

RESEARCH QUESTIONS

1. How do STEM faculty implement humor in a standard class session?
2. What is the difference between student engagement in classes that employ humor and those that do not?
3. What differences exist between the classes that use humor and those that do not with respect to other teaching techniques?

BACKGROUND

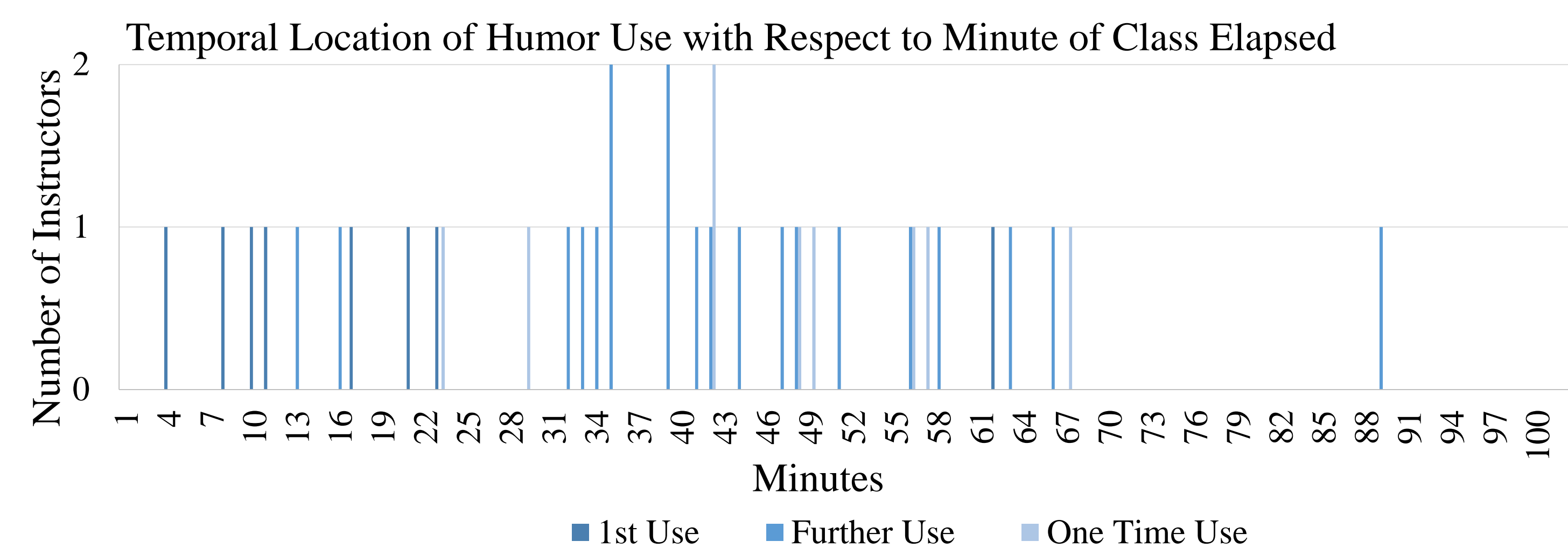
- ◆ Research on humor in the classroom at the collegiate level primarily concentrates on student perceptions [1, 2]
- ◆ Students perceive humor to be an effective teaching tool [1]
- ◆ Engineering students at Purdue University felt they were “more likely to remember class material if it is presented with humor” [1]
- ◆ Neumann, Hood, and Neumann identified a positive correlation between humor use and students rating the effectiveness of the communication [2]
- ◆ when used appropriately, content-specific humor can provide students with new perspectives and insight on the course material [3, 4]
- ◆ When surveyed, students most recommended funny stories, funny comments, and professional humor for use in the classroom [5]

METHOD

- ◆ **Participants:** 48 STEM instructors in at a medium size private institution; includes all ranks and tenure status.
- ◆ **Data:** Single video recorded classroom sessions for each of the participants
 - Video coded in one minute increments using the Teaching Dimensions Observation Protocol (TDOP) [6], and classification of humor [7]
 - Humor event based on class response (i.e. laughter)
 - Context and intent of each of these events was obtained through a transcription and description
- ◆ **Analysis:** Quantitative statistical analysis descriptive statistics and non-parametric student engagement and teaching approaches between faculty that used and did not use humor in the recorded video session

Humor serves to increase student engagement, even in cases where it is not related the educational material. Additionally, the use of humor improves student retention of information, builds instructor-student rapport, and has the potential to make the course more enjoyable.

- ◆ **Usage:** 63% of instructors did not use humor; 21% used humor once, 10% used humor 2 to 5 times, and 6% used humor 6 or more times in a particular class
- ◆ **Presentation Methods:**
 - Humorous comments typically last only a few seconds
 - Funny stories often lasted a minute or more, but were more related to the educational material, justifying the time spent
 - Only 10% of the humor being classified as distracting
- ◆ **Character Involvement:** 38% of the humor involved a character outside the classroom; 17% involved a student, 15% involved the instructor
- ◆ **Disparagement:** 5% of the humor involved instructor disparagement, 7% student disparagement, and 19% disparagement of a non-present character



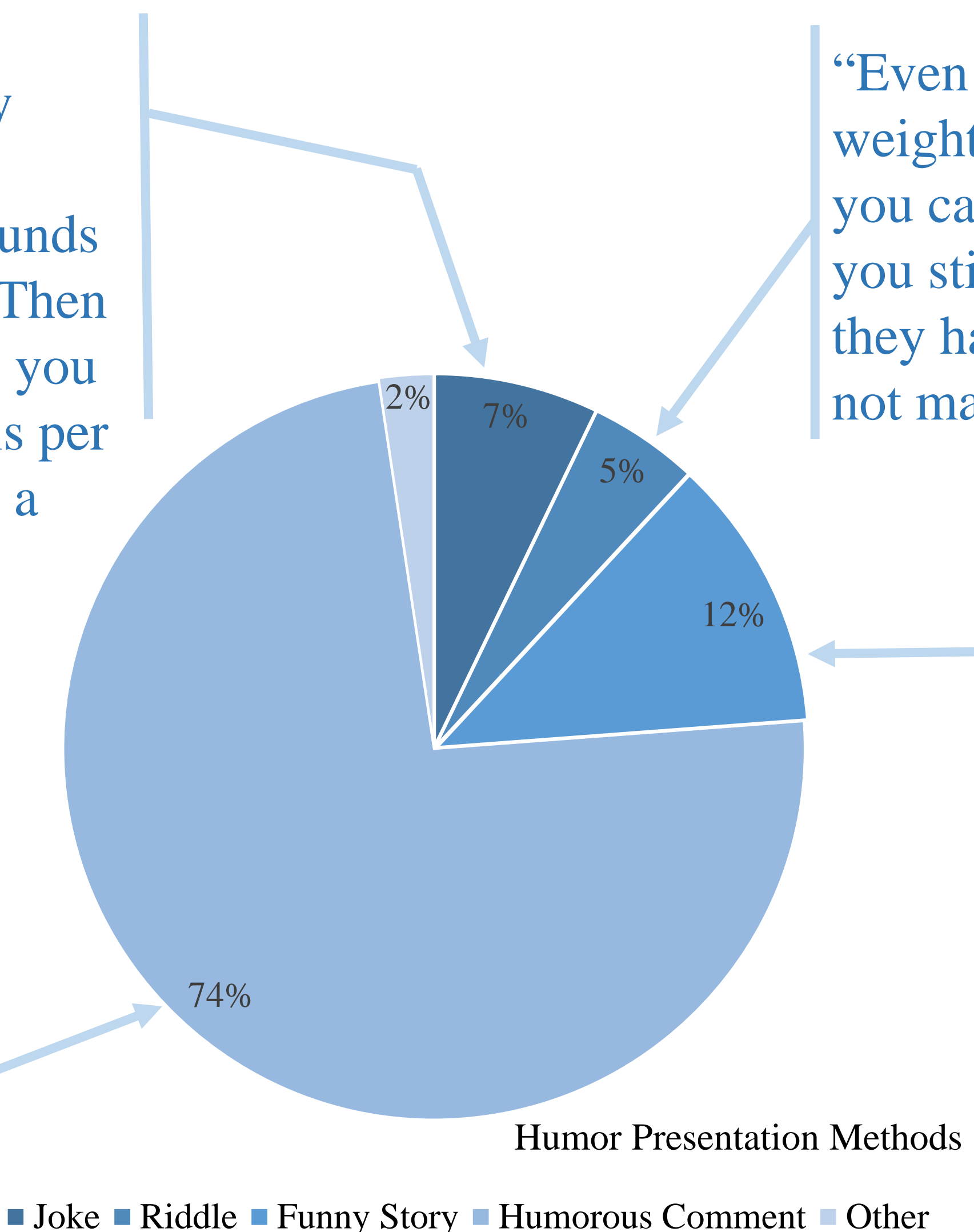
- ◆ **Timing:** Clusters at the beginning of the class set the tone for the class; later uses of humor reengage students whose attention has wandered
- ◆ **Student Engagement:** In classes where humor was used by the instructor..
 - Students asked more questions
 - Instructors used more anecdotes and connections to student experience
 - No statistically significant difference in the use of other teaching techniques in comparison to classes that did not include humor

REFERENCES

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RESULTS

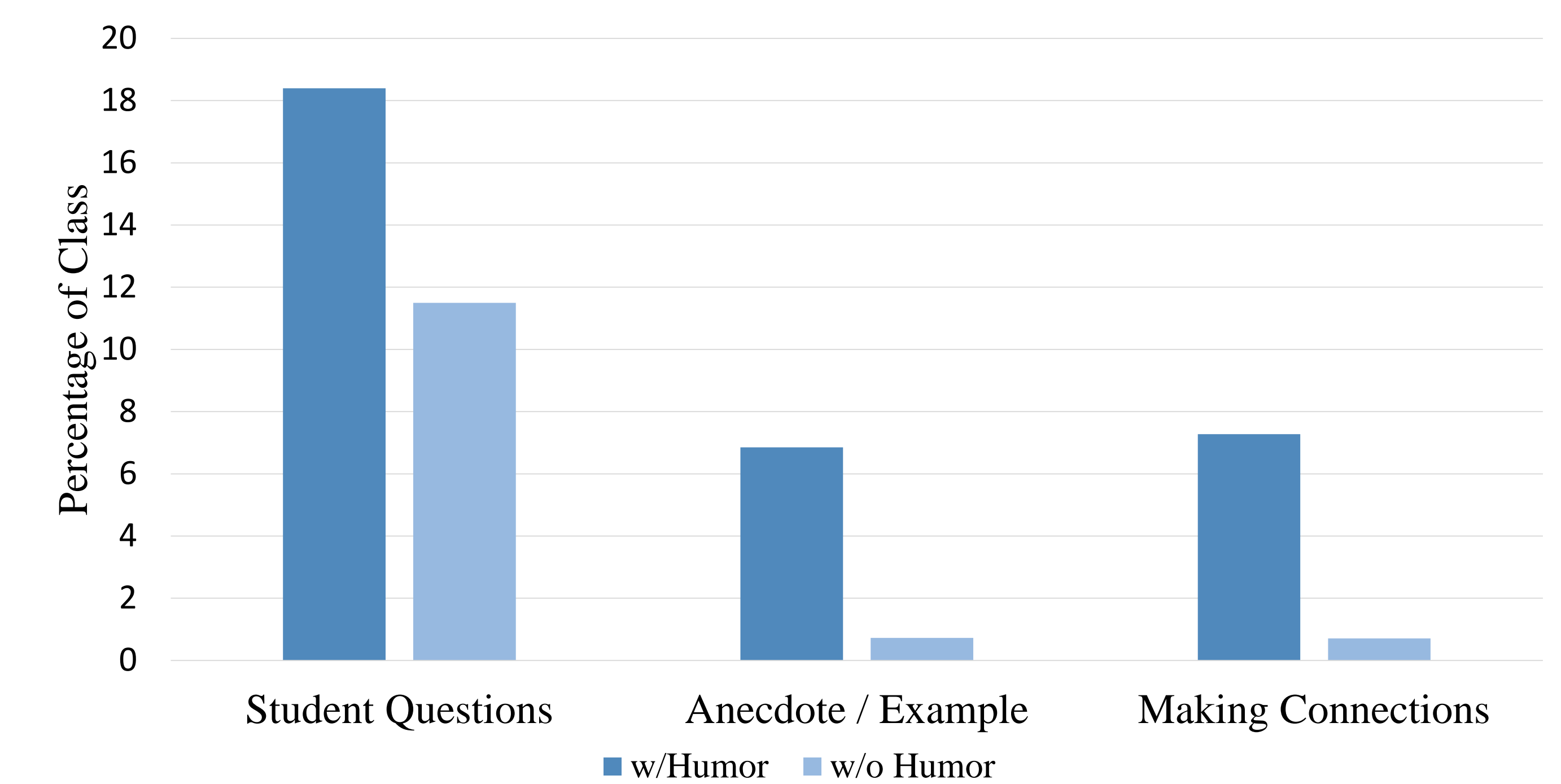
“You go and buy two pounds of grapes. They measure the weight of grapes to make two pounds and you pay for them. Then you eat them. Okay, so you pay per pound, which is per gravitational force. It’s a waste of your money; you’re paying for gravitational force!”



“Even when you don’t have weight, you still have mass. So you can lose your weight, but you still have mass. That’s why they have diets, to lose weight, not mass.”

“Now, next question, you in space; here is a car. I don’t know what car is doing in space. Maybe you want to drive around.” (when describing a fictional situation for a physics problem)

“We apparently value your education more than the National Arbor Day Foundation’s priorities.” (when asking a student to print a lengthy assignment)



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