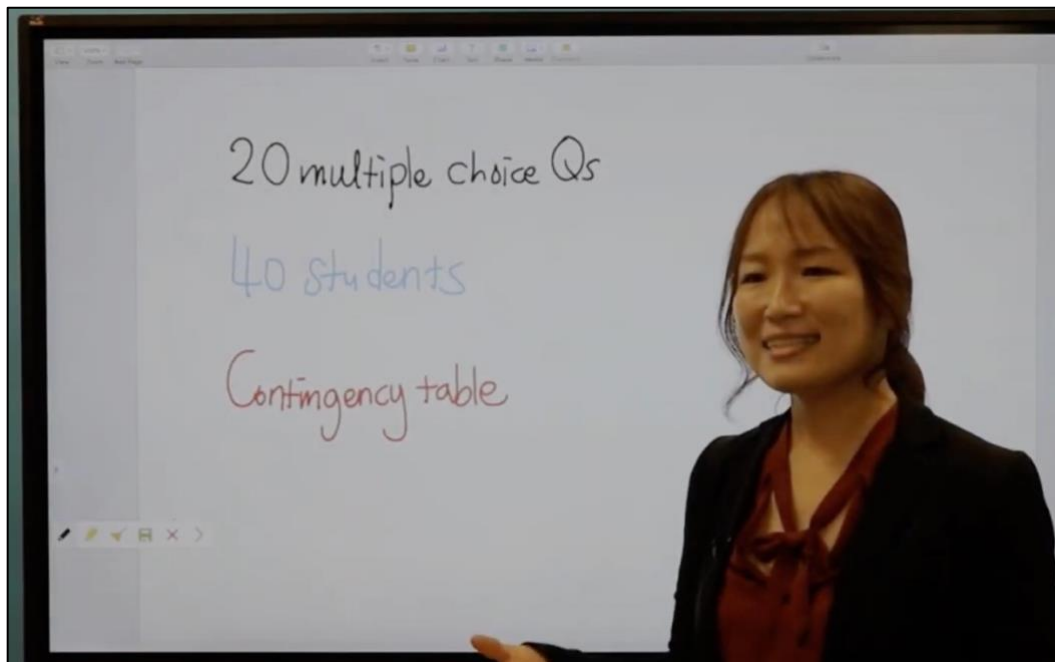




English as a Medium of Instruction (EMI)
Module 5: Task 1 – 3 Video Lectures
Video 5.3: *Strategies in Action: Facilitating Participation*

Dr. Bikowski: Let’s take a look at a strategy in action. In this video, Dr. Moon Cho at Ohio University will demonstrate how you can facilitate participation in your course. Specifically, she’ll showcase how to ask and answer questions so that students are more involved in the class. This is a course on statistics and the topic is contingency tables and types of variables—continuous or categorical. You’re going to hear some math terms in the following examples. Pay attention to the strategies that Dr. Cho uses to facilitate participation, regardless of if you understand the math terms themselves. As you’re watching, see if you can identify at least three strategies Dr. Cho uses to get students talking more. Welcome, Dr. Cho.

Dr Cho: Let’s say I created a test comprising 20 multiple choice questions, and administered the test to 40 students. Then, I counted the number of correct answers out of the 20 questions, like 18, 17, or 15. Can I use a contingency table for data analysis in this situation? Yes? No? and why. [on screen: No students answer, so Dr. Cho waits 6-7 seconds until finally one student volunteers]



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Student: I don't think we can use a contingency table in this case because the number of the right answers, like 15, 16, and 17, is a continuous variable.

Dr Cho: Well, you pointed out something very important here. Right, we don't usually use a contingency table for a continuous variable like test scores. The total number of the right answers sounds a lot like a continuous variable because they are coded as integers, I mean whole numbers, like 15, 16, 18. But let's think about this. When we know the number of the right answers, or the sum of the right answers, what would be the other values that we can automatically obtain?

Student: Well... maybe... the number of the wrong answers?

Dr Cho: Excellent. Right. In this case, we have the two discrete, or separate, categories of counts, the number of the right answers and the wrong answers. We didn't count the number of the wrong answers, in this case, but we know that there are only two discrete categories of answers, right and wrong. Remember we used a 2 X 2 contingency table for analyzing associations between taking a vitamin supplement before bed, which is coded yes or no, and having a sound sleep, another yes and no for 30 days, N = 30. Does this ring a bell?

Student: Oh... I got it. I think we can use a contingency table in this case because we're counting frequencies under discrete categories although we didn't necessarily count the number of the wrong answers. How about when we have more than 2 discrete categories? Can we still use a contingency table?

Dr Cho: Excellent question! Yes, the number of categories doesn't have to be binary. In this case, we use a contingency table although the total number of the right answers sounds like a percentage, a continuous variable. It's a little bit different than a percentage of a mass quantity, like the percentage of the area of a piece of pizza covered with cheese. It's just one mass and some measurable percentage. But, a variable that measures the number of right or wrong out of N trials uses a contingency table.

Dr. Bikowski: Ok, thanks Dr. Cho for this excellent demonstration. Maybe you all noticed some of the strategies Dr. Cho used to help students talk more in class. The ones I noticed were praising, when she always started her response by telling students something they did well, like when she said, "you pointed out something very important here." That was praising for their effort and ideas. However, the student didn't in fact provide the correct answer. So next, Dr. Cho moved to a probing question, when she asked, "When we know the number of the right answers, or the sum of the right answers, what would be the other values that we can automatically obtain?" She is helping the student come to the right answer on their own. You can also see Dr. Cho asking questions and giving examples that require critical thinking from the students. This is going to make the questions and discussion more interesting for them. And finally, she summarizes the correct answer, once the students have provided it to her. That way, all the students can leave class knowing what the answer was.

Ok, that concludes our demonstration on facilitating participation in your course. Thanks, Dr. Cho for your very useful tips!