Summary of paper: Identifying best practices for advancing access, equity, and inclusion in code club settings

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The objective of the paper was…

- To explore how code club practitioners enact socially just and inclusive practices

We asked:

- *Which educational and management strategies used by code club providers in selected European countries reflect best practices for promoting access, equity, and inclusion?*

What do we mean by access, equity, and inclusion?

- Based on Dawson's (2014) framework, we applied a **relational and systemic** understanding of access, equity, and inclusion. The relational approach means *looking at people and their relationships, as well as how people interact and how power is shared.*

- Systemic approach means looking beyond individuals to the bigger system. *Systemic means "zooming out" and looking at the structures that make participation hard.*

This enabled us to categorize different access, equity, and inclusion approaches as **strong** or *weak*

Table 1. Key concepts of the AEI framework framed by weak and strong approaches to access, equity, and inclusion. The weak approach focuses on singular "barriers", while the strong approach focuses on relational social justice models.

| Construct	Weak	Strong
Infrastructure access	• Focuses on physical barriers such as location, participation fees, and physical accessibility • Might also focus on marketing strategies and audience targeting	• Recognizes that access to code club infrastructure is not the same for all children and reimagines how code club education can be delivered. • Redistributes access to code club opportunities by identifying challenges non-participating groups might have. • Shares power with learners by involving them in various decision-making processes. • Values and respects differences to create meaningful and relevant learning experiences.
Literacies	• Concerns primarily developing a set of skills and competencies (e.g. programming skills)	• Recognizes assumptions that are made about the learners. • Makes rules of participation explicit • Supports participants by clarifying terminologies. • Relates learning content to what learners find motivating. • Implements differentiated support strategies to address learners' varying levels of prior knowledge. • Identify productive ways to involve caregivers/family. • Demonstrates "cultural humility"
Community Acceptance	• Concerns acceptance by those already involved in a practice of those who were formerly excluded	• Reimagines who the participants and the practitioners could be. • Gains acceptance from the participants who were previously left out. • Implements initiatives to diversify the practitioner group, ensuring a range of role models.

In other words…

- **Access:** Can children realistically get into and participate in the club (money, transport, equipment, timing, comfort)?

- **Equity:** Do they get the support they need to thrive (clear expectations, differentiated support, cultural humility)?

- **Inclusion:** Do they feel welcome, valued, and a sense of belonging (relationships, representation, emotional support)?

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Data collection and analysis

- **Cast a broad net:**
  - We contacted 71 different code clubs from 20 European countries.

- **Final study participants:**
  - 17 practitioners from 8 countries agreed to participate in the study (24% response rate)

- **Data collection:**
  - We conducted online interviews, ~45 – 80 minutes

- **Data analysis:**
  - We followed Bingham's (2023) five-phase process of qualitative analysis.

Details of the Data collection and analysis are in the paper.

We found that practitioners employ **diverse approaches** to:

- Reduce participation barriers, support learners' engagement and emotions, and create inclusive learning environments....
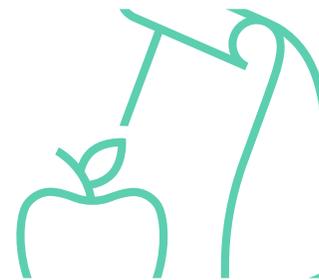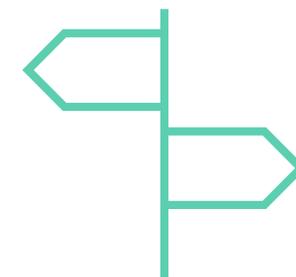
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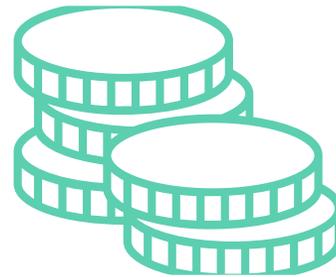
Reduce costs

Provide equipment

Address location barriers

Design for non-material needs

Learner agency

Some best practices we found
in terms of **infrastructure access...**

Themes	Representative practices
Addressing financial, equipment, location, and non-material barriers	• Free participation. • Provision of equipment. • Help with setup. • Offer online/hybrid options. • Partnerships with other stakeholders. • Flexible scheduling. • Provide courses at multiple locations. • Free transportation to the code club location. • Provide rest and play areas. • Free or affordable snacks. • Sensitivity to children's dietary needs.
Sharing power with learners	• Offering multiple project choices. • Child-driven projects. • "Wish lists". • Co-design of activities.
Marketing Strategies and Targeting Underrepresented Groups	• Visit schools in economically disadvantaged areas. • Use diverse communication and outreach channels to reach children. • Partner with influential individuals.

Implications for Practice: **Infrastructure access**

Sustainable funding is an equity issue:

- Practitioners most often wanted stable, reliable financing—without it, clubs struggle to maintain quality and expand inclusion efforts.

Precarity limits improvement:

- Constant resource pressure reduces capacity to reflect, redesign, and scale practices that support underrepresented learners.

System-level implication:

- Equity work may require shifts from short-term/project funding toward structures that reduce operational instability.

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Some best practices we found
in terms of **literacies...**

Themes	Representative practices
Recognising and challenging assumptions	• Clear communication of expectations. • Multilingual materials. • Differentiated support.
Making rules and norms explicit	• Co-created rules. • Visible agreements. • Signed "contracts".
Fostering joy and engagement	• Understand children's motivations. • Interest-driven projects • Playful and cross-disciplinary learning. • Physical computing projects.
Family and caregiver involvement	• Information sessions. • Parent-led clubs. • Co-learning activities.
Practising cultural humility	• Ongoing self-reflection. • Openness to new perspectives. • A commitment to understanding diverse experiences. • Collaboration with relevant organisations to accommodate neurodiverse learners.

Implications for Practice: **Literacies**

Inclusion includes 'participation literacies':

- Not only teaching content, but making expectations and participation norms visible so learners can engage confidently.

Center participant voices in evaluation:

- Stronger evaluation comes from engaging underrepresented participants (and families) to understand disengagement and non-participation.

Attend to systemic factors:

- Evaluation should include reflection on environmental and structural conditions that shape inclusion.

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Some best practices we found
in terms of **community acceptance…**

Themes	Representative practices
Emotional support and relationship building	• Take time to build meaningful connections with the children.
	• Foster a welcoming environment.
	• Support children in expressing their ideas during presentations.
	• Focus on progress rather than completed projects.
	• Involve the children and their families.
Evaluation and assessment	• Use reflective diaries as a tool for continuous learning.
	• Consider implementing longitudinal assessment.
Reimagining code club education	• Expanding partnerships.
	• Recruiting diverse volunteers.
	• Sustainable and consistent funding support.
	• More pedagogical training for practitioners.
	• Broadening curricula scope.
	• Increase family involvement.

Implications for Practice: **Community acceptance**

Relationships are the engine of belonging:

- Motivational support and relationship-building (among learners and with caregivers/facilitators) are central to psychological safety and persistence.

Celebrate process and progress, not perfection:

- Showcasing 'works-in-progress' reduces fear of failure and supports positive emotions around computing.

Build social capital intentionally:

- Making space for peer connection supports longer-term engagement and participation.

We hope this presentation has inspired you to explore new ways of designing your educational activities, whether they take place in or out of school.

Removing barriers is an important first step, but sustained participation requires applying strong approaches to access, equity, and inclusion.

Questions, comments or just want to get in touch?

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