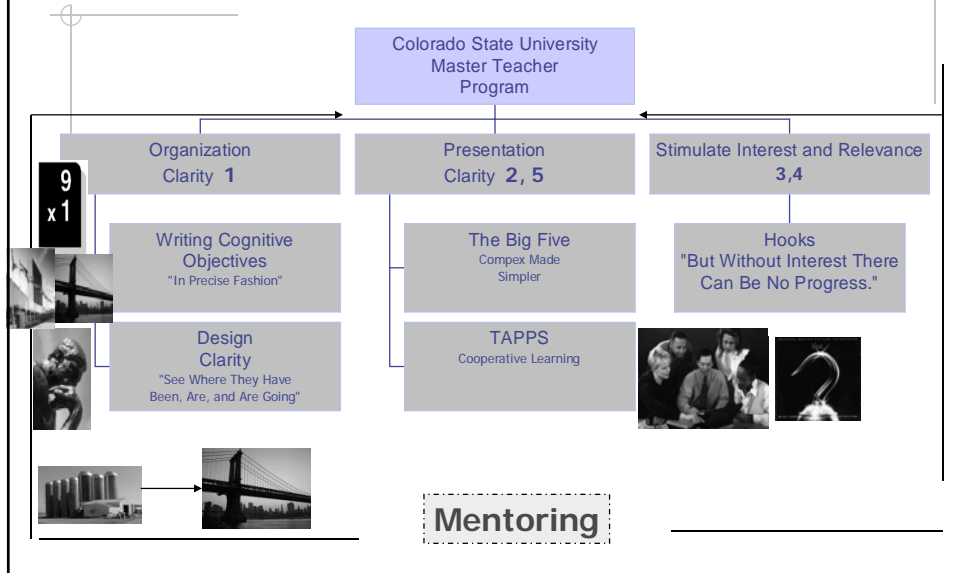


Presentation overview: mentoring



Typical student evaluation improvement from 8-10 hours of mentoring by me.

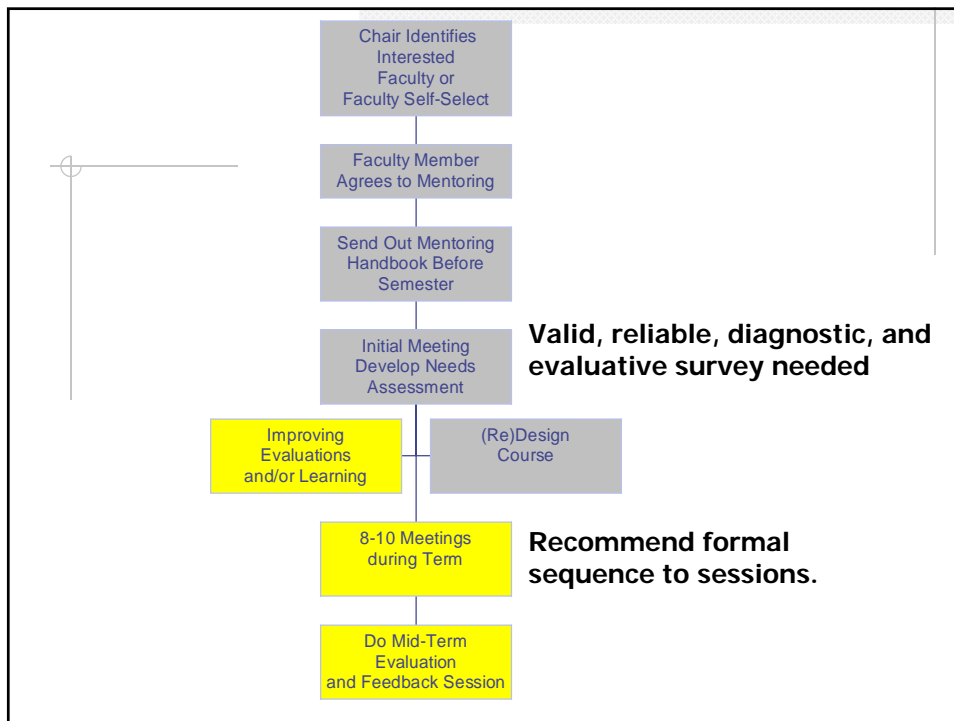
	Before - Auditing		After - Auditing	
	Spring 2001	Spring 2002	Spring 2003	Spring 2004
Overall Effectiveness	3.5	3.2	4.1	4.3
Course Worth	3.2	3.2	4.1	4.3

Before - Tax Course						After - Tax Course			
1996	1997	1998	1999	2000	2001	2002	2003	2004	
4.2	4.3	3.9	4.3	4.3	4.2	4.2	4.4	4.7	

The why and who of teaching mentoring

- ◆ **Inexpensive way to improve teaching within one semester.**
- ◆ **Faculty who need mentoring often don't attend teaching workshops.**
- ◆ **Even those they do may need help.**

- ◆ **Senior or emeriti faculty.**
 - **Course release for senior faculty (one per 4 mentees?).**
 - **Negotiated stipend for Emeriti.**



Characteristics of an ideal mentor

- ◆ **Excellent teacher (current or emeriti).**
- ◆ **Tolerant of colleague's learning curve.**
- ◆ **Great at keeping in touch.**
- ◆ **Keep confidences.**
- ◆ **Approachable and can establish trust at first meeting.**

This is my most common first meeting agenda.

Session	Activity	Assignment
1 (B4)	(1) Review comparison report and fix simple problems. (2) Review syllabus.	Incorporate fixes. Edit syllabus (see course preparation module for ideal syllabus)
2 (B4)		

Dimension/SEI Item	CBA Dec.*	Mean	Std. Dev.	SECTION						COMPARATIVE		
				Frequencies**						Averages		
				1	2	3	4	5	NA	CRS	DEPT	CBA
Overall Evaluation - (2 items)												
34. Effectiveness of instructor	5	4.2	1.0	0	3	1	11	12	0	4.1	4.1	4.2
35. Relative worth of course	6	4.3	0.8	0	1	3	10	12	0	4.3	4.1	4.1
Presentation Ability - (8 items)												
19. Cares about quality teaching	3	4.1	1.1							4.2	4.3	4.4
20. Genuine interest in students	5	4.4	0.9	1	0	2	7	16	0	4.3	4.4	4.4
22. Dynamic and energetic person	5	3.8	1.2	2	1	6	10	8	0	4.1	4.2	4.3
23. Interesting presentation style	3	3.8	1.2	3	0	3	13	7	0	4.0	4.0	4.2
24. Enjoys teaching	4	4.3	1.0	1	0	3	9	14	0	4.3	4.4	4.4
25. Enthusiastic about subject	5	4.2	1.1	1	2	1	9	13	0	4.5	4.5	4.5
26. Self confident	3	4.3	1.0	1	1	1	8	15	0	4.7	4.5	4.5
27. Varies speed and tone of voice	5	3.7	1.2	2	2	6	8	8	0	4.0	4.2	4.3
Organization/Clarity - (8 items)												
5. Well prepared	7	4.5	0.9							4.3	4.2	4.3
6. Easy to understand	9	4.8	0.4	0	0	0	4	22	0	4.6	4.4	4.4
11. Explains clearly	7	4.6	0.9	1	0	1	5	19	0	4.4	4.2	4.4
12. Lectures easy to outline	7	4.5	1.0	1	1	0	7	18	0	4.3	4.1	4.3
13. Answers questions carefully	8	4.7	0.5	0	0	0	9	17	0	4.4	4.3	4.3
14. Summarizes major points	7	4.5	0.9	1	0	1	7	17	0	4.3	4.2	4.4
15. States objectives of each class	7	4.5	0.9	1	0	1	8	16	0	4.2	4.1	4.3
18. Knows if class understands	5	3.8	1.2	3	0	3	11	8	1	3.8	3.9	4.2
Grading/Assignments - (7 items)												
1. Follows plan in syllabus	7	4.5	0.8							4.3	4.4	4.4
2. Assignments related to goals	8	4.7	0.6	0	0	1	6	18	0	4.5	4.4	4.4
3. Explains grading clearly	8	4.7	0.5	0	0	1	5	19	0	4.6	4.4	4.5
4. Accessible outside class	4	4.3	0.8	0	1	3	9	13	0	4.4	4.4	4.4
31. Returns exams/papers quickly	8	4.6	0.6	0	0	1	7	16	1	4.0	4.2	4.3
32. Reasonable assignments/exams	9	4.9	0.4	0	0	0	4	23	0	4.6	4.5	4.5
33. Fair and impartial grader	5	4.1	1.2	1	3	2	6	14	0	3.9	4.1	4.3
5	5	4.3	1.0	1	1	1	8	15	0	4.3	4.3	4.4
Intellectual/Scholarly - (4 items)												
7. Discusses other viewpoints	6	4.4	0.9							4.4	4.3	4.4
8. Contrasts theories	6	4.4	0.7	0	0	3	9	12	1	4.2	4.3	4.3
9. Discusses recent developments	4	4.2	1.0	1	0	4	7	12	1	4.2	4.3	4.3
10. Presents origins of ideas	6	4.5	0.7	0	0	3	7	15	0	4.6	4.4	4.4
6	6	4.4	1.0	1	1	0	8	15	0	4.4	4.2	4.3
Student Interaction - (3 items)												
16. Encourages class discussion	5	4.1	1.0							3.9	4.2	4.3
17. Invites criticism of own ideas	2	4.0	1.1	2	0	2	13	8	1	4.0	4.2	4.4
21. Treats students as individuals	3	3.9	1.0	1	1	4	10	7	3	3.8	4.0	4.2
5	5	4.3	1.0	1	1	0	10	13	0	4.1	4.3	4.3
Student Motivation - (3 items)												
28. Made me work harder	5	4.3	1.0							4.3	4.1	4.2
29. Motivates me to do best work	8	4.5	0.6	0	0	1	11	14	0	4.5	4.2	4.2
30. Creative thinking on exams	4	4.1	1.1	1	2	3	8	12	0	4.0	4.0	4.2
5	5	4.3	1.2	2	1	0	8	15	0	4.2	4.2	4.3

This is my most common second meeting agenda – assuming problems are organization clarity and testing/grading.

Session	Activity	Assignment
1 (B4)	(1) Review comparison report and fix simple problems. Review syllabus.	Incorporate fixes. Edit syllabus (see course preparation module)
2 (B4)	Fix testing and grading. Discuss structuring and objectives.	Table of spec. Structure exam and/or develop 2 course diagrams. Develop objectives for first lecture.

Example from graduate public health class 715-830P	
<u>Introduction</u>	4: Start with slide 9. You stated why topic important but better to have students discover.
Establish Topic Importance	
Provide Overview	2: Very clear diagram slide 9 but shared too late in lecture.
State Objectives	5: Yes. Four objectives right number.
<u>Organization/Clarity</u>	2: Disjointed. Slides 2-8 too abstract. Needed a concrete example from GA health care to drive lecture. 4: Explained clearly.
<u>Communication</u> Voice	5: Strong with inflection. No fillers.
Stage Presence	3: Relaxed but hid behind podium. Talked to whiteboard when writing. Ignored left-side of room.

Example from graduate public health 715-830P	
<u>Strengths</u>	Clear objectives. Good examples on social security TV ad. Smiling at class. Strong voice.
	Board layout good on concerns of patients, providers, and payers in slide 6 <u>but</u> see below.
<u>Areas for Improvement</u>	<u>Recommendation</u>
Too little interaction given 715P class.	Plan out group activity and base it on four objectives.
Presentation flow disjointed.	Slides must tell story. Meet tomorrow to revise using "Big Five." Use slide 9 as central spine.
No formal summary at end.	Have guided note slide for summary so students can add to your points.

Example from graduate public health 715-830P

Asked questions when answer already on slide.

Use guided note method.

Talked to board.

Use document camera or write on board, turnaround and then talk.

Too many slides.

Delete slides that not part of slide 9 flow. Reduced from 15 to 11.

Board layout not consistent.

Board layout must show linkages for entire lecture. Think through before class starts.

Session	Activity	Assignment
5	Preview upcoming lecture using "Big Five."	Make changes. Do mid-term evaluation with feedback to class
6-7		
8-9		

Must do mid-term evaluation – a simple form to do it.

Lectures organized:	1	2	3	4	5
Presents clearly	1	2	3	4	5
Do more of in class:					
Do less of in class:					
Exams reflect important topics and objectives	1	2	3	4	5
I could improve exams by					

◆ Acknowledge students' feedback and make changes if possible.

Session	Activity	Assignment
5	Preview upcoming lecture using "Big Five."	Make changes. Do mid-term evaluation with feedback to class
6-7	Discuss how to construct "hooks" and to use cooperative learning groups - TAPPS.	Develop hooks for upcoming lecture. Design activity for cooperative groups.
8-9	As needed + "do-overs."	

Record keeping is important.

Keep log of meetings.

Upon request, write letter to chair or P&T committee on mentee's progress towards improving teaching and learning.

Keep before and after data on student evaluation of instructor, grades and honors or awards.

Request mentees to write "thank you" letter to Chair or Dean at term's end.

Readings

◆ Knapper, C. *New Directions for Teaching and Learning, Fresh Approaches to the Evaluation of Teaching, No. 88.* San Francisco, Jossey-Bass, January 2002.

◆ Reinzrz, A. *New Directions for Teaching and Learning, Beyond Teaching to Mentoring, No. 85.* San Francisco, Jossey-Bass Spring 2001.

Practice feedback session on queuing lecture

Can also use visitation form if you have colleagues sit in your class.

Classroom Visitation Review					
<u>Introduction</u>					
Establish Topic Importance	1 Not at All	2	3	4	5 Very Much
Provide Overview	1 Not at All	2	3	4	5 Very Much
State Objectives	1 Not at All	2	3	4	5 Very Much
<u>Organization/Clarity</u> (Presentation Flow) (Understand)	1 Disjointed Difficult	2	3	4	5 Clear Flow Easy
<u>Clarity of Visuals</u> (Board etc.)	1 Poor	2	3	4	5 Excellent
<u>Communication Skills</u>					
Voice	1 Too Soft Monotone Fillers	2	3	4	5 Strong with Inflection
Stage Presence	1 Stiff No Eye Contact Low Energy	2	3	4	5 Relaxed/Confident High Energy Eye Contact
<u>Strengths</u>					
<u>Areas for Professional Improvement</u>			<u>Recommendation</u>		

Components of Queuing System

◆ Customer

- From infinite source population
- Arrival pattern
 - ◆ Random (Poisson arrivals) average arrival rate (λ)
 - ◆ Average inter-arrival time ($1/\lambda$) exponential
- Patient or impatient (balking or renegeing)

◆ Server

- Exponential with average service time (μ)

Waiting Line Management

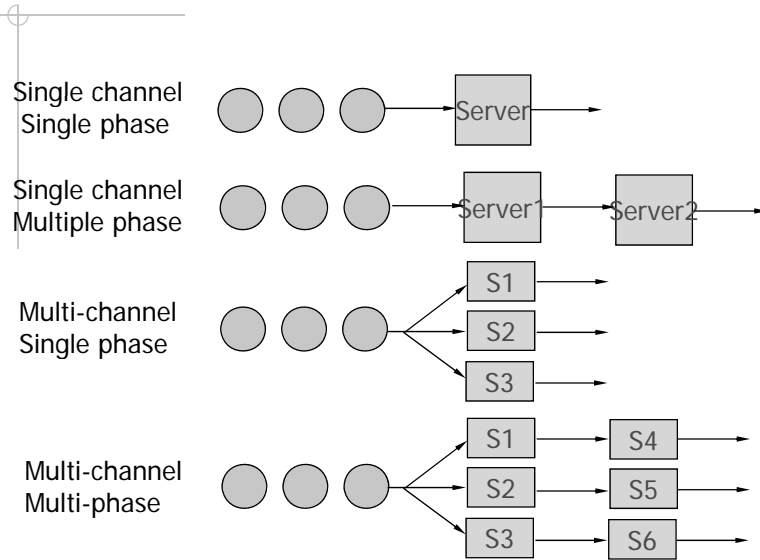
◆ Why waiting lines (queues) unavoidable?

- Limited service system capacity
- Variable customer demand

◆ Why study waiting lines?

- Find the most cost effective system capacity
- Goal is to minimize the sum of two costs
 - ◆ Customer waiting costs
 - ◆ Service capacity costs

Alternative Line Structures



Model 1: M/M/1

- ◆ **Single channel, single phase**
- ◆ **Poisson arrival (λ), exponential service (μ)**

Major performance measures

$$\rho = \frac{\lambda}{\mu}$$

$$\bar{t}_s = \frac{1}{\mu - \lambda}$$

$$\bar{n}_s = \frac{\lambda}{\mu - \lambda}$$

$$\bar{t}_l = \frac{\lambda}{\mu(\mu - \lambda)}$$

$$\bar{n}_l = \frac{\lambda^2}{\mu(\mu - \lambda)}$$

Application of Model 1

ATM where customers arrive at the rate of $\lambda = 5$ per hour (or one every 12 minutes).

ATM service time is $\mu = 12$ per hour (or one every 5 minutes).

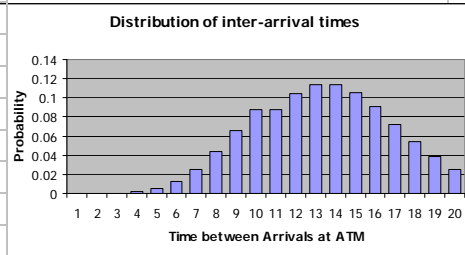
FCFS queue discipline

Key Queue Statistics

- A) What is the expected utilization of ATM or time that ATM is busy?
- B) What is the expected waiting time in the **system**?
- C) What is the expected number of customers in the **system**?
- D) What is the expected waiting time in **line** or **queue**?
- E) What is the expected number of customers in **line** or **queue**?

Making sense of inter-time arrival rate

Arrive at ATM	Time between Arrivals
901	
917	16
923	6
945	22
958	13
1004	6
1010	6
1021	11
1025	4
1040	15
1106	26
1108	2
1125	17



Making sense of ATM service rate

Arrive at ATM	Leave ATM	Service Time
901	905	4
917	922	5
923	930	7
945	949	4
958	1003	5
1004	1011	7
1010	1015	5
1021	1025	4
1025	1036	11
1040	1045	5
1106	1109	3
1108	1110	2
1125	1128	3

