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EDG565/EDU336/EDG515: Methods of Teaching Math

Week 4 Video Critique

Making Sense of Fractions Through Discourse

Grade 5

https://learn.teachingchannel.com/video/student-discourse-fractions

"Making Sense of Fractions" is a highly interactive video engaging the students in higher-level problem-solving by utilizing real-world problems and math language. It is part of the Series Bridging Content & Language: Strategies from a Dual Language Classroom: Making Sense of Fractions Through Discourse. It exemplifies a co-taught dual language classroom with the goal of all students becoming bilingual and bi-cultural. The school is in Wisconsin and uses Common Core State Standards and Wisconsin State Standards as well. The standards covered CCSS Math5.NF.B.6 -Solve real-world problems involving multiplication and division of fractions and mixed numbers, and WIDA ELD 1 & 3 -Social and Instructional Language and the Language of Math. The lesson was taught in English on the day of this video. The Dual Language program begins in K4 and goes through Grade 12.

Throughout the video, there were visual representations used of a symbolic nature, drawings/posters, colored marker pens by the students, index cards, and iPads. Academic Language and vocabulary discourse included strategies, tools, patterns, fractions, multiplication, division, halves, fourths, ratios, and algorithm. There was not any extended learning on this day since they were completing the lesson the following day.

- The lesson began with “Number Talk,” and number string, with the teacher saying, “We really want to see how much we can do mentally.” The teacher asked them what strategies they might use for the visual representation on the smartboard of a list of horizontal fraction problems. She asked them to think about it and write it down.
- Next, they broke into two groups with a teacher. They continued brainstorming and then returned to the whole class group and shared quite capably, organically, and enthusiastically.
- The students then paired up and worked on the problems and the strategies with a partner in Turn and Talk and had the option to use their iPads to draw or visualize.
- Next, they returned to the whole class again for some sharing and discourse as they explained what and how they solved their problems.
- They broke up into small groups this time and used their iPads, poster paper, and colored markers to draw, analyze and explain the problems with words and drawing. The teachers went around the room asking questions to gather information on any misconceptions or strengths, probe thinking, and take notes for them to review later in the day.
- They returned to the whole class group for lesson closure/debriefing. She advised they would have 15 minutes to complete what they had started the next day. They received a paper with a sentence stem to write what they learned and share their lesson experience. The students took a picture with their iPad to send to the teacher.

The lesson was taught with 110% fidelity! The approach was as close to a perfect balance of teacher-coordinated and student-centered that I could possibly imagine. The teachers supported and guided, yet allowed for shared thinking at the appropriate times. The

student pairs consisted of a strong English speaker and a strong Spanish speaker. I highly recommend it for its organization, mathematical discourse, and teacher approach,(not necessarily for instruction on teaching fractions per se.) This is a video demonstrating a model example of these characteristics in the classroom.

References

Student Discourse In Math: Fractions. (n.d.). Teaching Channel. Retrieved February 11, 2023, from https://learn.teachingchannel.com/video/student-discourse-fractions