

EE400D (Teaching Engineering): Classroom Observation

Faculty/Instructor: Jennifer Taggart

Date/Time of Observation: 11-22-19

Observer: Victor Cannestro

Course Number (Course Title): MATH 126

Format Observed (Lecture, Lab, Quiz Section): Lecture

Number of Students Enrolled: 151

Number of Students Attending: 151 = 132 + 19 late

Instructions

This observation worksheet contains both close-ended (Likert Scale) questions and open-ended (descriptive) questions regarding what the instructor is doing during the observed time period (session) and what the students are doing. Not all behaviors or activities are covered in the close-ended questions; those activities that are not included in the close-ended questions can be integrated into the open-ended questions. Please highlight your answers in a different, but legible color, minimize white space, and provide clean and consistent formatted in the completed observation.

During the Observed Session:

Not at All Somewhat Satisfactory Outstanding

The instructor provides objectives for the class session (written, verbal, or both).		X		
The instructor relates the session content to learning outcomes for the course.	X			
The instructor uses visual aids that are clear, organized, and relevant.				X
The instructor uses practical, "real-world" examples to support teaching.	X			
The instructor refers to the relevant portions of the textbook, reading, or other supplement.	X			
The instructor uses humor effectively to promote student engagement and rapport.				X (Many jokes and some had success)
The instructor answers questions well and demonstrates knowledge of the subject.				X
The instructor shows clear interest or enthusiasm in teaching.				X (Lots of smiling, positive vocal inflection, a use of a student's name, and care shown)
The instructor uses student names.		X (Once)		
The instructor asks specific questions.				X (Many times)

The instructor pauses after asking a question.		X (about 2 seconds)		
The instructor asks questions of students that result in responses from students.				X
The instructor changes gears periodically from one style of teaching to another.	X			
The instructor engages students periodically through think/pair/share, problem solving, or other active learning exercises.	X			
The instructor uses guided notes.	X			
The instructor involves students periodically in what is to be covered during the session.			X (Asked whether a topic had been covered to see if it should be in class)	

During the Observed Session:

Not at All Somewhat Satisfactory Outstanding

The instructor uses more than one way to explain problems or concepts.	X			
The opening of the class session gets students' attention.			X (Students focused very fast)	
The instructor provides a summary of what has been covered and accomplished at the end of the observed session.	X			
The instructor provides a preview of the next session or ideas of what to consider for the next class at the end of the observed session.		X		
The instructor could be easily heard.				X
The instructor moves around in the classroom and refrains from standing/sitting in one place.				X (Walked around very often)
The instructor uses analogies or metaphors to relate the concepts to students' experience.	X			
The instructor emphasizes key points throughout the observed session.			X (No connection to the big picture)	
The instructor makes eye contact with students.				X
The instructor uses open (not closed) body language during the observed session.				X (Always open)
The instructor engages in behaviors that develop rapport and trust with the students.				X (Lots of jokes, open

				body language, smiling, and movement)
The instructor relates the material/concepts to personal or societal concerns.	X			
The instructor is available before class.			X	
The instructor is available after class.				X

What types of visual aids (dry-erase board, chalkboard, powerpoint, etc) does the instructor use during the observed session? How are these visual aids used?

The instructor only used a projector to display handwritten notes that she updated throughout the class session.

In your opinion, what was the best/most effective teaching moment observed in this session?

The best teaching moment in my opinion was not confined to one instance, but, rather, the fact that she regularly and actively asked the students what step they should do next in the question. It was almost like a Socratic discussion.

In your opinion, what was the most unique teaching moment observed in this session?

The most unique teaching moment observed was when the instructor asked the students whether they covered certain material in the prior discussion session, making it clear that she would change what would be in lecture depending on student feedback.

In an organized paragraph with complete sentences, describe what the instructor did throughout the session (150-250 words).

The instructor arrived about 5 minutes early and set up the projector for hand-written notes. She stood behind the podium until class began. She vocalized a plan for the class session. She wrote a definition and asked a rhetorical question, answering it immediately. The instructor highlighted an important concept, walked over to the other side of the room, and made a connection from last class—how the material today is built upon the previous session. “Any questions about what the question is?” She repeated a question asked and told them to go to the reading on canvas for the derivation. The instructor attempted humor by cooking up a hypothetical situation. She explained again what Taylor’s Theorem is doing and why it’s needed in the example they were considering. She asked the students to give a specific interval and many answered. She walked around and asked rhetorical questions. The instructor answered, making gestures to illustrate the concept. The instructor further clarified. She walked over to the other sides of the room and answer “Questions?” She was transparent about what she wanted to cover, emphasizing examples over derivations. She asked a rhetorical question and many students responded. She started another example, paused halfway, walked to the other side of the room, and asked, “Questions so far?” pausing for about 2 seconds. Several questions were posed by her. She made a joke and some students laughed. She asked another specific question and some students answered. She asked more questions and some students responded. She made a joke and some students laughed again. She asked, “Questions about that?” The instructor answered well and

used his name. She asked another question and many students responded. She commented on the benefit of symmetric intervals. The instructor summarized the question and walked through her thought process on how to solve it. The instructor asked, "Anything else?" and paused for about 2 seconds. She probed for information about how far they got in the prior quiz section and made a joke. She said, "Come up if you have questions, have a terrific weekend, and there's no class on ___ days." After class one student asked her a question and she spent over 6 minutes with him.

Overall, the instructor engaged with the students regularly, involving them in the act of problem solving, and kept the mood light. She also worked to maintain perspective, answering questions like "Why are we learning this?" and "How might this be useful." The result was rapt attention as she progressed through the notes.

<i>During the Observed Session:</i>	<i>None (0%)</i>	<i>Few</i>	<i>Some</i>	<i>Many</i>	<i>Most (> 50%)</i>
Students maintain attention toward the instructor (for example – eye contact).					X
Students remain awake and alert during the observed session.					X
Students are using their cell phones or other electronic devices in activities unrelated to class.			X		
Students are over one minute late to class.			X		
Students pack up early at the end of class.		X			
Students are reading the newspaper or doing other non-electronic activities unrelated to class.	X				
Students interact with the instructor before class.	X				
Students interact with the instructor after class.		X			
Students initiate questions.			X		
Students respond to questions posed by the instructor.				X	
Students ask follow up questions.			X		
Students participate in class when asked to do so by the instructor.				X	
Students are taking notes.					X

In your opinion, how would you best describe students' interest in the observed session?

Students were awake and alert for most of the session and were following along very closely. Not only were they quick to respond when prompted, but quick to catch typos as they came up.

In your opinion, how would you best describe students' affect (emotion) in the observed session?

Students were, overwhelmingly, curious and focused throughout practically the entire session. This was evident from their posture and responsiveness.

In an organized paragraph with complete sentences, describe what the students were doing during the observed session (150-250 words).

About 11 people were distracted using technology as the lecture began. Almost every student was awake and alert, taking notes. Upon being asked if they had any questions a student asked a question. Several jokes were made during the lecture and some students emitted small laughs. One student in the back let out a large, audible yawn. Another asked a question, got an answer, and then asked a follow up question. Students were silent, awake, and alert 20 minutes into the session and were still taking notes. When asked to use a formula they received in the quiz section the day before, the sounds of pages flipping filled the room. About 11 students were distracted with electronics. The room was extremely full, and even though there were open seats about 5 students arriving late choose to sit in the aisles or lean against the back wall. After being asked, "Questions about that?" a student immediately asked a question. The instructor asked many specific questions and many students chanted a response. Some students immediately corrected her after a small typo was made. After an example was finished, a student asked a question. Two students left 20 minutes early. Another student asked about the test and then asked a follow-up question. Another student asked a different question. A few students laughed at a joke. One left 10 minutes early and about 11 were on their phones. After class, one student asked the instructor a question.

Overall, students were paying very close attention and were very responsive when prompted for feedback which was surprising considering the size of the class. About a 10th of the class asked questions and an overwhelming majority were taking detailed notes.

<i>During the Observed Session:</i>	<i>Not at All</i>	<i>Somewhat</i>	<i>Satisfactory</i>	<i>Outstanding</i>
The instructor provides objectives for the class session (written, verbal, or both).	None provided	Objectives aren't very clear or observable; are barely mentioned and not written down	Mostly clear and observable objectives that are either easily visible and somewhat discussed OR somewhat visible	List of clear and observable objectives that are easily visible and are discussed in some detail

			and discussed in some detail	
The instructor relates the session content to learning outcomes for the course.	None provided	Briefly mentions how the content will be helpful in the future	The instructor gives a clear explanation on how the session content relates to specific learning outcomes	The instructor gives a clear explanation of why they've done what they've done so far and how the current session's content relates to specific learning outcomes
The instructor uses visual aids that are clear, organized, and relevant.	<p>Visual aids are:</p> <ul style="list-style-type: none"> ·clear in that writing (on board, document camera, electronic device) is legible; PowerPoint slides are not overpowered or underwhelmed with text ·organized in that individual chunks of material (a single slide, single problem) are laid out such that the student can see a logical sequence in the material presented, images are close to the concepts they describe, organized notes are readily constructed from the visual aids, and less relevant material is spoken rather than spoken and written. ·relevant in that tangential equations and formulas are avoided; images reinforce the concepts and words as presented, and examples closely apply the concepts presented. 			
	Visual aids contain none of the above elements as described	Visual aids contain one of the above elements as described	Visual aids contain two of the above elements as described	Visual aids contain three of the above elements as described
The instructor uses practical, "real-world" examples to support teaching.	No real-world examples are provided.	One substantive real-world example is provided.	More than two examples are provided during each 50-minute period but not all are relevant.	More than two examples are provided during each 50-minute period and all examples are relevant.
The instructor refers to the relevant portions of the textbook, reading, or other supplement.	<i>Not referenced/no textbook used in the class.</i>	<i>Mentions what chapters/pages to read and nothing else.</i>	<i>Tells the students where the material is in the textbook and uses examples straight from it.</i>	<i>Tells the students where the material is in the textbook and uses examples straight from it, takes excerpts from the book and uses them during lecture. Specifically says what parts of the text to focus on.</i>

The instructor uses humor effectively to promote student engagement and rapport.	Not at all	Humor is attempted 1+ times, but there is silence	Humor is attempted 1+ times, and a few students laugh	Many students laugh at the instructor's jokes and the atmosphere is light
The instructor answers questions well and demonstrates knowledge of the subject.	No questions asked.	Answers the questions vaguely, student needs to ask additional questions.	Answers the question but leaves the student somewhat confused.	Answers the questions clearly and easily explains it to the student.
The instructor shows clear interest or enthusiasm in teaching.	No enthusiasm/interest whatsoever.	Shows some enthusiasm but is mostly bland and unenergetic.	Shows enthusiasms for most of the class but has moments in which the instructor is more bland.	Instructor smiles, seems excited about the topic, give students positive energy.
The instructor uses student names.	Doesn't use names.	Remembers less than 5 names and uses them; doesn't ask for new names.	Remembers 5-10 names and uses them, always asks for a new name.	Remembers over 10 names and actively tries to learn new names.
The instructor asks specific questions.	never ask any questions to students	ask ambiguous questions that are difficult for students to respond	ask at least one question that result in clear responses from students	ask questions periodically to lead students keep thinking during class session
The instructor pauses after asking a question.	No pause.	< 10 second pause.	< 20 second pause.	At least a 30 second pause.
The instructor asks questions of students that result in responses from students.	Not at all.	1-2 students	>2 students but less than half respond	>Over 50% respond
The instructor changes gears periodically from one style of teaching to another.	Not at all	The instructor changes gears to another form of teaching once during the session	The instructor changes gears to another form of teaching twice during the session	The instructor doesn't lecture for more than 15% of the allotted time before changing to another form of teaching
The instructor engages students periodically through	Not at all.	1-2 active learning exercises per session.	3-4 active learning exercises per session.	5+ active learning exercises per session.

think/pair/share, problem solving, or other active learning exercises.				
The instructor uses guided notes.	No guided notes	Guided notes are provided for the students, but the teacher doesn't use them during lecture.	Guided notes are provided for the students, and the teacher fills out part of them during the lecture but it's not his/her main focus.	Guided notes clearly provide the space to fill out, include necessary information; instructor spends majority of class filling them out.
The instructor involves students periodically in what is to be covered during the session.	Not at all	The instructor asks for student feedback on material to be covered but doesn't implement change	The instructor asks for student feedback on the material to be covered 1 time and follows through with the changes accordingly	The instructor asks for student feedback on the material to be covered 2+ times and follows through with the changes accordingly
<i>During the Observed Session:</i>	<i>Not at All</i>	<i>Somewhat</i>	<i>Satisfactory</i>	<i>Outstanding</i>
The instructor uses more than one way to explain problems or concepts.	No explanation or just 1 way.	2-3 different explanations.	4-5 different explanations.	5+ different explanations.
The opening of the class session gets students' attention.	Takes over a minute to get students to quiet down and focus.	Takes 30-60 seconds to get students to quiet down and focus.	Takes 10-30 seconds to get students to quiet down and focus.	Takes less than 10 seconds to get students to quiet down and focus.
The instructor provides a summary of what has been covered and accomplished at the end of the observed session.	None provided	A brief verbal summary is provided	A brief verbal and visual summary is provided	A clear verbal and visual summary of the content is provided and discussed in detail. (i.e. a roadmap)
The instructor provides a preview of the next session or ideas of what to	No objectives at all	Briefly talks about what the next session will focus on	Talks in some detail about what the next session will focus on	Talks about what the next session will focus on in some detail + has a list on a slide/the board

consider for the next class at the end of the observed session.				that shows the objectives/what to consider
The instructor could be easily heard.	Not able to hear the instructor in the last row at all.	Barely able to hear the instructor in the last row – any other noise makes it almost impossible.	Instructor is heard in the last row without much problem, but other noise makes it significantly harder.	Instructor can be easily heard in the last row throughout the session, speaks clearly.
The instructor moves around in the classroom and refrains from standing/sitting in one place.	The instructor sits/stands in one place.	The instructor only moves if it's absolutely necessary.	The instructor moves around the classroom, but it's all within 5 feet of the same place.	The instructor moves around the classroom a lot and uses that to articulate some of the main points of the session/gives examples of how what he/she describes behaves in space.
The instructor uses analogies or metaphors to relate the concepts to students' experience.	Not at all	The instructor uses analogies or metaphors that are hard to understand or don't really relate to students' experience	The instructor uses 1+ analogies or metaphors that are easy to understand OR relate to students' experience	The instructor uses 3+ analogies or metaphors that are easy to understand and relate to students' experience
The instructor emphasizes key points throughout the observed session.	Doesn't mention key points	Brefly mentions a key point once or twice	Mentions key points 3-4 times during the lecture	Clearly highlights main points after every example or concept and ties them up to the learning outcomes of the course
The instructor makes eye contact with students.	No eye contact.	Looks at students only when asking/answering questions; otherwise looks at visual aids.	About 50 – 50 split between looking at students and visual aids.	Looks at different students for majority of the time; only looks at visual aids when explaining something.
The instructor uses open (not closed) body language during the observed session.	Completely closed body language.	Crosses his arms a lot, doesn't look at students; hands in the pockets.	Open body language majority of time, but has closed body language moments.	Open body language all the time.

The instructor engages in behaviors that develop rapport and trust with the students.	No such behavior	Instructor does 1-2 of the best practices mentioned	Instructor does 3 of the best practices mentioned	The teacher shows enthusiasm in teaching, uses student's names, smiles, makes jokes, encourages everybody to be active during the session; makes the session more of a dialogue than a lecture		
The instructor relates the material/concepts to personal or societal concerns.	Not at all	Relates the material/concepts to personal or societal concerns 1 time	Relates the material/concepts to personal or societal concerns 2-3 times	Relates the material/concepts to personal or societal concerns 3+ times and gives concrete examples		
The instructor is available before class.	Arrives < 1 minute before class.	Arrives 1-2 minutes before class.	Arrives 3-4 minutes before class.	Arrives 5+ minutes before class.		
The instructor is available after class.	Instructor leaves early, or hurries away from class as soon as it ends.	Available for 1-2 minutes.	Available for 2-5 minutes.	Available for as long as necessary/talks with the student on his way out.		
<i>During the Observed Session:</i>	<i>None</i>		<i>Few</i>	<i>Some</i>	<i>Many</i>	<i>Most</i>
Students maintain attention toward the instructor (for example – eye contact).	0 students		10%	20%-30%	30%-50%	Over half
Students remain awake and alert during the observed session.	0 students		1-2 students	5%-10%	10%-50%	Over half
Students are using their cell phones or other electronic devices in activities unrelated to class.	0 students		1-2 students	5%-10%	10%-50%	Over half
Students are over one minute late to class.	0 students		1-2 students	<20%	>20%	Over half
Students pack up early at the end of class.	0 students		1-2 students	5%-10%	10%-50%	Over half
Students are reading the newspaper or doing other non-electronic activities unrelated to class.	0 students		1-2 students	5%-10%	10%-50%	Over half

Students interact with the instructor before class.	0 students	1-2 students	5%-10%	10%-50%	Over half
Students interact with the instructor after class.	0 students	1-2 students	5%-10%	10%-50%	Over half
Students initiate questions.	0 students	1-2 students	5%-10%	10%-50%	Over half
Students respond to questions posed by the instructor.	0 students	1-2 students	5%-10%	10%-50%	Over half
Students ask follow up questions.	0 students	1-2 students	5%-10%	10%-50%	Over half
Students participate in class when asked to do so by the instructor.	0 students	1-2 students	5%-10%	10%-50%	Over half
Students are taking notes.	0 students	1-2 students	5%-10%	10%-50%	Over half