Current Event 3: “Learning Environment, Motivation, and Achievement in High School Science”
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This research investigates the relationship between student’s perception of their science classroom and their achievement in the classroom. The study focused on one school district where eleven teachers volunteered their classrooms. There were a total of 377 students enrolled in the introductory science course. Students were asked to take a survey in the fall and in the spring. This survey asked the students to respond to statements that dealt with motivation, classroom environment, and teacher expectations. On top of the two surveys, the district mandates a test to be administered at the end of the year so that data can observe student achievement in the introductory science class. This study observed the relationship between the surveys and the district test. Overall, student achievement is impacted not only by their self motivation, but extrinsic factors such as teacher expectations.

The study had a very methodical approach. The methods in how the study was conducted were very logical. One of the strengths of the study was their longitudinal approach, where the Fall samples were compared to their spring samples. In order to tie it to science education, they correlated their results with the district test associated with the class. Being able to have these sets of data allows for a better interpretation of how students are affected in the classroom. Being in a high stake testing environments, it is nice to see the data next to something meaningful, such as student performance in the classroom. One difficulty I had with this article was a full understanding of the data. Their data seems legit, but it was hard to interpret because of my limited knowledge of statistics. An improvement I can see with this study is to follow the students in all of their science classes in their high school career and see whether their perceptions or successes change throughout time. This change would take the longitudinal outlook to a different level. The study can now see some kind of progress, not in just one school year, but also in the other science disciplines.
Students are great observers and once they are keen to an idea, such as “this class is hard” or “this teacher doesn’t like me”, it’s hard to erase thoughts like these from their minds. A mentor of mine told me once, “be hard on the content, but be soft on the person”. I thought of this statement when I read through the article. As we teach day in and day out, we forget how we impact our student’s learning and success, with our body language, our tone, and our expectations. With all the pressures to get through standards, benchmarks, and high stakes testing, teachers forget that students are individuals and our profession is not just about the science curriculum. Students come into our classroom with their own perceptions of what a science class should be. How do we erase these perceptions? How do we change their mentalities so that they can have a more positive outlook? This article reminds me to ensure a safer and cooperative classroom environment for all my students.


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