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Co-Created Open Innovation for Inclusive Education

Digital Fabrication & Assistive Tools Co-creation

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I will introduce
how **sharing models and co-creating across roles** can transform inclusive education
and open new possibilities for learners.

The Challenge

Millions of learners still face:

- 1. High cost assistive devices**
- 2. Technology designed without users**
- 3. Limited access in schools and communities**
- 4. Lack of teacher training**

Technology alone does not create inclusion.
Co-creation does.

Our Approach

People-first, Co-creation-based Innovation

We bring together:

- Persons with disabilities (need-knowers)
- Educators and therapists
- Students and makers
- Designers and engineers

→ Working **together**, not separately

→ From “provider–recipient” to **equal partners**

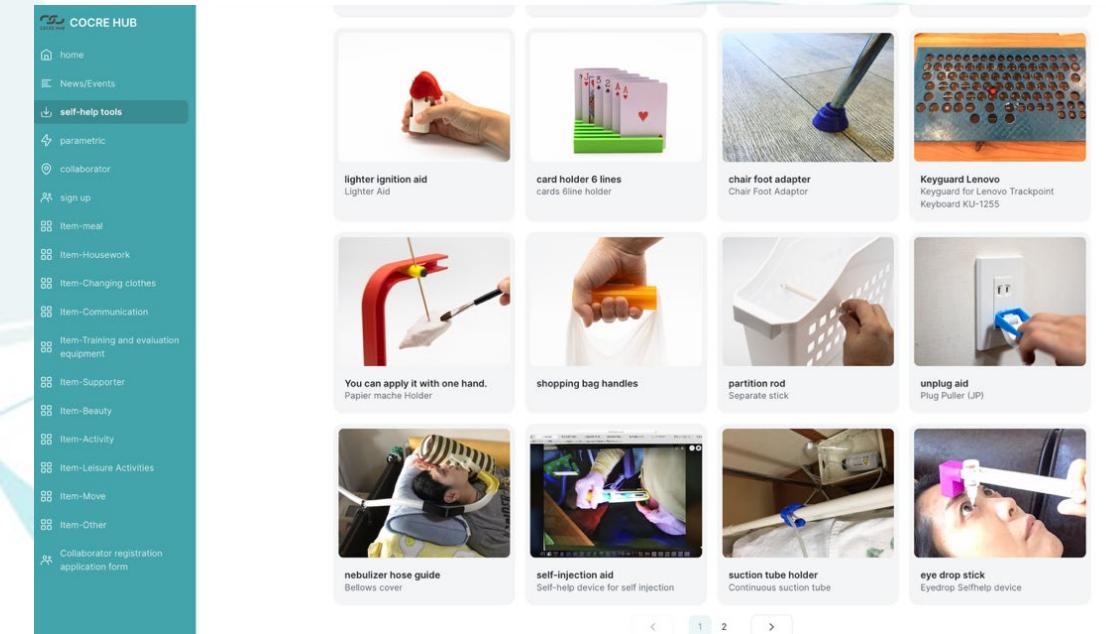


Shared ownership and mutual respect is essential for inclusion

The Model: COCRE HUB

An open platform for:

- Sharing 3D-printable assistive tool models
- Local adaptation and improvement
- Documentation and learning materials
- Community collaboration

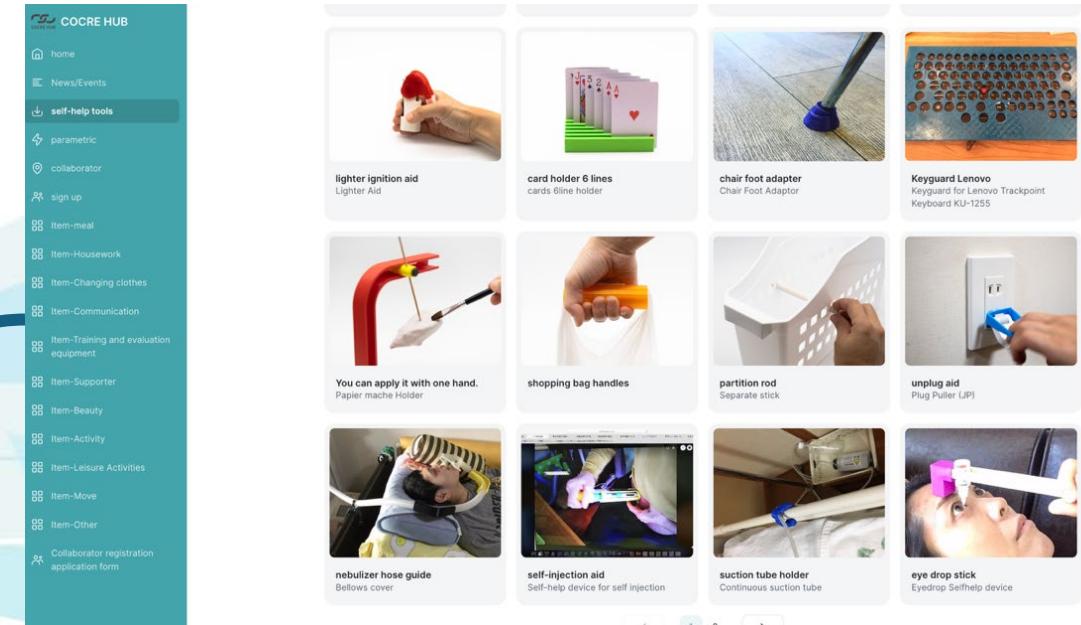


Today: 300+ shared models

Low-cost / locally manufacturable / open access

The Model: COCRE HUB

Create ecosystem of collaboration



Kaizen

New
ideas

Models as Hope Showcases

Shared models reveal possibilities

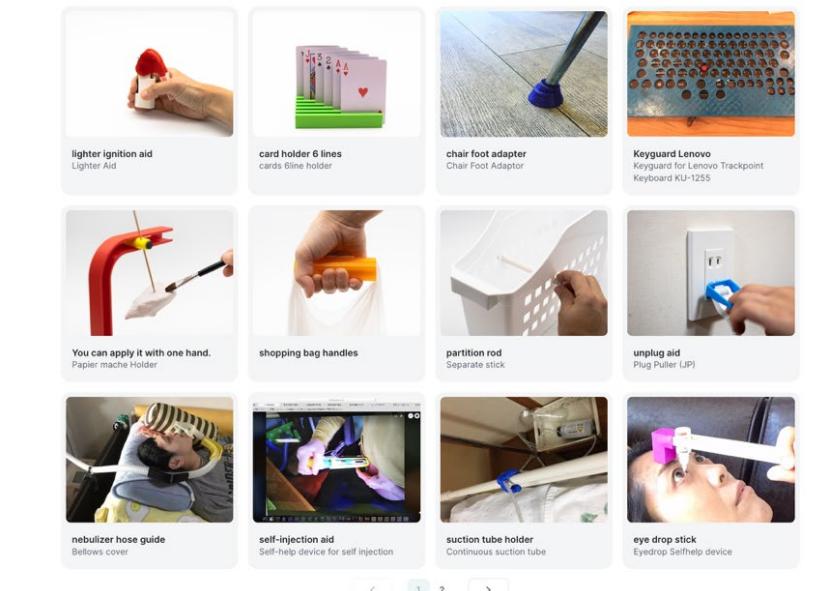
When people see:

- real tools made for similar challenges
- created by peers and communities

They realize: “I didn't know this was possible for me.”

Impacts:

- Awareness of latent needs and hopes
- Self-advocacy
- Expanded imagination
- New participation and co-creation



Case Example

Inclusive Makeathon in a Japanese High School,
15-16/Nov./2025 Japan

Participants:

- Students
- Persons with disabilities
- OT faculty and students
- Makers

Outcomes:

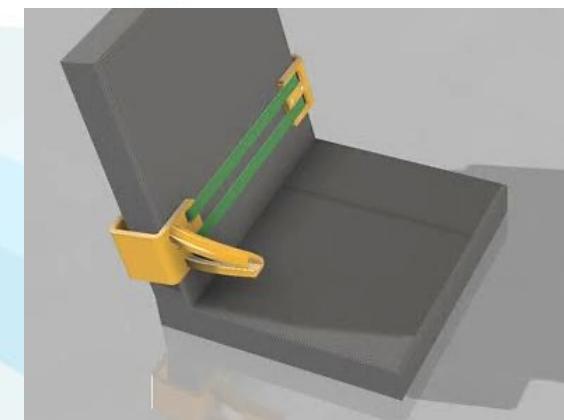
- 3D printed assistive tools
- Understanding and empathy
- Empowerment through collaboration

The model is reproducible in education settings



Example 1 Inclusive Classroom Seating Attachment

“I want to sit in the same chair as my classmates.”



Example 2 Adjustable-Angle Learning Desk

Designed with and for a student with cerebral palsy

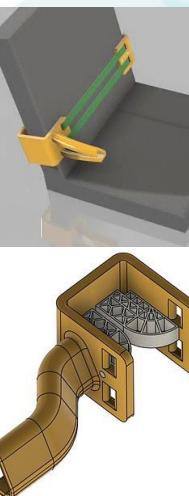
- Difficulty maintaining head position at a flat desk
- Adjustable angles co-designed with teacher analysis
- Increased learning endurance
- Fabricable using wood + 3D parts



Why It Scales in Asia

This model works in developing contexts because:

- Very low production cost
- Open, modifiable designs
- Production in schools
- Builds local capacity and ownership



→ Supports 15% for the 15% goal through education-driven inclusion

Toward a Regional Network

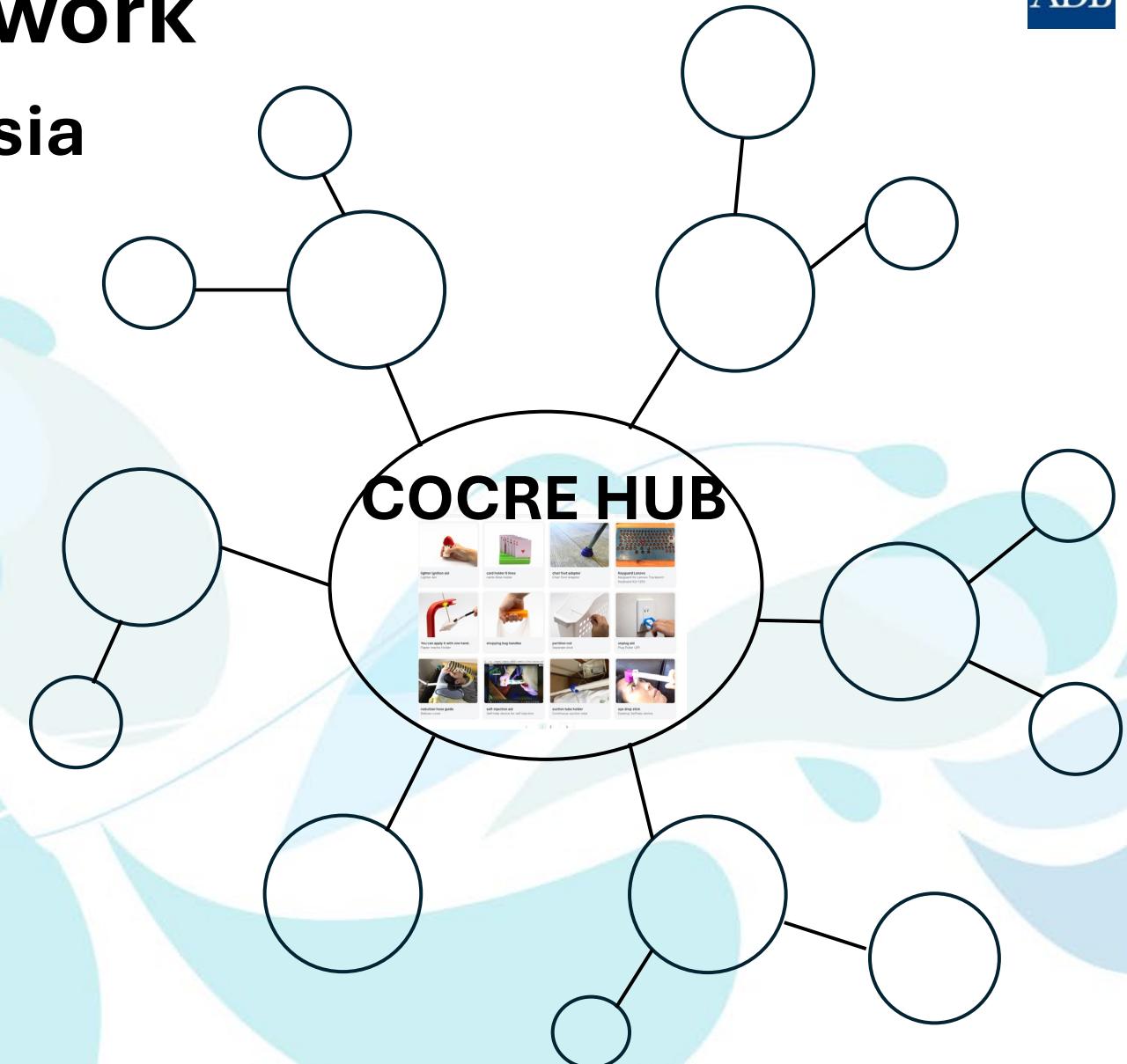
Hub-and-Spoke Model for Asia

COCRE HUB as:

- Shared repository
- Training resource
- Collaboration platform

Local hubs:

- Schools
- TVET centers
- Universities
- Makerspaces



regional collaboration, shared learning, and continuous improvement

Call to Action

Let's make education a place where:

- **learners create solutions together**
- **persons with disabilities lead innovation**
- **schools become inclusion engines**



Inclusion happens when we create together.