

EE400D (Teaching Engineering): Classroom Observation

Faculty/Instructor: Shih-Chieh Hsu

Date/Time of Observation: 10/11/19

Observer: Victor Cannestro

Course Number (Course Title): PHYS 123 Waves

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

Number of Students Enrolled: 173

Number of Students Attending: 140

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 (on webpage)		
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 demos and .gifs added clarity and excitement)
The instructor uses practical, "real-world" examples to support teaching.		X (Only shown at the end when students were leaving)		
The instructor refers to the relevant portions of the textbook, reading, or other supplement.				X (Every slide had the relevant textbook section)
The instructor uses humor effectively to promote student engagement and rapport.				X (Many funny moments observed)
The instructor answers questions well and demonstrates knowledge of the subject.				X (Half of the class was spend clarifying concepts)

The instructor shows clear interest or enthusiasm in teaching.				X (Animated arm motions, and open posture)
The instructor uses student names.	X			
The instructor asks specific questions.		X (Only once)		
The instructor pauses after asking a question.		X (5 second pause after the one question)		
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 (Switches between lecture, quiz, and demo)	
The instructor engages students periodically through think/pair/share, problem solving, or other active learning exercises.			X (Three instances of these activities)	
The instructor uses guided notes.	X			
The instructor involves students periodically in what is to be covered during the session.	X			

During the Observed Session: *Not at All* *Somewhat* *Satisfactory* *Outstanding*

The instructor uses more than one way to explain problems or concepts.			X (Analogies and .gifs illustrated concepts)	
The opening of the class session gets students' attention.		X (Announcements were hard to hear over side conversations)		
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	X			

for the next class at the end of the observed session.				
The instructor could be easily heard.				X (Mic)
The instructor moves around in the classroom and refrains from standing/sitting in one place.		X (Only moved a few times to better hear student questions and give demos)		
The instructor uses analogies or metaphors to relate the concepts to students' experience.			X (Several analogies made)	
The instructor emphasizes key points throughout the observed session.				X
The instructor makes eye contact with students.				X (Only turned around to point at slides)
The instructor uses open (not closed) body language during the observed session.			X (Open posture and)	
The instructor engages in behaviors that develop rapport and trust with the students.			X (Jokes made)	
The instructor relates the material/concepts to personal or societal concerns.		X (Only application at the end)		
The instructor is available before class.				X (up to 8 minutes or so)
The instructor is available after class.			X (up to 8 minutes or so)	

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?

PowerPoint slides and a laser pointer were used together. An old projector, projected water waves in an interference pattern. An oscilloscope and speaker were used in a demonstration of the human hearing range.

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

The quizzes generated engaging discussion from most of the students as they tried to reason through to an answer.

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

The demonstrations were interesting and handled well. During the first he made a joke saying “I hear nothing! When you are my age, it will be more peaceful.” During the second, he made a joke saying “It’s too dark. I cannot find my pointer anymore!”

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

The instructor arrived 10 minutes early, set up the PowerPoint, and displayed an announcements slide. Next, he dove into the content and explained the pictures on his slide—showing the textbook section at the top. He answered 3 questions. He then asked, “Other questions?” Then, he described a .gif illustrating soundwaves and particle oscillation. “I want to be sure...with a show of hands, who understands...” Based on this, he explained the concept further. He answered a question and demonstrated the collisions of air molecules with his fists bumping into each other. He then asked, “Other questions?”. One student asked 3 questions. He did more illustrations of spherical wave motion with his arms and hands. He then asked, “Other questions?”. He answered more questions, illustrating with his hands. He then asked, “Other questions?”. There was and he acted out an analogy with this student. He then asked, “Other questions? Clear? Good.” He prompted quiz 1: Think-pair-share and submit answers to the real-time online quiz feedback system. He counted down the time they had to do this. Based on the feedback he laser-pointed at the PP figure and asked, “What is y-axis?” He guided them to the answer of the question and displayed a figure. He gave his laser pointer to a student asking a question. He then asked, “Other questions?” He answered another student’s question, saying “yeah” and “uhuh” during its statement. He then said, “Before moving on, does anyone have any questions? Okay”. He then began a demonstration using a speaker, increasing the frequency to test students’ hearing capabilities. He projected an oscilloscope’s screen. He made a joke saying “I hear nothing! When you are my age, it will be more peaceful.” Then he dimmed the lights and projected an interference pattern of water waves. He made a joke saying “It’s too dark. I cannot find my pointer anymore!” Next, he introduced a group activity. On his last slide he described an application: intensity level.

The instructor was well organized and prepared but engaged with the audience at a very fast pace. Very few questions were constructed to prompt deeper thinking. However, his use of visual aids greatly enhanced the class.

During the Observed Session:

None Few Some Many Most

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 (a quarter fell into this category)		

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 (A few on phones, eating, or surfing the web)			
Students interact with the instructor before class.	X				
Students interact with the instructor after class.		X			
Students initiate questions.			X (Most of the lecture was spent on questions)		
Students respond to questions posed by the instructor.		X (Only those near spoke up)			
Students ask follow up questions.		X (Happened twice)			
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?

Many students were interested in the material and took notes, however most in the back engaged in side conversations throughout the lecture.

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

Students were amused, curious, and bored in roughly equal proportions of the class.

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

Several students were having side conversations in the back. Around ten were on their phones doing something unrelated, and more than half were using laptops—mixed use between notes, reading, and unrelated content. Three students asked questions about types of waves and their behaviors. Students filtered in late. Some students had side conversations at this time. Some students answered a question he posed, prompting a subset to raise their hands. Another question was asked by a different student and the instructor's response made many students laugh. Quiz 1 was prompted and almost every student participated. Students then answered the instructor's question: "What is y-axis?" Some students were engaging in side-conversations throughout these questions. The student behind me fell

asleep at this time. During the demonstration, students laughed when he increased the frequency from 15kHz to 50kHz and then down to 18kHz. In the next demonstration, students were quiet. During the second think-pair-share quiz, students engaged the material. One student left class. Side conversations were rampant in the back during the discussion of the solution. Many students packed up early and began side conversations while he was explaining the last two slides.

Unsurprisingly, the front of the class seemed invested in the material, while the back consistently maintained distractions. The think pair-share activities greatly focused the discussion back to the material.

Are there any items that you believe should be added to this classroom observations worksheet? If so, please describe.