On Technology Design, Education and Social Responsibility

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• Technology Design: context, philosophical stance
• Those that inspire us in Education&Technology
• What we mean by “social responsibility” in design
• Some projects to illustrate the ideas
context to understand technology design

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eniac, 1943: ibm archives

xerox star, 1981

automating human tasks

extending human capacity

blurring boundaries

pervading spaces, our bodies, life and culture

https://codific.eu/internet-of-things

1950

1980

2010

20**...

time

complexity
3 moments of Technology in Education

The computer as a “teaching tool”

The computer as “an object to think with”

The computer “disappears”

Technology is behind the scenes

Tool

Cognitive Tool

Ubiquitous Education

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Who inspires us...

“Experience” designates the events of a H interacting with his physical and social environment.

Learning is most effective when the learner experiences the construction of a product meaningful to him/her.

Seymour Papert, 1928 – 2016
Mindstorms: Children, Computers, and Powerful Ideas 1980

Paulo Freire 1921-1997
Pedagogy of the Oppressed 1970

No one educates anyone, no one educates himself, people educate one another, mediated by the world.
Our View on Design

Design as a social process of joint construction of meaning (participatory sense-making) that manifests itself in a (social-physical-digital) product that mediates our (inter)action in the world.

The Socially aware Design

Combines the development of interactive systems with social practices with stakeholders

Baranauskas, M.C.C., Social Awareness in HCI, ACM Interactions July+August p. 66-69 2014.
SawD

COMPONENTS

Interested Parties, coauthors

Semioparticipatory Workshops

Artefacts, Systems, Methods

https://opendesign.ic.unicamp.br
SawD illustrated in Educational Contexts
The e-Citizenship Project  (Fapesp-MSR 2010)

» Design shared process, in which the designer acts as facilitator

» People are actively involved in the design process and their influence is mutual and open to the "becoming" of a product

» Process allows sense making to the artefact being created, enabling co-authoring the product of this process

Promoting digital literacy and e-citizenship within a low-income community through the codesign of an inclusive social network system.
The "XO" Project (CNPq 2012)

- Context of a fundamental public school in the same neighborhood, codesigning a new school setting with the inclusion of educational laptops into the local practices.
Ongoing Project

Socio-enactive Systems
Fapesp Thematic Project
2015/16528-0

Partners: Exploratory Science Museum, Sobrapar Hospital, Child and Complementary Education Division
**TangiTime** - in the museum scenario

- *Yusseli Lizeth Méndez Mendoza, Design and Development of a Tangible Tabletop Enhanced with Embedded-Technology Objects towards a Socioenactive Experience, MSc dissertation IC – UNICAMP 2019
**TangiTime**: Architecture

TechMemory Game* in the school scenario

Physical-Virtual Collaborative Reading (LCFV)*

Tangible Programming* in the school scenario

Socioenaction* in the school scenario

Systemic and socio-situated vision for the design and use of technology for Education

The School is “à altura de seu tempo” (P. Freire)

Technology is behind the scenes
Education is ubiquitous...

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Thank you!

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- Socioenative Project Partners, Collaborators, Students