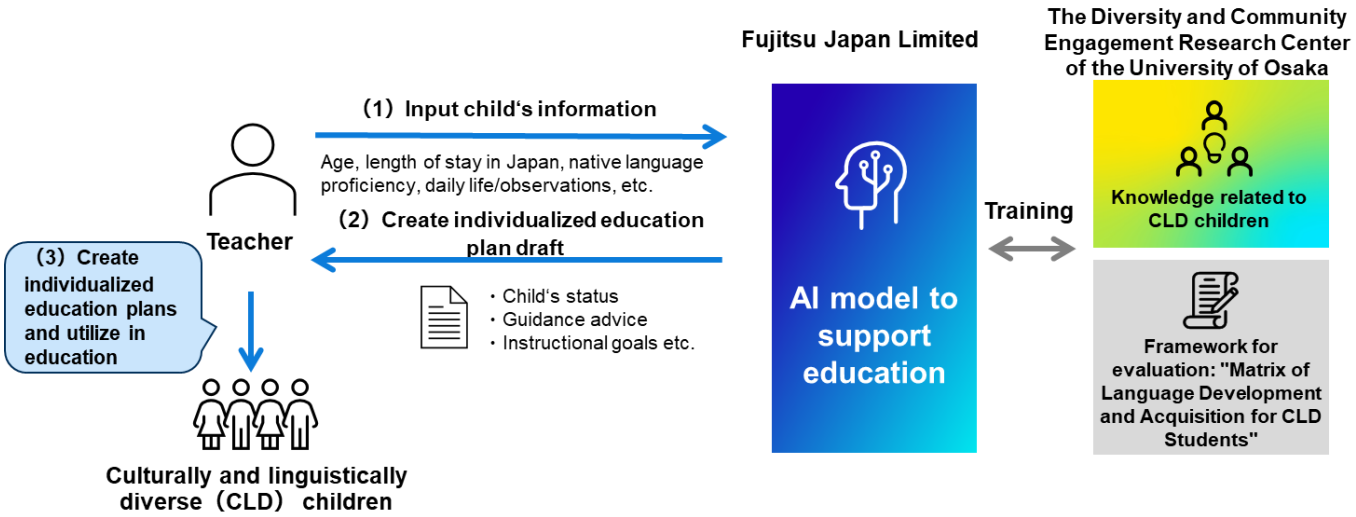
The University of Osaka and Fujitsu Japan launch joint research on AI-powered education support for culturally and linguistically diverse children in Japan

Creating an inclusive learning environment where no child is left behind

Osaka and Kawasaki, Japan – June 30, 2025 –The Diversity and Community Engagement Research Center at the Graduate School of Humanities (DERC) of the University of Osaka and Fujitsu Japan Limited today announced a joint research project focused on leveraging generative AI to provide tailored education for culturally and linguistically diverse (CLD) children. The four-month project, running from June 2025 to September 2025, will explore the use of AI to assist in creating individualized education plans for elementary, junior high, and high school students, and is the first project of its kind in Japan.

This joint research will utilize DERC's extensive expertise in supporting CLD children combined with Fujitsu Japan's AI capabilities. The project aims to develop an AI model for educational support that generates baseline individualized education programs trained on DERC's practical knowledge and the "Matrix of Language Development and Acquisition for CLD Students," (1) a new assessment framework published by the Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT) in April 2025. The project will then validate the effectiveness of this AI model.

Moving forward, DERC and Fujitsu Japan plan to collaborate with Osaka Prefecture to validate the effectiveness of the AI model for educational support by the end of fiscal year 2025. The collaboration aims to accelerate the development of an inclusive educational environment where CLD children in Japan can learn with confidence, ultimately contributing to improved educational quality and equity.



<Illustrative diagram of the joint research project and AI model for educational support>

Supporting Japan's growing population of multicultural learners: A new approach to personalized education
With the number of CLD children in Japan rapidly increasing, the need for personalized learning support is more critical than ever. Currently, over 480,000 children with foreign nationality aged 5-19 reside in Japan, with approximately 130,000 attending public elementary, middle, and high schools nationwide. Effective support requires understanding the individual proficiency and cultural/linguistic backgrounds of each student to provide tailored instruction.Teacher shortages and workload challenges represent an ongoing challenge in Japan.

To better understand how individual language development impacts academic learning, and to improve learning guidance and the educational environment , MEXT released the Matrix of Language Development and Acquisition for CLD Students in April 2025 to better assess language proficiency and provide targeted support, also revising the "Dialogic Language Assessment (DLA)" (2). Associate Professor Chiho Sakurai of the University of Osaka DERC played a key role in developing these tools and guiding schools nationwide. Leveraging this expertise and Fujitsu Japan's experience in educational technology, the joint research project aims to enhance teacher expertise in supporting CLD children and fostering improved learning environments.

Joint research details

- **Period:** June 1, 2025 to September 30, 2025
- **Contents:**
  This joint research will focus on developing and implementing an AI model for educational support that serves as a foundation for teachers, providing advice that leads to teacher awareness regarding teaching methods and attitudes toward CLD children, as well as presenting draft individualized education plans.
- **Step 1: Data Analysis and issue extraction:**
  - Collection and analysis of data regarding the factors that impact children's language development
  - Analysis of correlations between factors like the Matrix of Language Development and Acquisition for CLD Students, age, length of stay in Japan, and native language proficiency
  - Extraction of key issues in creating individualized education plans
- **Step 2: AI model development and demonstration trials:**
  - Fujitsu Japan develops the AI model and verifies its usefulness using data from Step 1
  - DERC provides advice on AI-generated individualized education plans and participates in discussions to address educational support challenges
  - Effectiveness is verified in real-world educational settings with local government cooperation
- **Roles and responsibilities**
  - **DERC:**
    - Provides expertise in language proficiency assessment and educational support for CLD children, as well as knowledge of various cultures and languages
    - Provides data related to the creation of individualized education plans
    - Examines demonstration content and solutions to challenges aimed at practical application in educational settings
  - **Fujitsu Japan:**
    - Conducts technical studies and develops prototypes of an AI model for educational support
    - Conducts verification aimed at social implementation in educational settings

Future plans
Based on the results of this joint research, DERC will continuously evaluate the new AI model for educational support for CLD children to improve its accuracy and usability. Through support for the initiatives of local communities, local governments, and schools, the center will continue to play a role as a mediator between languages, cultures, and people, aiming to solve social issues.
Fujitsu Japan aims to provide services based on the results of this joint research by March 2028. By providing services to Japanese local governments and schools facing challenges in educational support for CLD children, the company will contribute to realizing learning where no one is left behind.

Associate Professor Chiho Sakurai, The University of Osaka, comments:
“We are excited to be part of this vital project to create a truly equitable educational environment for CLD children in Japan. By re-examining their language and cognitive development within their environment, we're getting to the heart of what education should be. I'm confident that this AI technology will democratize expertise, ensuring more reliable

support for every child and paving the way for inclusive learning for all. We're also looking forward to explore how this collaborative model can transform public education and inspire future policies."

Notes

1. **Matrix of Language Development and Acquisition for CLD Students:**
   The "Matrix of Language Development and Acquisition for CLD Students " is a comprehensive assessment framework published by Japan's MEXT in 2025 to comprehensively assess the language proficiency of CLD children. It aims to grasp the actual situation of children by referring to information obtained through daily observations and "Dialogic Language Assessment (DLA)" to this framework, and to indicate the direction of guidance and support accordingly.
2. **Dialogic Language Assessment (DLA):**
   An assessment tool published by Japan's MEXT in 2014 to assess the language proficiency of CLD children. It aims to understand the strengths of children that are difficult to capture with paper tests through one-on-one dialogue. The official name is "Dialogic Language Assessment (DLA) for Culturally and Linguistically Diverse Students," and the 2025 revision enables assessment in nine languages including Japanese: Portuguese, Chinese, Filipino, Vietnamese, Spanish, English, Nepali, and Russian.

Reference URLs

- Center for Multilingual Multicultural Education and Research, Graduate School of Humanities, Osaka University: https://derc.hmt.osaka-u.ac.jp/ (in Japanese)
- Fujitsu Japan - Education website: https://www.fujitsu.com/jp/solutions/industry/education/school/ai/ (in Japanese)

About DERC

Leveraging the expertise and experience of faculty and students specializing in 25 languages, cultures, and area studies, DERC engages in support activities and educational research initiatives for CLD children. We are committed to fostering a society where multilingual and multicultural coexistence is taken for granted.

About Fujitsu

Fujitsu's purpose is to make the world more sustainable by building trust in society through innovation. As the digital transformation partner of choice for customers around the globe, our 113,000 employees work to resolve some of the greatest challenges facing humanity. Our range of services and solutions draw on five key technologies: AI, Computing, Networks, Data & Security, and Converging Technologies, which we bring together to deliver sustainability transformation. Fujitsu Limited (TSE:6702) reported consolidated revenues of 3.6 trillion yen (US$23 billion) for the fiscal year ended March 31, 2025 and remains the top digital services company in Japan by market share. Find out more: global.fujitsu.

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