

# The Effects of Interactive Notebooks on Science Content Knowledge and Achievement in the Middle School Science Classroom

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## BACKGROUND

Havre Middle School  
Grades 6-8

### Demographics:

\*\*7<sup>th</sup> Grade Life Science  
(3 classes = 67 students)

\*\*8<sup>th</sup> Grade Earth Science  
(3 classes = 63 students)

### Purpose:

-To help students develop skills necessary to take meaningful, organized, and useful notes.

-To engage students in the notetaking process both inside and outside of the classroom.

-To teach students to use their notes as a tool to guide and support their content knowledge.



## RESEARCH QUESTIONS

### Main Research Question

- 1.) What is the effect of interactive notebooks on student content knowledge and academic achievement?
  - Will students be more engaged?
  - Will students use the notes outside of class?
  - Will students of a variety of learning modalities benefit?

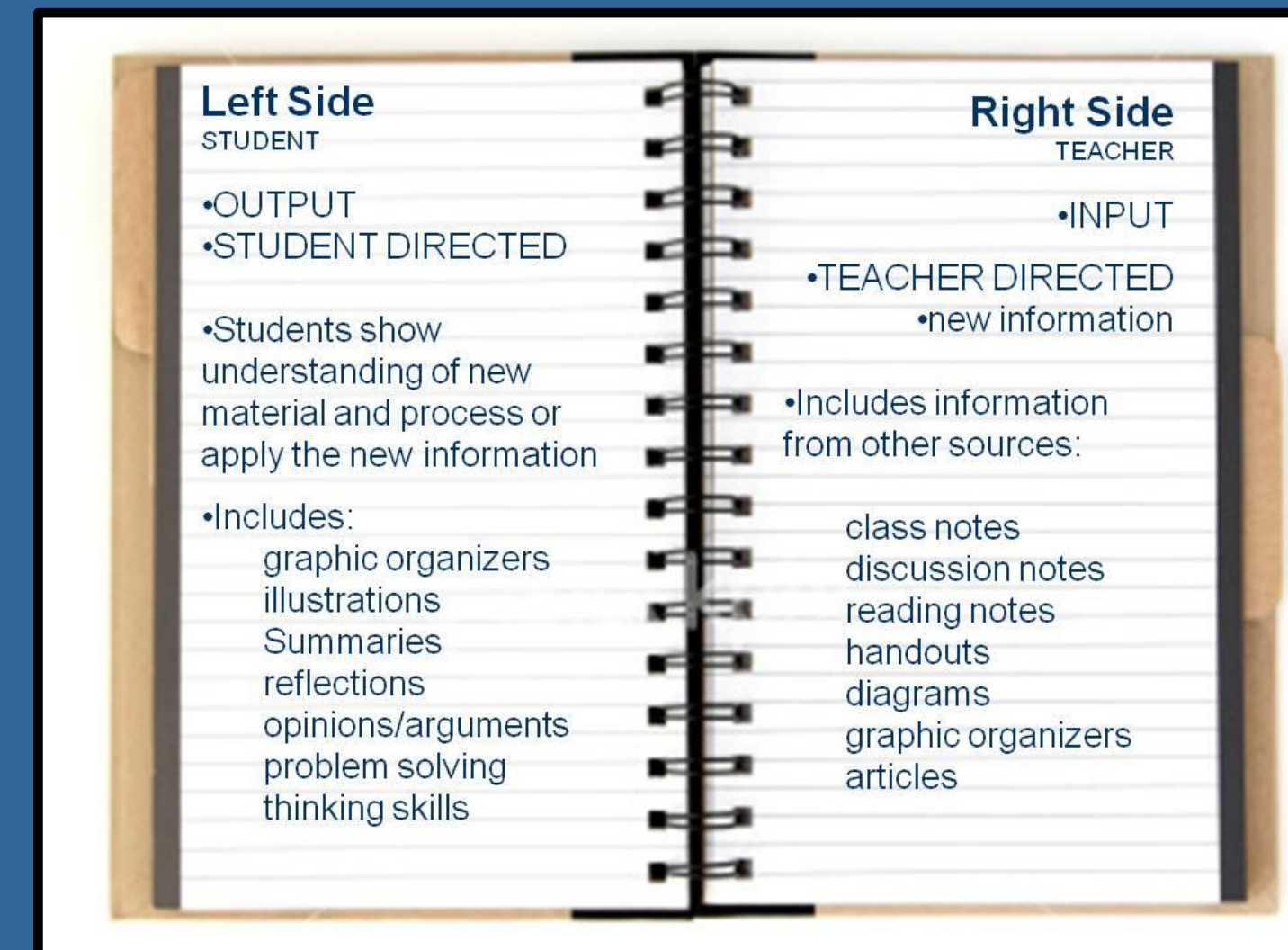
## RESEARCH DESIGN

130 Students ( $N = 130$ )

- 1 Non-treatment unit at each grade level: standard notetaking
  - 7<sup>th</sup> Grade Ecosystems Unit
  - 8<sup>th</sup> Grade Earth's Structure Unit

- 1 Treatment unit at each grade level (interactive notebooks right side input, left side output)
  - 7<sup>th</sup> Grade Life Structure/Function Unit
  - 8<sup>th</sup> Grade Geologic Changes Unit

-Instruments: Teacher Journal, Observations, Pre/Post Assessment Scores, Survey, Questionnaire, Science Notebook Rubric, Student Self-Assessment



[http://techpd.weebly.com/uploads/2/0/8/3/2083734/in9\\_with\\_curie13.jpg](http://techpd.weebly.com/uploads/2/0/8/3/2083734/in9_with_curie13.jpg)

## CONCLUSIONS

1.) Many of my students are considered visual learners; these students seem to benefit from any type of notetaking (see Figures 1 & 2).

2.) Many of my students find note-taking to be important and/or helpful, even if they don't necessarily enjoy taking notes (see Figures 3 & 4).

3.) As a whole, seventh graders benefited more than eighth graders (normalized gain was higher, see figures 5 & 6).

4.) Many students still struggle to see the benefit of notes outside of class.

## DATA

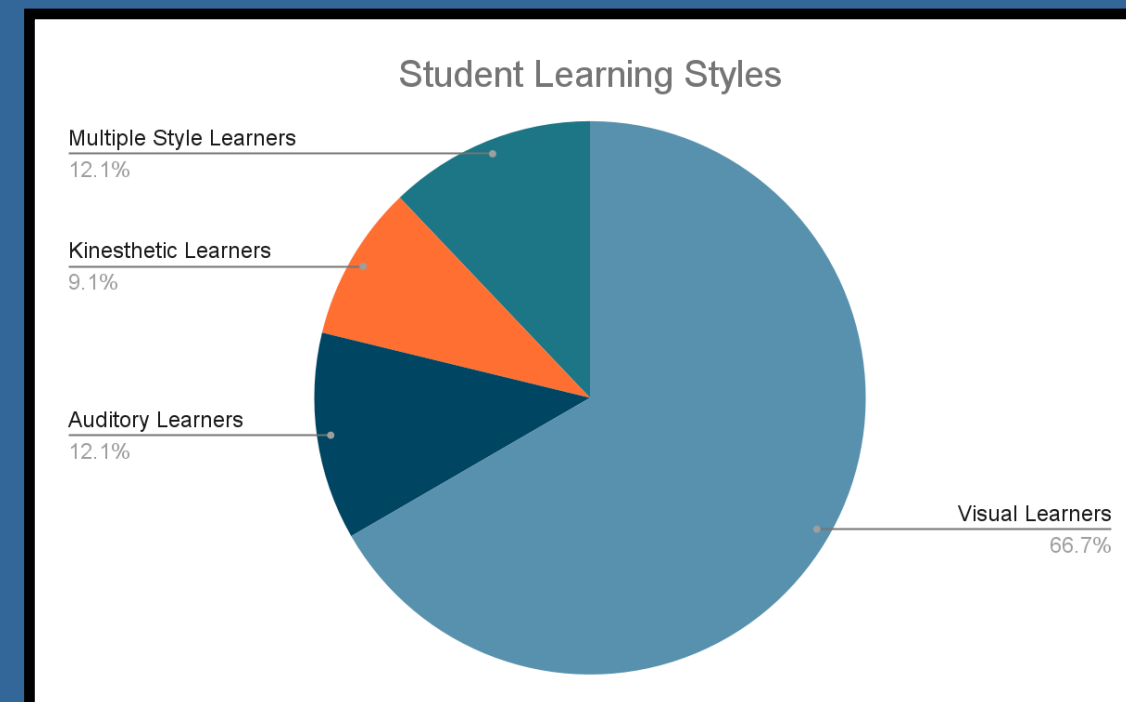


Figure 1: 7<sup>th</sup> Grade Student Learning Styles ( $n=33$ )

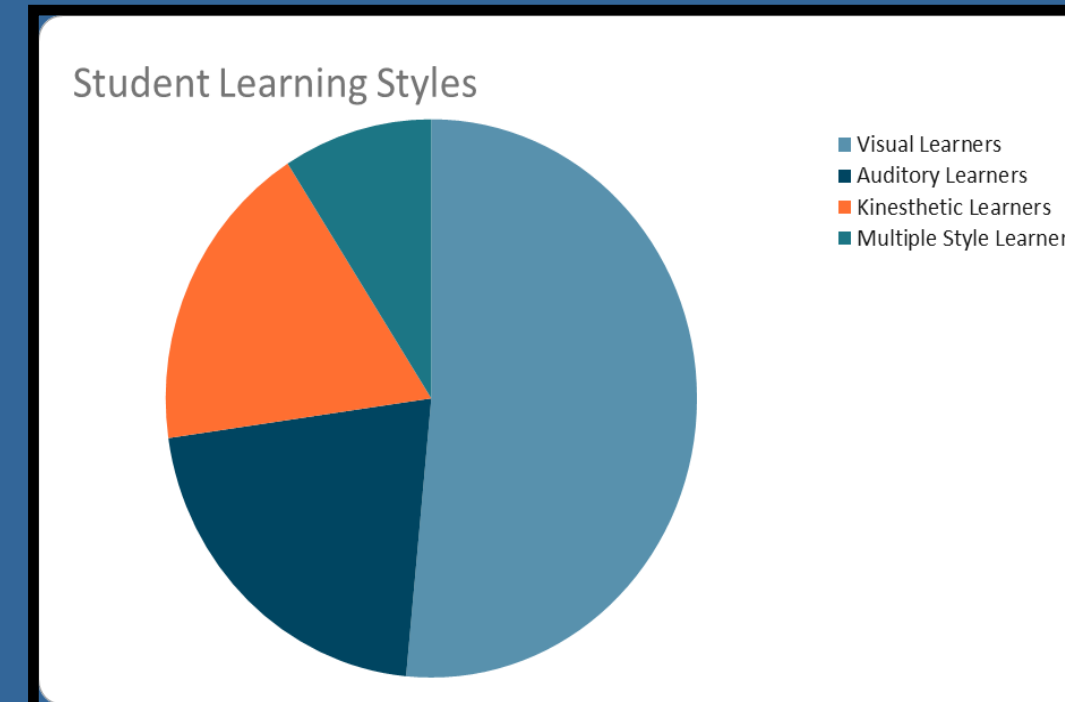


Figure 2: 8<sup>th</sup> Grade Student Learning Styles ( $n=33$ )

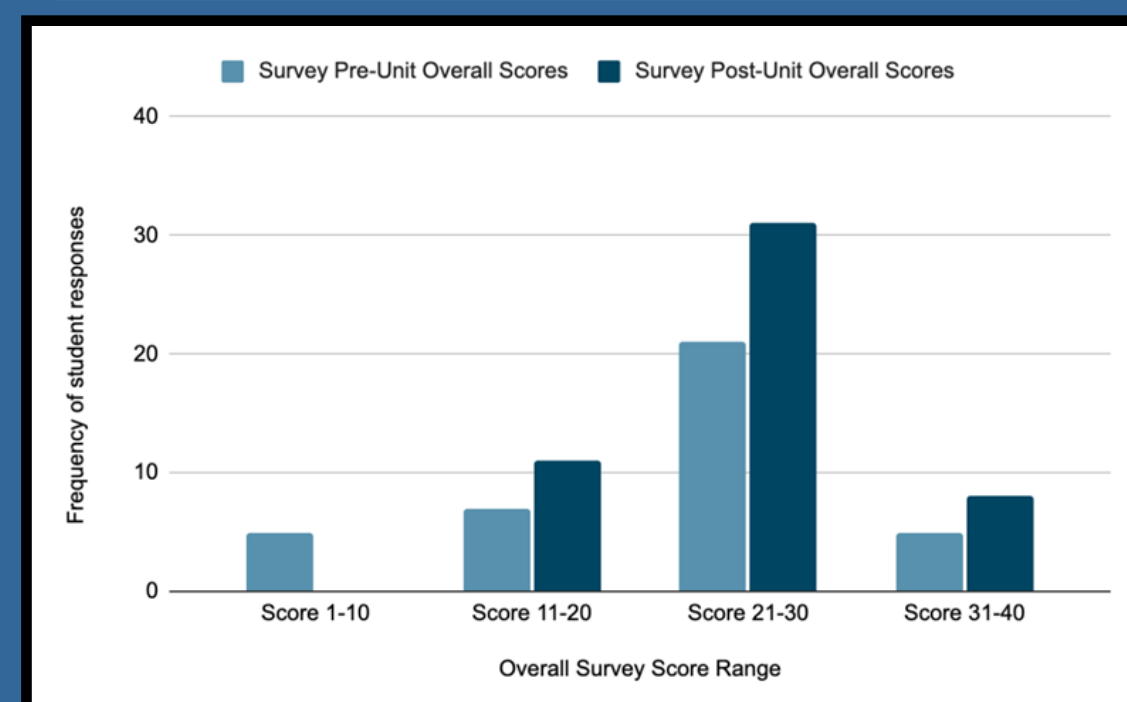


Figure 3: 7<sup>th</sup> Grade Student Note Taking Survey ( $n=50$ )

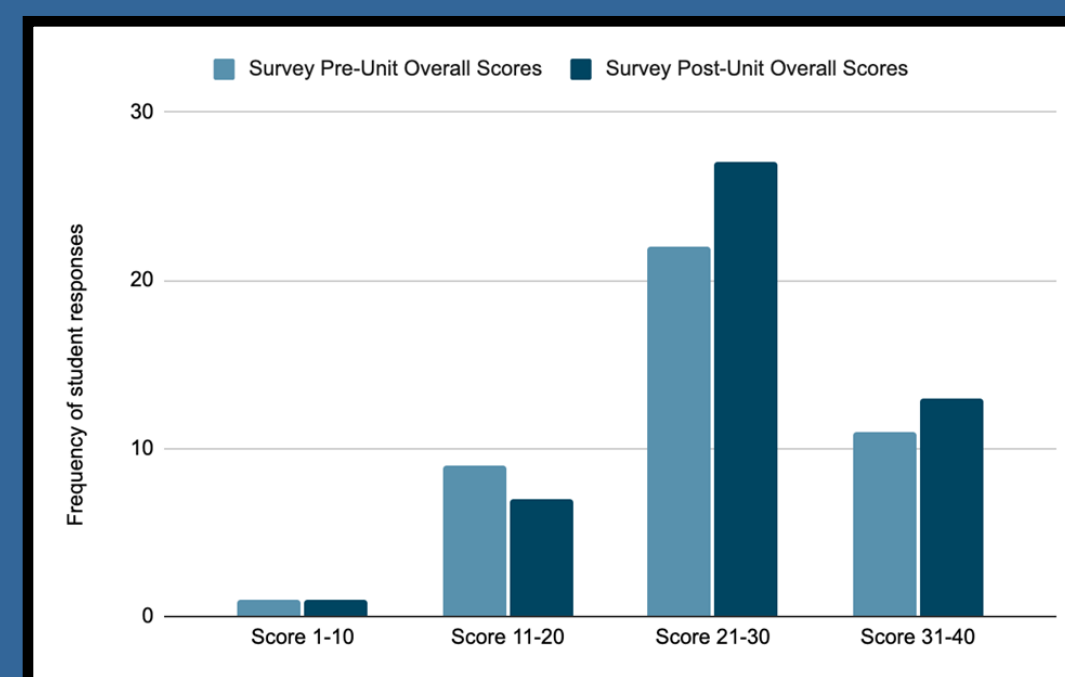


Figure 4: 8<sup>th</sup> Grade Student Note Taking Survey ( $n=48$ )

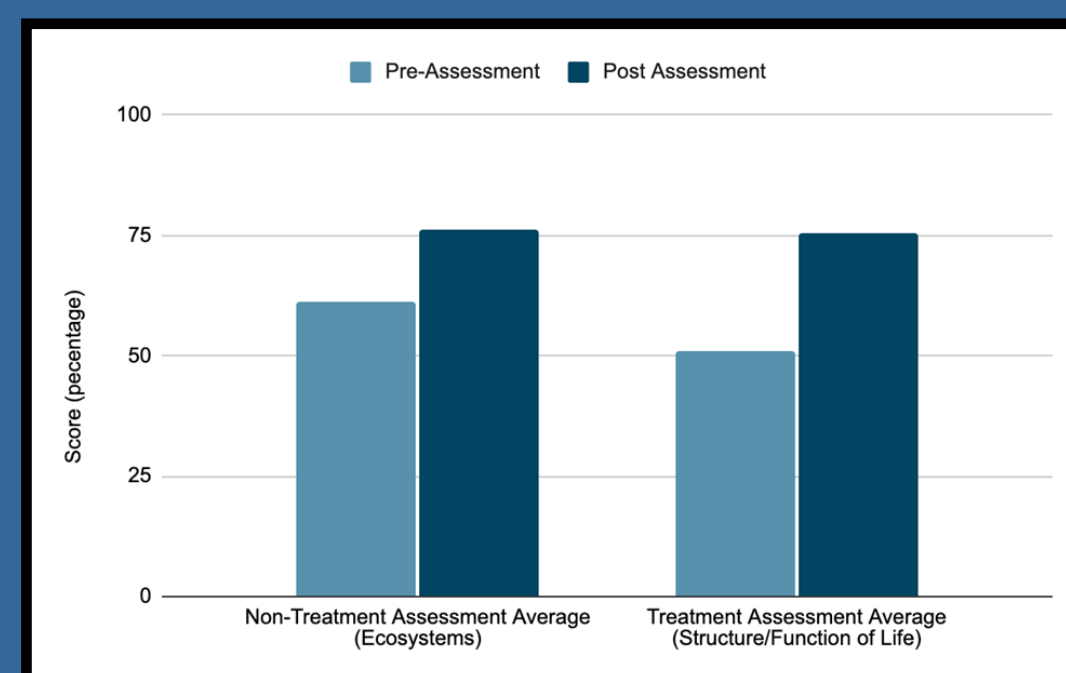


Figure 5: 7<sup>th</sup> Grade Assessment Scores ( $n=67$ )

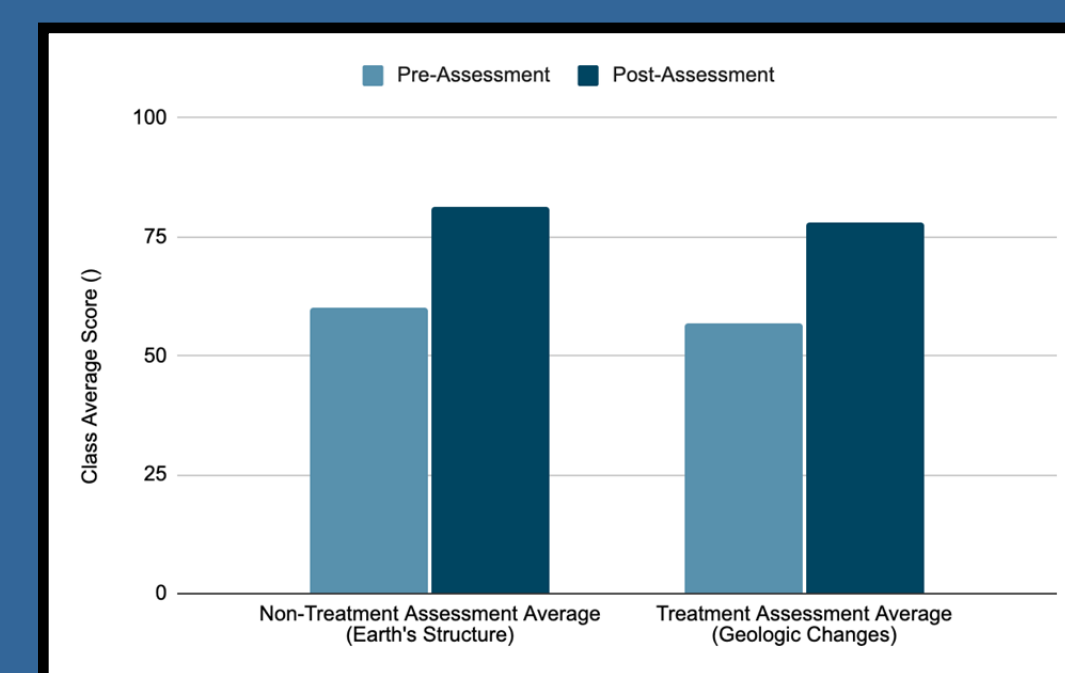


Figure 6: 8<sup>th</sup> Grade Assessment Scores ( $n=63$ )

## IMPLICATIONS TO MY TEACHING

-I will continue using notes in class, as the majority of students find them useful/helpful.

-I will focus the interactive notebooks more on 7<sup>th</sup> grade, as they seemed to benefit more and need more guidance.

-8<sup>th</sup> grade students needed less guidance and didn't show as much gain using the interactive notebooks; I would like to try a different note taking style with them.

-I will work on finding a way to make note taking more meaningful outside of class by incorporating note-taking careers/jobs/trades.