PROFESSORS IN A PANDEMIC:
Tips and Tricks for Teaching Online

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What is CRA-WP?

**Individual & Group Research Mentoring**

**Undergrads:** Undergraduate Research Experiences (CREU & DREU), Research-Focused Scholarship opportunities at GHC (GHC Research Scholars)

**Grad Cohort:** Group Mentoring of Graduate Students (Grad Cohort for URMD & Grad Cohort for Women)

**Grad Students & Academics/PhD Researchers:** Mentoring Tracks @ GHC, Returning Scholars @ GHC, Group Mentoring for Early & Mid Career @ CMW

2400+ students & PhDs a year
Helen Hu

What I'm doing this year:
• Chair of CS department
• Spring semester
  • Optional synchronous meetings, with asynchronous backup
• Fall semester
  • Officially hybrid (some in-person)
  • Most classes synchronous, virtual

Personal:
• Parent to two middle school students
What I'm doing this year:
● Senior Lecturer at Stanford University
● Already completed Spring quarter completely virtual (~450 students)
● Fall quarter is virtual
  ● Large Intro course
  ● Small special topic discussion seminar: Race & Gender in Silicon Valley

Personal:
● "Like a cat lady, but for chickens"
● 🏳️‍🌈
Principles of Pandemic Pedagogy

- Reciprocal flexibility and forgiveness between you and the student
- More about nourishing seeds of intellectual curiosity than fixed outcomes
- Attend to social and emotional needs

It's ok to just do less
Modes of Teaching Online

- **Asynchronous, Virtual**
  - Students connect when they can

- **Synchronous, Virtual**
  - All students taking part online at the same time

- **Hybrid**
  - Some students in-person
  - Some connecting virtually (asynchronous or synchronous)
  - Ratio changes your strategy
Asynchronous Virtual Learning

Make As Much of the Course Accessible Asynchronously As You Possibly Can

(Even if you are in-person, you will have students with individual crises to accommodate)
Asynchronous Virtual Learning

• Lecture: record it, even if low production values
  • Commit to a "show must go on" single take—no perfectionist re-dos and editing
• Office hours: capture for those who couldn't make it
  • Record a 3-5 min video of yourself giving an explanation that came up often
  • Take notes and publish FAQ for students
  • Email or Q&A forum availability
• Exams: take-home style
  • Time window of 48 hours worked well for my class
  • If needed, redesign your assessment style, rather than obsess about possibility of cheating
Synchronous Virtual Learning

Prioritize Community Building and Collaboration during Class Time
Goal: Engage Students

• Shorten Lectures – reduce passive learning
  • 3,2,1 chat tip
• Increase Time to Collaborate
  • Breakout Rooms
    • Structured Groups
    • Let students choose – co-hosts
  • Pair Programming
Collaboration Options

- **Single Shared Slidedeck**
- **Separate Google Docs** for each group (change *edit* to *copy* in URL)
- Pair Programming in collaborative IDEs
  - More shorter programs
  - Use subgoal labeling
  - Switch roles regularly – harder to announce
Breakouts: Structure & Check In

Instructions

1. Find your breakout room's slides (Slides 4-5, 6-7, 8-9, 10-11).
2. Everyone should open jGRASP:
   - Facilitator - make sure everyone finds the Interactions pane in jGRASP.
   - Everyone should type the sample code
3. Take turns filling in rows in the table
   - Quality Control - make sure everyone reaches consensus
4. Then answer the questions on your next slide
5. If time permits, summarize with:
   - Spokesperson - be prepared to
6. Ask for help if you need it

- Detailed instructions in shared slides & chat too
- Keep track of rooms visited
- Back-channel for TAs
- Clarify help process
- Schedule breakout room creation

This is a two-step process:
1) Click on “Ask for Help” at the bottom of your Zoom window.
2) Click on “Invite Host”.

Please be patient… Helen will need to finish up the current conversation but will be with you soon.
Trauma-Informed Pedagogy

Teaching During a Pandemic,
and a Civil Rights Movement,
and an Economic Shutdown,
and a Hurricane,
and a Fire, ...
Restoring **Agency** in a Time of Chaos and Helplessness

• Instead of this:
  • Mandatory breakout rooms for problem solving
  • Video office hours only
  • Mandatory camera on so you aren't teaching a sea of names:

• Try this:
  • Each class, students set reacts to indicate willingness
  • Synchronous text chat office hours option
  • Students set a Zoom profile photo for when camera needs to be off
You're a **Teacher**, Not a Cop

Redesign requirements and assessments, **Not policing**, or double-down on control and surveillance

- Students record a video of their thought process for a problem, post on YouTube
  - *Watch at 2x speed for faster grading 😊*
- Students create a visual tutorial about a topic for future students
- Students design an exam problem, including a whole teacher’s guide
  - *Learning goals, at least 2 different solutions, common misconceptions the problem tests for*
- Mastery learning
Mastery Learning

Allow "revise and resubmit" of exams or other work

• No deadline pressure—focus is on crossing finish by the end

• No cheating incentive—staff will help students fix any errors, so why copy?

• No headaches for you to manage extensions, etc

* maybe not "no" these things, but at least greatly reduced
Executive Function is Severely Taxed During Stress

• Communicate more
  • Reiterate course expectations

• Check-in regularly
  • "Tag yourself" mood photos, Anonymous Polls, Exit Tickets (Google Forms)
  • Smaller classes: meet 1:1 for code reviews

• Lenient extension policy
  • No reason needed if requested before deadline
  • Requests for second extensions prompt check-in
  • Reaching out to late students without extensions
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Last Thought: These Principles Can Be Self-Care for You, Too
Resources Throughout

Examples for Student Collaboration:

- Shared Slide Deck / Google Doc for Graded Work / Help Instructions

Tools:

- Ed discussion forum with in-browser code execution
- Breakouts: In MS Teams / In Google Meet with "Choose a Work Room" template
- Pair Programming: Repl.it (instructions) / Ed / glitch
- Polls: Poll Everywhere / Zoom Polls / Mentimeter / Kahoot!
- Cameras and Screens: Example Setup / DIY document camera and v2

Further reading:

- 3 Proposals...to Reduce Inequality: An Urgent Call to Action for Online Teaching
- What Does Trauma-Informed Teaching Look Like?
- "Nobody signed up for this": One Professor's Guidelines for an Interrupted Semester