Designing for participation and computational empowerment for all in an entangled technology comprehension classroom

Laura Mørk Emtoft & Vibeke Schrøder

As a first stepping stone in a design based research project on inclusion and participation for all in the technology comprehension subject, we conduct a systematic review.

Further, our context phase will consist of reframing the *Universal Design for Learning* (UDL), a framework developed in the 1990's to overcome what had until then has been seen as individual learning disabilities. The three core pillars of the UDL design are 1. 'Provide Multible Means of Engagement'. 2. 'Provide Multiple Means of Representation' and 3. 'Multible Means of Action & Expression' (Meyer et al., 2014).

However, the framework overlooks the complexity and messiness of the classroom, as described through Fawns' concept of 'entangled pedagogy' (Fawns, 2022).

Based on the review and redesign of the UDL framework, the question this paper poses is: How might an STS perspective contribute to the design principles for an inclusive technology comprehension classroom, offering computational empowerment for all?"

Fawns, T. (2022). An Entangled Pedagogy: Looking Beyond the Pedagogy—Technology Dichotomy. *Postdigit Sci Educ 4, 711–728*. https://doi.org/10.1007/s42438-022-00302-7

Meyer, A., Rose, D. H., Gordon, D. (2014). *Universal design for learning. Theory and Practice*. CAST Professional Publishing.