

## Sharpen Your Observation Skills with TIMSS Math Videos

Educ 350 Teaching and Learning, Trinity College, Spring 2023

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Be prepared to share your responses during our next class, for participation score

Anthropologists say: “A fish would be the last creature to discover water.” What does it mean?

To help you escape the “fishbowl” that you have grown up in, we will closely observe videos of teaching and learning from two culturally different high school classrooms in the US and Japan, filmed during the late 1980s-90s for the Third International Math and Science Study (TIMSS 1999). <http://www.timssvideo.com/>

Sharpen your observation skills by comparing teacher-student interactions in the two videos, which also include a transcript and resources. Feel free to watch and discuss with classmates, but write your own 3-5 sentence responses for each question below.

Mathematics > United States (US87) Interior Angles of a Polygon

<http://www.timssvideo.com/us87-from-timss-1995-video-study>

Mathematics > Japan (JP2) Changing Shape without Changing Area

<http://www.timssvideo.com/jp2-changing-shape-without-changing-area>

Think like an anthropologist. Write about what you directly observe, but dig beneath the surface to identify meaningful differences.

[Maria V:](#)

[Jess](#)

1) Physical space:

How is physical space organized in the US versus the Japanese classrooms? How does this influence teacher-student and student-student interaction?

2) Participants:

Who is present in the two classrooms? What do their roles appear to be?

[Shelley](#)

[Sonia](#)

3) Activities:

How does the sequence of learning activities differ between the US versus Japanese classrooms?

[Marie](#)

[Alberlis](#)

#### 4) Questions and Interactions

Who speaks to whom? What kinds of questions do people pose? How do person-to-person interactions differ?

[Maria M](#)

[Xavier](#)

#### 5) Mathematical thinking:

What kind of mathematical thinking is encouraged in each of the classrooms?

[Sloane](#)

Jack

#### 6) Subtle differences:

What does NOT happen in the US versus the Japanese classroom?

#### **Hints about writing better responses:**

a) *Weak response:* Students in the Japanese class begin by bowing to the instructor, but students in the US class do not bow to their instructor.

*(Although this observation is accurate, the sentence is weak because it only addresses superficial differences, without depth.)*

b) *Inaccurate response:* Students in the Japanese class bow to the instructor, which demonstrates that their teacher is more strict and demands respect from all students.

*(Although this claim goes deeper than the one above about bowing to the instructor, it makes an unsupported claim about “strict” Japanese teachers. From minutes 2:00 to 3:00, the Japanese teacher jokes with students about moving the land ownership boundary line.)*