

# AN INVESTIGATION IN NOTE-TAKING STRATEGIES FOR HIGH SCHOOL BIOLOGY STUDENTS

## Introduction

My capstone research was conducted in the 9<sup>th</sup> grade biology classroom at Washington High School in Sioux Falls, South Dakota. My topic originally stemmed from the 1-1 integration of student Chromebooks. Many students started out typing notes electronically, but nearly all returned to the traditional paper and pencil method. This research was conducted to delve deeper into the educational science behind note-taking methods and media.

## Research

### Questions:

Primary:  
How do various methods of note-taking impact student learning?

Secondary:  
1. What methods of note-taking are the most student-friendly in the classroom?

2. What methods of note-taking are the most student-friendly outside the classroom?

### Triangulation Matrix

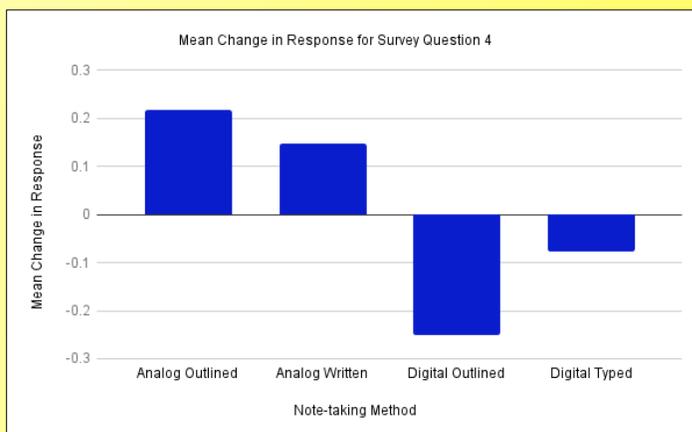
Focus Question	Data Source 1	Data Source 2	Data Source 3
Primary	Pretreatment test scores on pretest assessment	Posttreatment test scores on summative assessment	Two formative assessments
Secondary 1	Posttreatment students surveys	Posttreatment student interviews	Recorded teacher observations
Secondary 2	Posttreatment student surveys	Posttreatment student interviews	Pretreatment and Posttreatment test scores

## Treatment

The treatment phase was conducted over one unit of study in three high school freshman biology classes. Participants were randomly assigned one of four note-taking methods including analog, outlined analog, digital, and outlined digital. Students were asked to use this method of note-taking for the entirety of the unit, not only in the classroom, but also for outside referral and review.

## Results

Results of this investigation showed that there was not a strong relationship between student learning and note-taking method. Multiple forms of evidence pointed towards analog note-taking as the most student-friendly during classroom instructional time versus digital note-taking. Student survey results suggested that digital, outlined note-taking was the least student friendly within and outside of instructional time, however overall results were inconclusive.



The chart at the left is an example of data collected through student surveys. Students were asked whether or not their assigned note-taking method helped them pay attention in class. A positive value, as in the cases of analog outlined and analog written, showed an average increase in comparison to their initial survey response regarding traditional analog written note-taking. A negative value, as in the cases of digital outlined and digital typed showed an average drop after completion of the treatment phase.