

Classroom Visitation Form

Southwestern is committed to creating a culture of excellence for our students, staff, and faculty. One of the ways we fulfill our commitment is through peer-to-peer feedback and mentorship on each other's teaching. This Classroom Visitation Form is designed to provide a framework for peer teaching observations, helping to assist the instructor in the performance of their duties, and to encourage and support their professional development over time.¹ The form is comprised of two components: a pre-observation form, to be completed by the faculty being observed, and a post-observation form, to be completed by the observer. The two components work iteratively to promote constructive feedback, pedagogical reflection, and ongoing dialogue to promote faculty members' continual development over the course of their careers at Southwestern.

Pre-Observation Form *(for Faculty being observed, please complete this form and return to the person observing your teaching)*

Faculty Member: Benjamin Holt	
Course: MTH 95	Date: 10/30/2018
Observer: Maidie Rosengarden	
Name and Topic of Class Session: The Quadratic Formula	

1. Learning Outcomes

What is/are the objective(s) of the class session? What do you want your students to know, understand, and/or demonstrate as a result of your instruction?

The objective is for students to learn how to use the quadratic formula to solve quadratic equations, and to know the number and nature of the solutions they obtain. Students will also gain a deeper understanding and appreciation for the quadratic formula by seeing its application to a problem in physics.

2. How do you plan to achieve this/these Outcomes?

¹ Collective Bargaining Agreement, Article 16.1

I will deliver a brief, web-enhanced lecture on the topic which will build upon and complete a lecture given in the previous meeting. I will reinforce a method introduced in the previous class session which encourages and emphasizes careful use of notation in order to avoid errors. This will include several examples which I will leave on the board. I will then put students into groups, at which time, they will apply the techniques just presented.

It is my hope that by having students immediately try examples on their own, both with my help and the help of their peers, that they will solidify what we discussed in lecture, and will be better prepared to practice the material on their own.

3. Instructional Techniques Being Used (*select all that apply*):

- Lecture
- Class Discussion
- Small group activities
- Individual Student Assistance
- Interactive activity
- Lab
- Web-enhanced
- Other: _____

4. What will you do to help students reflect on and enhance their learning?

What will you do to help students look back on their learning? What will you do to help students enhance their learning process?

I will have students work in smaller groups in order to help each other. Students who are stronger in the material will get a chance to explain the ideas to other students. Student who are not as strong will have a chance to learn from their peers. As students work in groups, I will have the chance to work with students individually.

5. What do you hope to learn from this observation?

What feedback would you like the observer to provide during your lesson to help you better reflect on your practice?

Lecture

Is the interaction between slides, lecture, and other presentation methods smooth?

The Quadratic Formula can be a bit of a dry topic in that students have likely seen the material before. I usually try to include historical context and connections to students' experience to make it more human, real, and interesting. Are there any suggestions for changing it up in some way?

Of course, I would like to know about any distracting mannerisms (such as using the word "like" too much).

Group Work

I would like to know any techniques for better facilitating group work, particularly with the space presently available. Having students move chairs around the room works okay for now, but there's something still unsatisfying about it.

Post-Observation Form *(for classroom observers, please complete this form and return to the instructor. Please note that due to the variety of activities in which our faculty engage, some of the items may not be applicable to each instructor.)*

1. Development of Learning Outcomes

Please describe and demonstrate (with specific examples) how and/or to what extent the objectives and outcomes identified by the faculty member were met during the class session.

Ben stated: *The objective is for students to learn how to use the quadratic formula to solve quadratic equations, and to know the number and nature of the solutions they obtain. Students will also gain a deeper understanding and appreciation for the quadratic formula by seeing its application to a problem in physics.*

In the lesson observed the outcome of "solving problems" was probably met. Students were walked through three problems to solve as a class together using the equation. It was not evident to the observer if each student answered the problem correctly, or used the equation correctly. However, students did not voice problems with an inability to solve a problem or use the equation. Students completed work sheets at the end of the lesson, the observer doesn't know if the students correctly solved the problems.

The outcome of "Learning" and "knowing" is difficult to measure, so can't be commented on.

It is also difficult to measure "gaining a deeper understanding and appreciation." It can be said

that Ben met the outcome of “introducing the importance of the quadratic formula and describing reasons why/how it’s implications are used in other disciplines such as physics.

Ben met his stated outcome of students “seeing it in a physics problem” as he used handouts, power point, and a description of a physics problem and the quadratic equation.

2. Teaching Effectiveness:

- X Main ideas are clear and specific
- X Sufficient variety in supporting information
- X Relevancy of main ideas was clear
- X Instructor related ideas to prior knowledge
- Definitions were given for vocabulary

Specific examples of teaching effectiveness observed:

Ben linking learning to the previous lesson and previous knowledge, displaying some text on the board about the past, ancient cultures and math systems.

Ben briefly discussed the relevancy of the equation to “not making mistakes”, understanding how to solve other kinds of problems, such as physics, and why sometimes a student might not wish to use a calculator.

Some terms were heard that were not defined, however, they may have been defined in previous lessons.

The main idea of the equation was clearly discussed and written on the board a number of times.

3. Presentation and delivery:

- X Communicates audibly and clearly
- X Establishes and maintains eye contact with students
- Varies pace and tone to keep students alert
- Uses a presentation style that facilitates note-taking
- X Uses positive and appropriate humor

- Incorporates various instructional supports (film, diagrams)
 Other: _____

Specific examples of teaching presentation and delivery observed:

Ben's tone was clear and vocal level appropriate to the room. While Ben made eye contact when possible, he spent time with his back turned while writing on the boards. Bens pace moves quickly – students did not ask him to slow down. It is unclear if students were able to keep up with notetaking, and Ben might want to ask students about his pacing and how that works for them.

Humor was used that was appropriate and students seemed comfortable with.

Instructional supports observed was the power points, writing on the board, website links, and work sheets.

4. Student Involvement:

- Attends respectfully to student comprehension or puzzlement
 Responds to changes in student attentiveness
 Asks questions of students that challenge them to think more deeply
 Invites student participation and comments
 Incorporates student responses when appropriate
 Encourages students to respond to their peers throughout the discussions
 Treats students with respect
 Uses positive reinforcement to encourage student participation and intellectual risk-taking
 Encourages students to interact civilly/respectfully with each other
 Other: _____

Specific examples of student involvement observed:

Ben made statements such as “Right, excellent question, good question” and so forth when students posed questions. Ben attended to each question and student comment respectfully and positively. At time Ben posed questions to the entire class, the observer did not hear Ben call on specific students.

Bens pace may not have allowed all students to answer in a timeframe that worked for the time needed to process. Ben did ask some questions that may have prompted students to think deeply, however, they moved by quickly, and at times the same student responded to these questions.

While most students appeared attentive and engaged, there were a few times when students asked each other questions as Ben moved on to another topic.

At times it was difficult to hear student comments or questions, one strategy Ben might consider is repeating the comment and question to the whole class.

5. Learning environment:

- X Students seemed to be interested and taking notes during class
- X Checks for understanding periodically
- x Promotes student involvement
- X Students participated in active learning activities
- Addresses potentially disruptive behaviors before they impact the learning Environment – **Not applicable**
- X Students were given an opportunity to apply learning through practice, project, case studies, etc.
- X Creates opportunities for students to practice relevant skills
- X Develops student independence by encouraging students to assume responsibility for their own learning
- X Solicits student feedback
- X Listens carefully to student comments and questions
- X Encourages critical thinking and analysis
- Other: _____

Specific examples of the learning environment observed:

Students were provided many opportunities to practice the skills in the lesson in a variety of ways, together as a class, on a work sheet, and in groups.

Ben regularly checked in with students asking if they had questions and when in groups, visiting each group and checking in.

The learning environment was flexible and oriented towards active learning.

6. Overall summary of / reflection on classroom observation

Ben stated:

Lecture

Is the interaction between slides, lecture, and other presentation methods smooth?

From the observers point of view, the interaction between the slides/lecture and group work was smoothly handled and swiftly handled.

The Quadratic Formula can be a bit of a dry topic in that students have likely seen the material before. I usually try to include historical context and connections to students' experience to make it more human, real, and interesting. Are there any suggestions for changing it up in some way?

The observer did not see the previous lecture that discussed the ancient cultural connections, the review of this seemed very interesting, and the application to the physics problem also appeared relevant and interesting.

Of course, I would like to know about any distracting mannerisms (such as using the word "like" too much).

Distracting mannerisms were few to none. As has been commented on, the swift pace, the inability to see raised hands when turned to the board, not regularly calling on students to respond may be strategies Ben might consider. Leaving the classroom may also be a habit to avoid.

Group Work

I would like to know any techniques for better facilitating group work, particularly with the space presently available. Having students move chairs around the room works okay for now, but there's something still unsatisfying about it.

Sitkum is a difficulty building for active learning, as the desks are heavy, unwieldy and noisy. It

was noticed that the chart that Ben had created for group work was not able to be used because of absences. Some strategies that might help are using colored dots, name tents, numbering off, playing cards. These can be fun and active ways to divvy up students differently. Also, having students use small white boards, perhaps get up and move to white boards – working standing up, might help get the active learning moving.

In conclusion, Ben used a number of effective, positive strategies that appeared to work well for the students in the classroom, and clearly met some of his outcomes as stated. As Ben gets to know Southwestern students, continues to develop coursework, and settles in to a first year with the college, the observer would predict that Ben will certainly be a valuable asset to Southwestern and that students will benefit from him.

Peer Review Member's Signature

Date

Faculty Member's Signature

Date

The Faculty Member's signature acknowledges review and receipt of this form and does not constitute agreement.

Arrived at 8:45 AM, students began arriving, by 8:58 about eight students had arrived, and Ben arrived at a few minutes before 9:00. Ben was wearing black jeans, brown leather shoes, and a sweater.

“Good Morning, by cell phone time in it is time to get started,” stated Ben. “Let’s get some lights going.” Ben turned on the classroom lights. “Let’s talk about Exam I reboot, today at 3 pm just a reminder that you if you don’t do it you are risking lowering your score.” Ben turned on the computer and opened a power point.

“The other thing too is if anyone has a POW 4; please get that to me sometime today. All right so today what we are going to do is continue our topic from last time, if we go to our notes, we are going to keep working the quadratic formulas, we learned about the Babylonians and modern day mathematics comes from, solved an ancient problem involving area that a Babylonian scribe

had written down. Then we solved a quadratic formula so I will write that down for reference, written on board, so we saw that any problem can be solved using this formula.”

Door closed.

“When you actually do this on your own, do this.” Ben then wrote equation on the board stating, “You’re going to get sick of me saying this, I’m going to say it a lot, I encourage you to do this.” Ben referred to writing the formula out. He asked if anyone remembered the advantage to using the formula and a student stated, “To help you with mistakes.” Ben state, “Yes, exactly you can avoid flubbing negatives.”

Student entered 9:05 AM

“So there is it is we solved the Babylonian problems last time so today I’m going to show you one version of how it’s going to look in the homework so when we saw this we simplified the radical, the next three examples are going to show you another form that you will see on the homework.”

Ben then describe the difference between radical and un-simplified, and how that would be evident on the homework, and what that meant for students. “This will test your ability to plug numbers in to the quadratic formula.”

Ben used quadratic formula to solve first problem on board using quadratic equation, he then mentioned the use of the Greek beta and asked a few questions about what that indicated. A student responded, although from seat in back of the room it was difficult to hear the answer.

As Ben worked through each problem most student were taking notes, or using calculators. A few times Ben posed a question to the group; the first four or five responses were from the same student.

9:12 a hand raised that Ben did not see.

9:14 same hand raised that Ben did not see.

When Ben turned back to the group he asked if there was a question, the student whom Ben had missed asked a question about why the problem needed to be written out a certain way, and Ben responded with reasoning that included both the usefulness of tools such as calculators, and the need sometimes to understand different parts of problem to solve or understand other problems.

“So let’s continue on, we are going to use quadratic formula.” Ben writes another problem on the board, “You will get to a point where filling in those numbers should be pretty quick which we should get to today.”

Ben moved to board on right wrote out 3rd problem and began to engage in solving it, discussing the formula as he wrote, “This is one of these knee jerk things you should know the quadratic

formula if I were to wake you about in 2 in the morning you should know this.” Ben wrote it again and plugged in third problem.

9:30 AM Ben discussed applications of the work and after working the final problem moved into an example using the physics of a bouncing ball. Ben described how we might want to find out some information about how long it takes a ball to bounce, using parabolic arcs and mathematics. After some discussion and description, Ben asked students to get into groups and work on some problems together. Ben displayed a chart on the board that had four groups, a student pointed out that there were a few people absent, and made a suggestion about how to re-group, Ben agreed, and left the room to pick up work sheets.

9: 40 The students arranged themselves, turning towards each other or dragging desks into clusters. The students chatted together as they re-organized. Ben returned with the work sheets and passed them out. Ben then moved around to each group sitting with them or asking, “How are we doing here?”

Students worked together sharing answers, using calculators, and chatting. The remainder of the class was spent with Ben moving about the room and answering questions.

At 9:50 or so Ben stated that the class would be over in a few moments, reminded students about the homework and exam re-take. A few students stayed after class to chat with Ben.