Beyond “Learning to Code”

How Tech Learning Collective merges IT training with emancipatory political action
Why care about technology?

“Make the world a better place.”

Individual Capability, “Get a Job”

“Fun”/Hobbies/Curiosity
Why care about technology?

Techno-capitalism

What Silicon Valley/tech companies think they do.

“Make the world a better place.”

Individual Capability, “Get a Job”

What Silicon Valley/tech companies actually do.

“Fun”/Hobbies/Curiosity

What most employed “techies” want to be doing.
Why care about technology?

“Make the world a better place.”

Individual Capability, “Get a Job”

“Fun”/Hobbies/Curiosity

“Crypto” Anarcha-Autonomism

What TLC aims to do.

What TLC makes possible for individual students.

Why TLC teachers keep teaching and mentoring.
TLC’s Mission: Primary Objective

“Provide meaningful technology education to underserved communities”

- A humane society would be one where we are valued regardless of the output of our labor.
  - Abolish employment as a prerequisite for survival.

- Enable immediate, material improvements in students’ lives and the lives of their communities.
  - Do not require or rely on the cooperation of existing capital or State-backed institutions (companies, governments, etc.)
“Fund existing community-owned technology projects for radical social good”

- Provide support for grassroots and community-lead projects:
  - Hardware for physical infrastructure installations
  - Operating costs for community-owned telecoms networks
  - TLC’s own teachers and staff (marketing, partner operations, and special event staff) are all paid for their time.
  - No easily-exploitative volunteering arrangements.
There is much Work to do. Most of that Work *cannot* be done “at work.”
Tech Learning Collective "Flywheel"

- Political impact, grassroots social change
- Alumni community and hyperlocal infrastructure projects
- Free Software
- Lower financial costs, more accessible tools
- Courses, Workshops, Clubs
- Engagement/Traffic, Student enrollments

Tech Learning Collective "Flywheel"
Downloadable “practice labs” for students built on GNU/Linux, automated using:

- Oracle VirtualBox
- HashiCorp Vagrant
TLC “Flywheel” components

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- Tor Onion services avoids public exposure and DNS/domain costs
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Hyperlocal infrastructure projects include:

- Funnel to existing community telecoms projects like NYCMesh
- Projects championed by alumni like the Shift-CTRL Space “Library”
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Political impacts/grassroots social changes:

- Alumni share visions with one another
- Diversity initiatives, cultural norms seep into existing workplaces/hackerspaces/etc.
- “Pay-it-forward” educational opportunities
Different Ways to Learn

Goal-oriented

Unstructured

“On the Job”

Personal Project

Reading Wikipedia

“Black hole of YouTube”

Guided

TLC

Bootcamp/University

Hackfests

Social clubs

Exploratory
Different Ways to Learn: Spotlight

Goal-oriented

TLC vs. Bootcamp/University

Guided
Goals:
- Employment
- Mutual Aid/Political Impact
- "Fun"/Hobbies

Concepts
(Foundational understanding)

Capabilities
(High-level abilities)

Competencies
(Skill with tools and shared culture)
Let’s fill this blue area with things we learn at TLC.
Goals:
- Employment
- Mutual Aid/Political Impact
- "Fun"/Hobbies

Concepts
- History of Computing
- Hypermedia and non-linear writing
- Version Control
- Physical Networking (OSI Layer 1)

Competencies
- Capabilities
  - High-level abilities
- Competencies
  - Skill with tools and shared culture

Capabilities
- Identity
- Integrity
- Ethics
- Anonymity
- Safety
- Proxies
- Privacy
- Censorship

(Foundational understanding)
Goals:
- Employment
- Mutually Aid/Political Impact

“Fun”/Hobbies
- Concepts (Foundational understanding)
- Capabilities (High-level abilities)
- Competencies (Skill with tools and shared culture)

Employment
- Sharing
- Publishing
- Collaborating

Capabilities
- Exploration
- Self-direction
- Leadership
- Advocating
- Collective Action

Competencies
- Cloud APIs
- Web scraping
- Web frameworks
- Git
- HTML/CSS/JavaScript
- Blockchains
- Hash cracking
- Infrastructure-as-Code

Concepts
- “Hacker” movies and games
- OpenStreetMap
- Web servers
- DNS
- GPG
- Password managers
- Containers
- BitTorrent

- GNU/Linux
- Command line
- Virtualization
- Containers
- BitTorrent

- History of Computing
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- Version Control
- Privacy
- Anonymity
- Safety
- Ethics
- Integrity
- Identity

- Web exploitation
- Signal
- Tor/OnionShare
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TLC vs Bootcamp: Price ($)

Typical Bootcamp

Tuition ........... ~$13,900
Tuition fee .......... ~$125

Data is based on sampling of CourseReport.com’s “Best Bootcamps” for 2020.
### TLC vs Bootcamp: Price ($)

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TLC is literally *an order of magnitude* less expensive for an equivalent educational investment. *(Stand-alone TLC workshops are even less expensive.)*

Data is based on sampling of CourseReport.com’s “Best Bootcamps” for 2020.
At TLC, femme-of-center students return twice as often as masc-of-center students do. This is a rate that is virtually unheard of at any other technical education program.

Data current as of May, 2020.

Source: https://techlearningcollective.com/2020/05/19/as-tech-learning-collective-grows-quality-is-signature-of-classes-and-workshops.html
Our Learning Model, Part 1

- Apprenticeship-based ("learn from experts")
  - Mentors are not only subject matter experts, but are also specifically expert teachers
    - Every TLC instructor was a TLC student in the past
    - Every TLC instructor is actively involved in TLC sister organization projects
  - Teachers are trained in Socratic pedagogical style
    - No lectures, no slideshows, no pre-recorded videos
    - Classes are composed of discussions (challenge-response), and high-engagement live demos ("keyboard time")
Our Learning Model, Part 2

- Collective activities ("learn together")
  - Structured courses in small, private, repeat groups called “cohorts”
    - Access to private virtual infrastructure (chat rooms, forums, etc.) per course and per cohort
  - Ongoing learning activities among alumni called “clubs”
    - Capture the Flag (CTF) security competition teams, “tilde.club” servers, more
  - One-off classes and events open to the public called “workshops”
    - Sliding scale pricing model offsets systemic biases prevalent in tech industry
What are students saying about Tech Learning Collective?

https://TechLearningCollective.com/testimonials
“The amount I’m learning in Tech Learning Collective workshops is way more than what I was learning in my college classroom.”

—Chantelle, Computer Science Undergrad (5+ TLC workshops)

https://TechLearningCollective.com/testimonials
“This class was immensely valuable, and changed my core beliefs about my technological proficiency and potential.”

—Snow, TLC workshop student (10+ workshops)

https://TechLearningCollective.com/testimonials
This is how we change the world.

Free Software

Alumni community and hyperlocal infrastructure projects

Political impact, grassroots social change

Courses, Workshops, Clubs

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