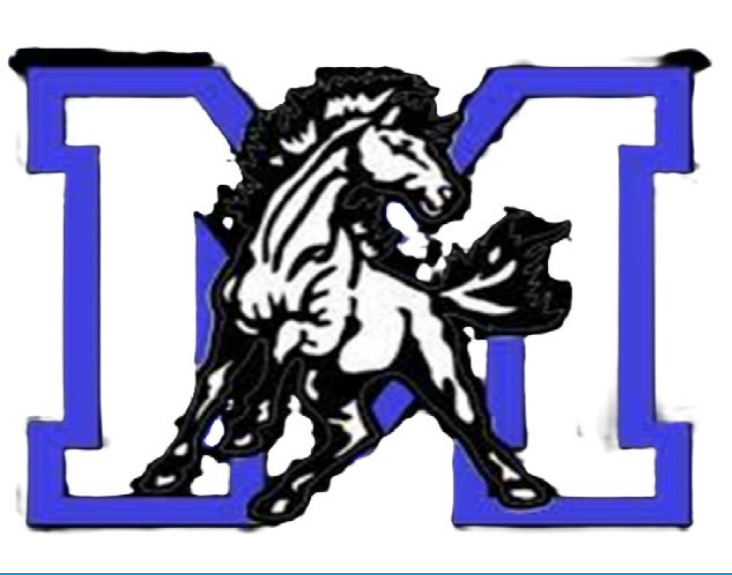




The Effectiveness of Science Homework in a 6th-grade Elementary School Classroom

Nancy Wear, Miguelito Elementary School, Lompoc, CA July 2024

RESEARCH QUESTIONS

How does science homework affect elementary school science classroom student learning?

BACKGROUND

Students at our school have very little to no science homework. When the current 6th graders were in 5th grade for the 2022-2023 school year, only 23% of the eighty students were considered proficient in science. In my class, only 5 out of 27 students, or 18%, met the standards on state testing. The students are now in 6th grade and struggle in science. Students have had little to no homework in science.

METHODOLOGY

- An eighteen-question survey was given to parents and students to assess their feelings towards homework.
- Students were given homework two to three times a week for five weeks.
- At the end of each week, students were given a ten-question assessment and a ten-question post-survey to assess their feelings about the homework and the assessment.

Weekly Quick Homework Survey:

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. The science homework given to me took me less than 30 minutes to do.					
2. I was able to learn something from the science homework.					
3. I was able to do the science homework with little to no help from others.					
4. The science homework helped me towards what we were learning in class.					
5. The science homework helped me during my class instruction.					
6. The science homework was beneficial towards my test.					
7. The science homework is useful in what we are about to learn.					

Describe what you liked about the homework this past week.

Describe what you did not like about the homework this past week.

At least one question did you have about the homework this past week?

Figure 1: Student Post Assessment survey

Parent & Student Survey

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
1. I have given my child doing his homework given to him in the science classes.					
2. The science homework given to science classes has a major role for me to understand the science classes.					
3. I think homework given to science classes should be different.					
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100. Homework given to science classes should be different.					

Figure 2: Room 9 Student Survey

Parent Survey

	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
1. I have given my child doing his homework given to him in the science classes.					
2. The science homework given to science classes has a major role for me to understand the science classes.					
3. I think homework given to science classes should be different.					
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Figure 3: Family Homework Survey

DATA ANALYSIS

THE EFFECT OF HOMEWORK ON ASSESSMENT

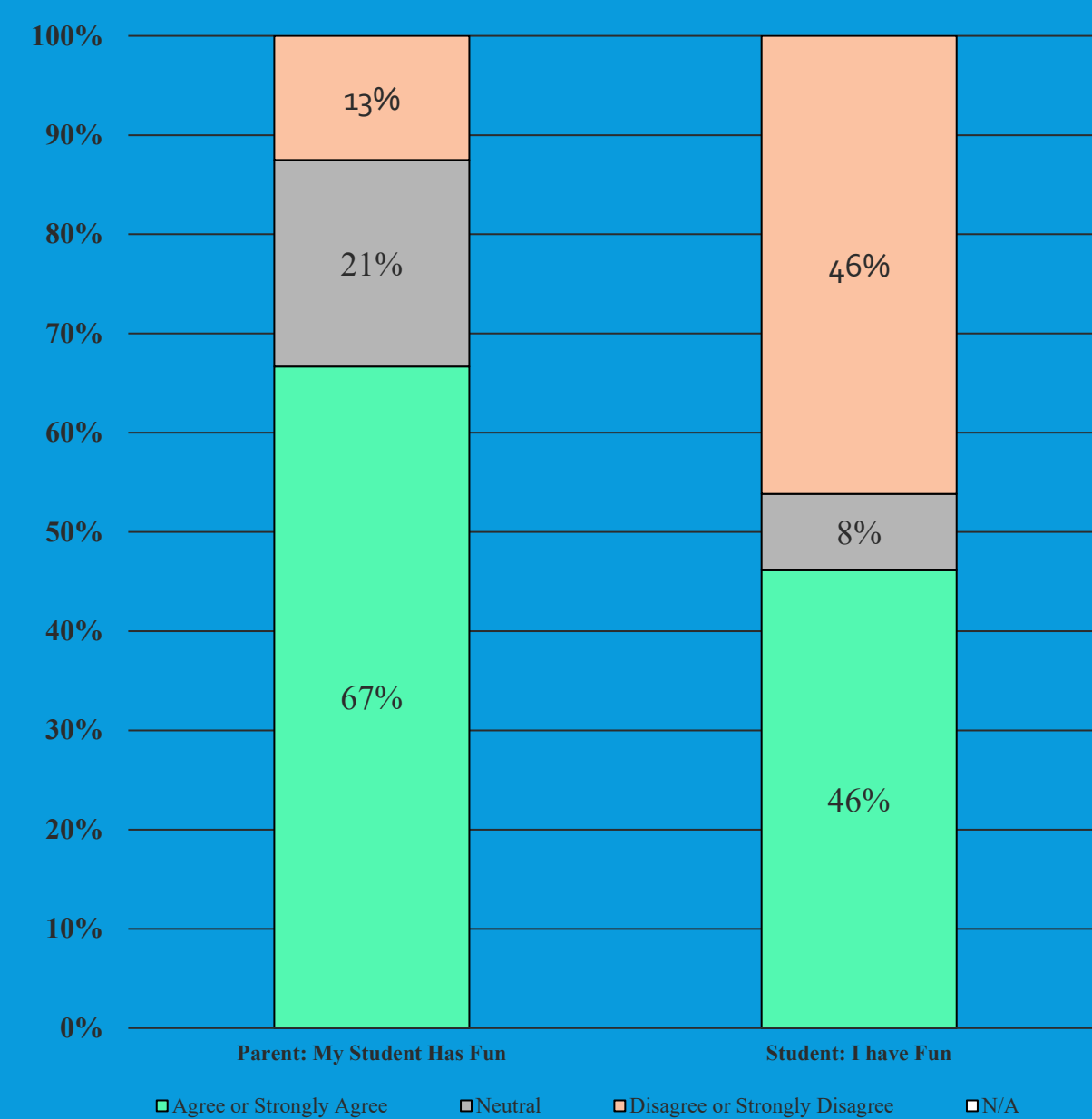


Figure 4: Parent and student perceptions of science homework. The disconnect between the perceptions is great for having fun doing homework.

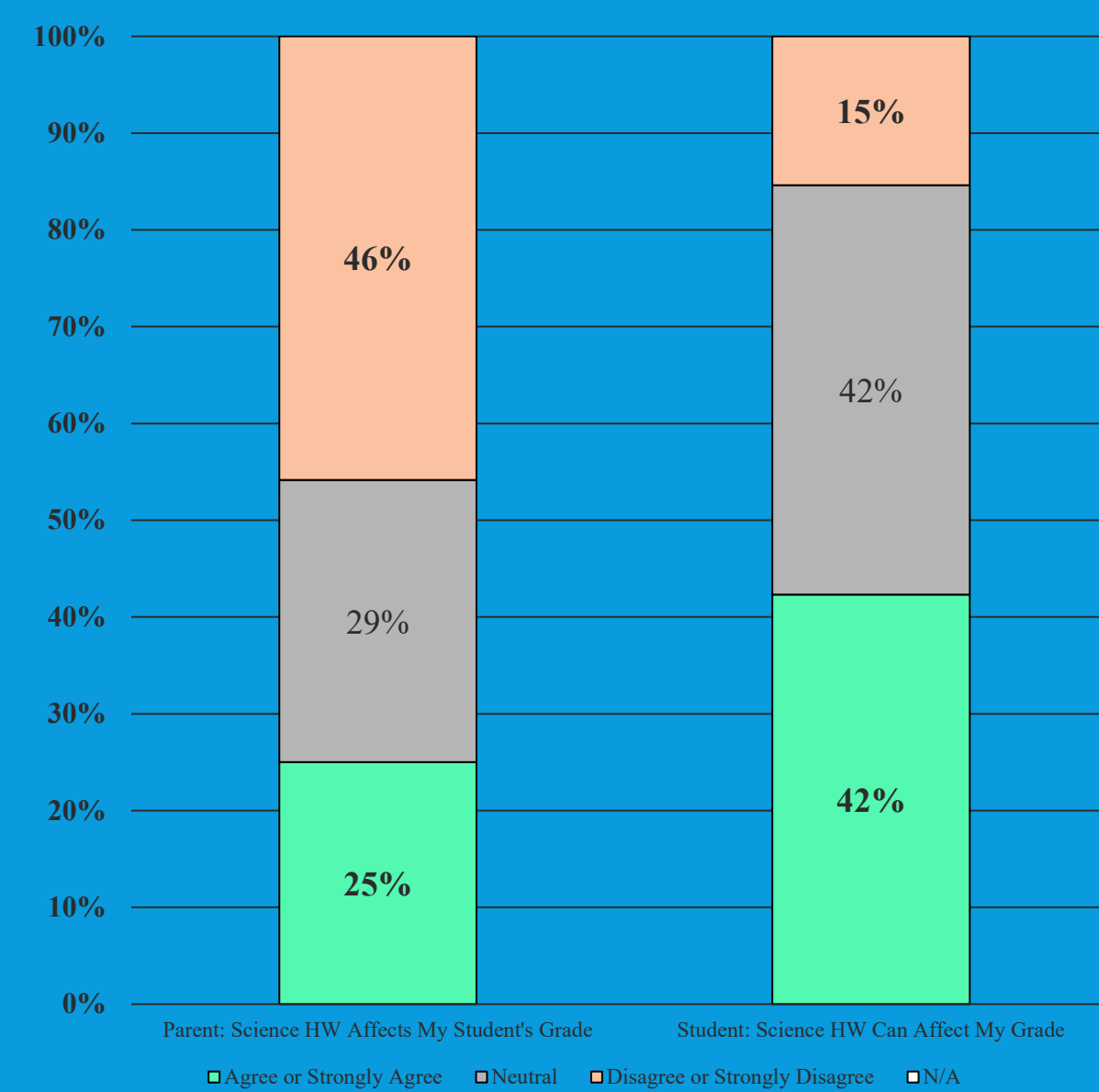


Figure 5: Comparisons of parent and student data on how science homework can affect their grade.

Parents and students have different perceptions of homework. Parents see homework as something fun for students and that they enjoy doing, while students see homework as something they are forced to do. Parents and students also see a difference in whether homework affects a student's grades. Parents believe that it shouldn't, and students see it as it should.

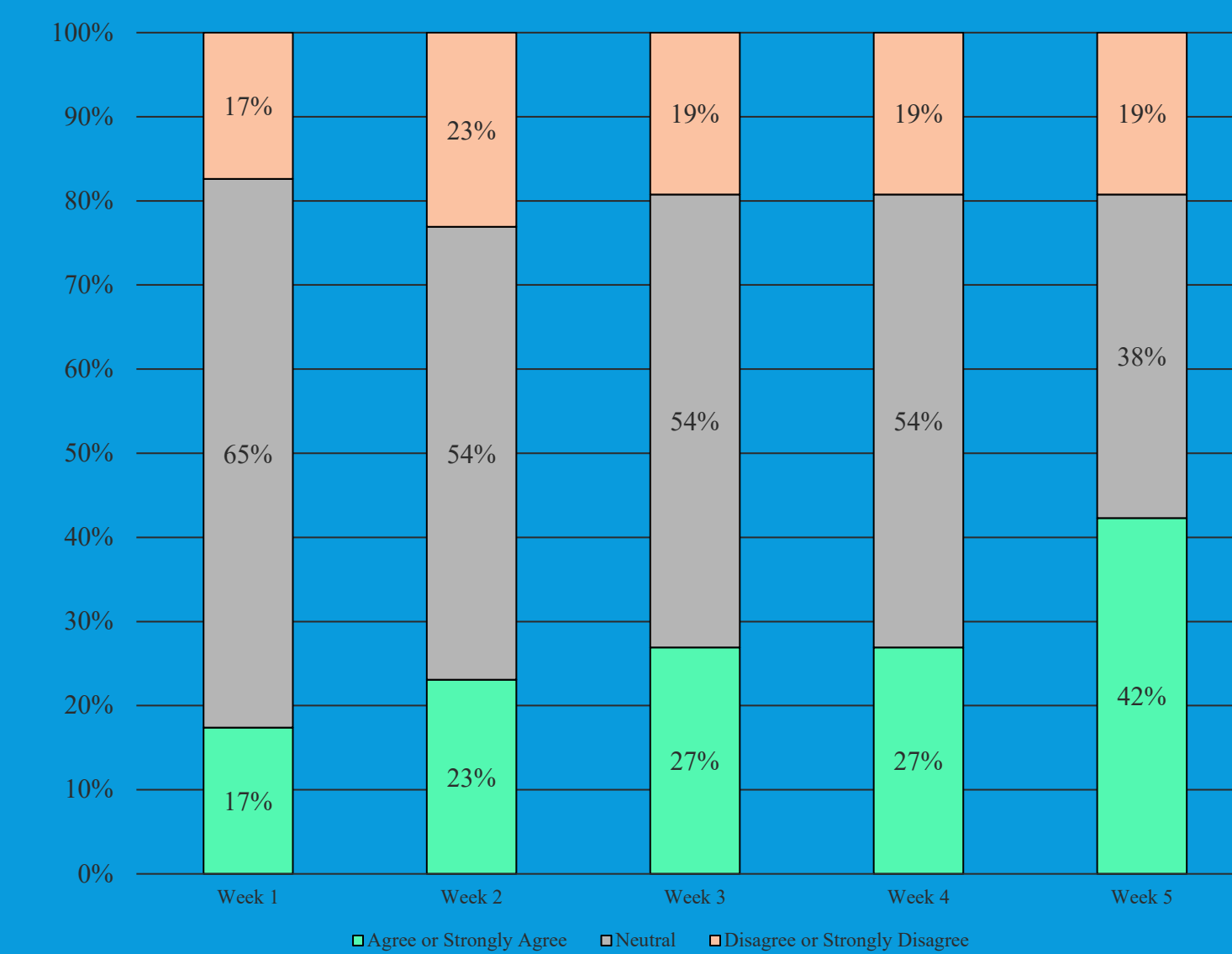


Figure 6: Student post-survey after homework and assessments

The data throughout the five weeks show that students were neutral about homework helping with class instruction. However, when analyzing the final data on students who did their homework compared to the average assessment scores, students started to make gains in week four and week five when homework was creative using observations at home, multimedia creations for homework, and thinking of questions instead of answering questions in the reading.

RESULTS

According to the survey, there needs to be more connection between parents and students regarding homework. The data also shows that student's test scores slightly improved with homework. However, the type of homework that is given does affect student scores. Furthermore, students struggle with some of the homework, such as fill-in-the-blank

CLAIM-EVIDENCE-REASONING

Past studies on homework effectiveness for grade six showed a slight positive effect. The study I conducted reiterates the effectiveness of homework in the classroom setting. However, the type of homework given plays an essential factor in this. The type of questions students must answer affects their assessment scores. Students did better when they had multimedia homework, used their imagination, or thought critically. Students struggled with assessment questions, where they read and answered questions. One can conclude that when students use multimedia, creativity, or critical thinking, they can make a connection from homework to the classroom.

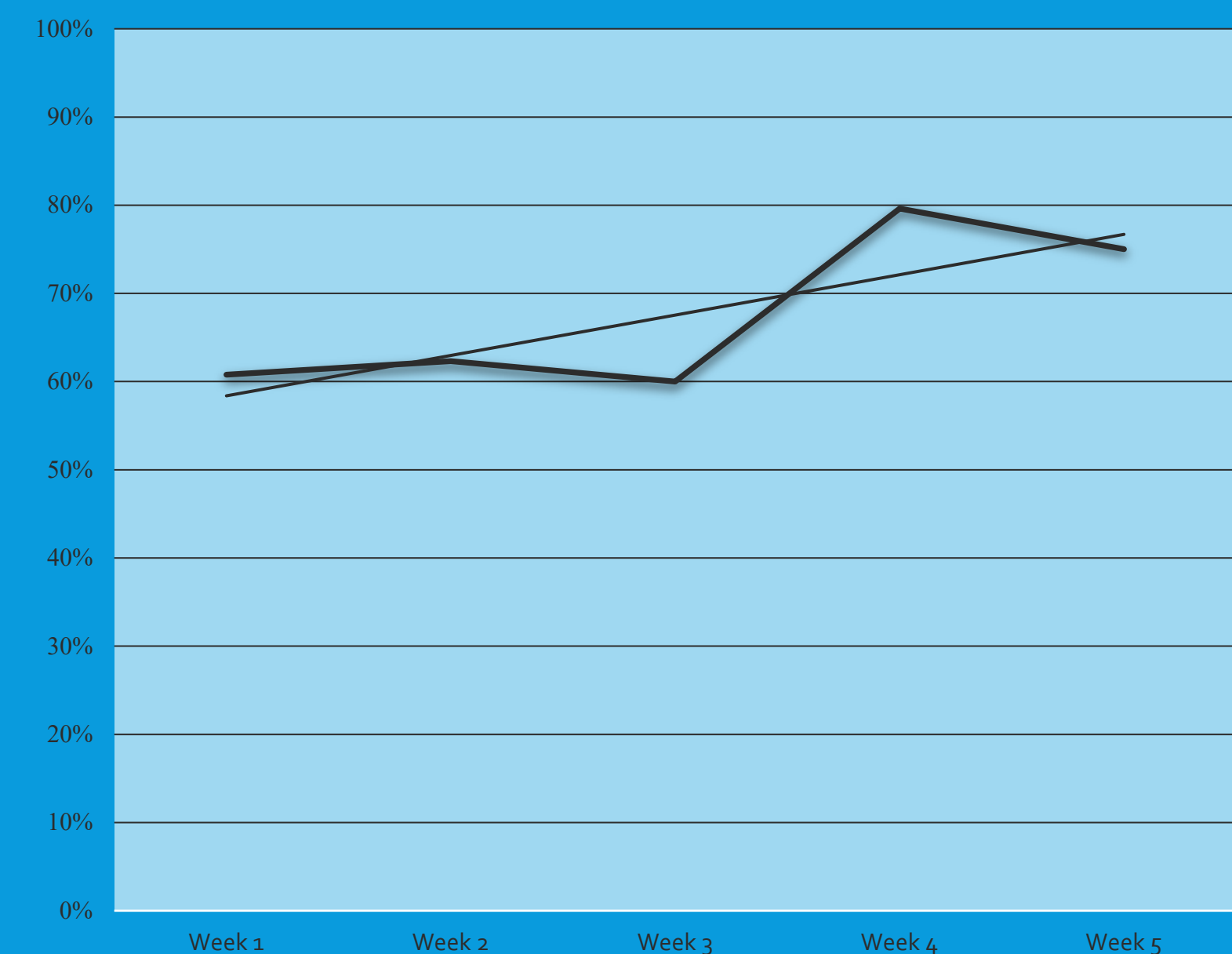


Figure 7: Homework and student assessment success has a slight correlation.