Agenda

**Check in – what is happening/how to handle now/how to prevent**

How do you determine where to draw the line between answering a student’s question and making the student figure it out for him/herself? This seems especially difficult during office hours in a one-on-one situation, as the student may expect more help during office hours.

*for example,*
- point to resources for solving the problem (*e.g.*, class notes, text)
- nudge students along by asking questions about their understanding
- work through an example
- start the problem and have the student continue

**Topic 1 – In the classroom – leading a lab or discussion, summing up**

**Break**

**Topic 2 – Outside the classroom – office hours, email, discussion boards**
RECALL

(0) Organize – special case: preparing for first days of class (TT 3 – first days)
(1) Prepare – design a learning experience (TT 12 – asking questions)
(2) Practice
(3) Deliver – in the classroom (TT 13, 15, 16 – fielding q, delivering lecture, explaining clearly)
(4) Reflecting – what went well/challenges

0. Organize and Coordinate
   - coordinate with instructor/instructional staff
   - read/practice this week’s material and next week’s material
   - if first days of class
      - visit the classroom/tech check and backup plan
      - setting the tone: welcome/set expectations/promise/start

1. Prepare – Designing a Learning Experience
   “Ability to convey knowledge to others/understandableness”, for example:
   - student/beginner perspective
   - consider context (pointers back and forward)
   - determine key concepts
   - examples
   - short explanations
   - anticipate questions and difficulties for key concepts
   - how will you check in with students

2. Practice
   Classroom skills, for example:
   - practice presentation: speaking, volume, timing, etc. (record it)
   - speak to be heard, slowly
   - vary pace and intonation, pause, avoid “um” and other verbal tics (TT p. 153)
   - review student names

3. Deliver - in the classroom – where your good preparation will pay off:
   “Classroom skills/organization”, for example:
   - check demeanor and attitude – eye contact
   - provide a map of topics you’ll be covering
   - say it, write it, show it
   - verbal markers/checkpoints
   - build in redundancy
   - 10 methods to get participation
   - leave time for recap and questions and walking around and checking in

4. Reflecting – what went well/challenges
10 Methods to Get Participation Any Time

✓ open discussion
✓ response cards
• polling
✓ subgroup discussions
• learning partners and think-pair-share
✓ go around the group and obtain short responses to key questions
• panels
• fishbowl
• games
• calling on the next speaker (new speaker summarizes prior speaker)

AVOID: Any questions? Does everyone understand? And other yes/no questions.

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Skills and traits of effective teachers

1. Knowledge of/experience in area AND

2. Ability to convey knowledge to others [aka “understandableness”] –
• representations: examples, illustrations, analyses, explanations, demonstrations
• awareness of what makes concepts easy or difficult
• common conceptions or preconceptions
• common errors on the way to understanding, etc.

3. Good people/communication skills [friendly, empathetic, etc.] AND

4. Good classroom skills [organized, enthusiastic, etc.] AND

Text ch. 16 (this week’s reading – explaining clearly): “Research has shown that student achievement correlates most highly with two characteristics of effective teachers (Feldman 1989). One is preparation and organization. The other is clarity and “understandableness”.

This seminar focuses on the fourth and second of these points: general teaching skills in a computer science context – effective and reflective components.

Recall: advice from other GEs
→ What is your best advice for leading a class/discussion?
• Prepare and anticipate problems and think of analogies for the solution.

• Be patient.

• Get involved with your students

• Be prepared for your knowledge to be challenged.

• Prepare well before class. Leave nothing out.

• Do the assignment/labs multiple times before.

• Practice answering questions by coming up with some yourself.

• Practice any audio/visual setup (projects, HDMI, etc.).

• Do the assignment/labs before the lab! Give very clear instructions!

• Expect things to go wrong; try to have backup plans.

• CLARITY > QUANTITY

• Be well prepared for office hours; make sure you know the assignments beforehand.

• Be prepared with the concepts a week before the class.

• Prepare before class always.

• Do the assignment before office hours!

• Keep an approachable facial expression.

• Be organized.

• Practice.

• Leave room for questions.
**Topic 2 – Outside the classroom: office hours, online**

Groups of 3: 1 GE, 1 student, 1 observer/reporter (I will be timekeeper). Students, be challenging! Each student in group play 2 roles: 4 minutes on 3 minutes discuss then repeat.

```
a = "ARMADILLO"
b = "BUTTERFLY"
c = "CHAMELEON"
```

Your job is to, using only a, b, and c, to construct a series of strings: MADMADMELO, BUTNO, and CHILL. You may use any of the string operations you have learned in class:

1. String addition - a+b
2. String multiplication - a*3

Student: “I don’t get this assignment.”

You: ????

→ groups report – what went well? challenges?

*Get the student started.*

*Work a different example.*

*What are you struggling with? (Help the student be specific.)*

*Zero in on hard-to-grasp concepts, e.g., zero index, slicing, overloaded operators.*

*Slow down.*

*Do it again.*

*Make sure you and the student understand the assignment.*

*Be prepared for basic questions: what is a string? why duplicate a string?*

*Can you tell me more?*

*Do Not: get frustrated, condescend, etc.*

**SUM:** Office hours/lab help hours is a continuation of classroom approach:
Focus on problem-solving rather than answers: observe, questions, examples... just like explaining clearly in the classroom.
FOR EXAMPLE (note similarity to preparing lab/discussion!)

- OBSERVE student solving the problem.

- Reach partial answer then QUESTION (for example, what have you tried? Can you talk me through your reasoning? What are your thoughts on how to approach this problem? Does this problem look similar to/remind you of [lab problem, class notes, text]?).

- Reinforce correct work; provide brief EXPLANATION/EXAMPLE.

- Repeat for same or additional problems.

- Focus on problem-solving strategies rather than answers, to GUIDE students to a solution. DO NOT TAKE OVER keyboard, problem-solving, anything (can be tricky, as you’ve just seen in the role play).

ALSO:

explain the purpose of office hours; explicitly invite students to office hours

hold office hours outside your office; use some office hours as tutorial sessions

try electronic office hours, evening or night time office hours (remote)

set boundaries [easier outside of your office and/or remote]

do not try to resolve sensitive issues via email

always keep them at the appointed day/time/place

- If a student raises personal problems or sensitive issues, refer them to instructor, UO Resources.

- if a student raises personal problems, refer them to instructor, counseling: https://www.uoregon.edu/onestop (“wellness”)

- be aware of conflict of interest policies