a decision-making pedagogy for the
public interest technology clinic:
putting the 'practice' in critical technical practice

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takeaway

Public Interest Technology (PIT) clinics—client-facing, project-based courses inspired by clinical legal education—provide a powerful pedagogy to train future **critical technical practitioners** [1]. They do this in large part by nurturing students' proximate and distal mental models for sociotechnical decision-making under real-world constraints and contexts.

clinical education

Clinics are common in professional education across disciplines, including law, nursing, psychology, physiotherapy, and more. They are united by **practice-based learning** that results from **immersion** into the **profession** under instructor **supervision**. [2]

Cybersecurity clinics [12] employ data- and tech-based methods to address clients' problems.

The **public interest law clinic**, popularized in the 1960s, seeks to (1) provide services on behalf of underserved clients, (2) expose students to a public service ethos, and (3) to develop students' personal sense of justice [7].
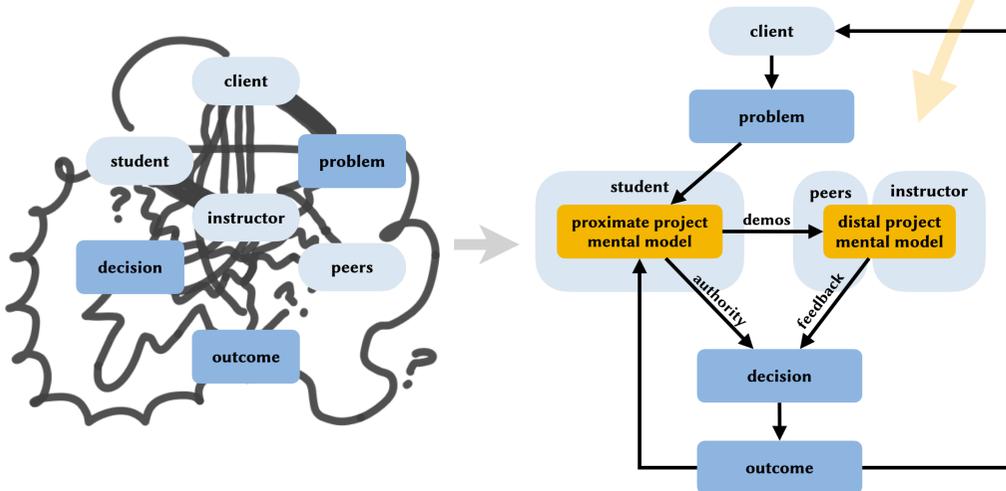
methods

- **collaborative auto-ethnography** [4] conducted by the instructors of the Berkeley clinic, over 18 months and 2+ semesters of clinic instruction
- analysis shaped by consultation with peers at other clinics [5, 9]

what is a PIT clinic?

(1) offers students **experiential** and **project-based** education

(2) provides data & tech services to **public interest organizations**

(3) aims to **develop students' skills and mental models** as PIT practitioners

mental models

proximate
my project
what is non-negotiable? what imperfections are tolerable? when do you stop? what is "good enough"?

distal
their project
how to understand the project owners' goals and constraints? how to add value? how to provide useful feedback?

the Berkeley clinic

- cross-listed by the **Public Policy School** and the **School of Information**, an explicitly interdisciplinary department; for Master's and PhD students
- no assignments, readings, or lectures; all class time is for group work or 'demo' time
- three semesters and counting; started Spring 2025
- **cascading mentorship** model [11] in which repeat students take on leadership roles
- instructors set up projects before each semester, yet are intentionally **hands-off** once student work begins
- past and current clients include:

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PROJECT AVARY

six pedagogical design principles

productive uncertainty	preserve ambiguity that students can engage with, rather than eliminating uncertainty
transferred authority	transform students' ability to critique into a practice of judgment and action
consequential choices	students are responsible for complex decisions of consequence
structured reflection	students articulate not only what they have done, but critically describe why and how
modeling distal practice	students observe how second-order engagement, without ownership, can add value
relational accountability	students respect clients' time, operate with humility, and are accountable to affected publics

Idealized development of students' proximate and distal mental models from the start of the clinic (left) to the end (right).

⚙ the good

education as **"the practice of freedom"** [10]; students develop a personal sense of **data justice** and practice both action and reflection [7]; PIT clinics benefit students seeking public-, civic-, and private-sector careers

🔨 the hard

danger of **miseducation** [14]; navigating difficult emotions under uncertainty; avoiding student **dependence** on instructors; navigating norms **without a formalized computing profession** [3]

☢ the ugly

universities can be **extractive** in how they wield resources, credibility, and reputation; data-based **expertise can eclipse** other kinds [6]; reifying **tech exceptionalism** and the "ethics unicorn" [13]

read the paper

[1] Agre. 1997. Toward a Critical Technical Practice: Lessons Learned in Trying to Reform AI. In *Social Science, Technical Systems, and Cooperative Work: Beyond the Great Divide. AJCE* 1, 1. [2] Cantatore et al. 2016. Defining Clinical Education: Parallels in Practice. *AJCE* 1, 1. [3] Chambers. 2025. Beyond Big Tech: Advocacy Technologists within Mission-Driven Civil Society Organizations. *Proc. ACM Hum.-Comput. Interact.* 9, CSCW7. [4] Chang et al. 2016. *Collaborative autoethnography*. Routledge. [5] Chowdhary et al. 2020. Care and Liberation in Creating a Student-Led Public Interest Technology Clinic. In *2020 IEEE International Symposium on Technology and Society (ISTAS)*. [6] Crooks & Currie. 2021. Numbers will not save us: Agonistic data practices. *The Information Society* 37, 4. [7] Dubin. 1998. Clinical Design for Social Justice Imperatives. *SMU Law Review* 51, 5. [8] Freire. 1968 (1993). *Pedagogy of the Oppressed*. Continuum. [9] Graeff & Wood. 2021. Undergraduate Engineering as Civic Professionalism. *The Good Society* 30, 1/2. [10] hooks. 1994. *Teaching to transgress: education as the practice of freedom*. Routledge.[11] Kafai et al. 2013. A cascading mentoring pedagogy in a CS service learning course to broaden participation and perceptions. In *Proceeding of the 44th ACM technical symposium on Computer science education (SIGCSE '13)*. [12] Nti Asare et al. 2025. Protecting Communities while Training Future Cybersecurity Professionals: Lessons from the Consortium of Cybersecurity Clinics. *CDR* 10, 2. [13] Raji et al. 2021. You Can't Sit With Us: Exclusionary Pedagogy in AI Ethics Education. In *Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency (FAccT '21)*.[14] Woodson. 1933 (2009). The Mis-Education of the Negro. *The Journal of Pan African Studies*.

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