USING AN INTERACTIVE NOTEBOOK TO SUPPORT SIXTH-GRADE WRITING

A THESIS

Submitted in partial fulfillment of the requirements

for the degree of

MASTER of EDUCATION

by

Samantha Merritt

William Paterson University of New Jersey

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ABSTRACT

When it comes to English Language Arts (ELA) classrooms, writing is a main topic of instruction. Writing is important inside and outside of the classroom, however, many students across the United States struggle with writing, including at the foundational grammar level. This study was designed to address this problem by exploring the research questions: How does the use of interactive notebooks help students to identify grammatical errors? How does the use of interactive notebooks impact sixth-grade students' use of grammar in narrative writing? What are students' perceptions about the interactive notebook?

The study was conducted over three weeks in one of my sixth-grade English Language Arts classes, with some data retroactively accessed after IRB approval due to curriculum restrictions. The participants were nine sixth-grade students in this class. During the study, the participants completed two diagnostic tests on identifying grammatical errors and wrote two narrative pieces, all designed to improve grammar usage when writing. Participants also shared written reflections on using the interactive notebooks to support their grammar.

It can be concluded that interactive notebooks improve students' use of grammar when writing narrative pieces and are positively perceived. However, the impact of interactive notebooks on grammar identification was not significant. Based on the study's findings and conclusions, recommendations for further research and teachers were identified.

DEDICATION

To my family, who supported me and encouraged me every step of the way while I completed this project. Thank you for your continued support.

To my friends, whose constant validation and encouragement motivated me to complete this project. To Connor and Brianna for being amazing friends and coworkers who saw me go through every emotion during this project. I appreciate you all.

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CHAPTER I

Statement of the Problem

Introduction

When it comes to navigating the world inside and outside of the classroom, writing is an important skill for all citizens. People must know how to write things properly like sending emails or writing documents, however, many students across the United States struggle with writing. According to the Nation's Report Card, 27% of eighth-grade students were proficient in writing in 2011, while 31% of eighth-graders were proficient in 2007 (NCES, 2008). These National Assessment of Educational Progress (NAEP) scores show a decline in writing proficiency throughout the nation. To further explore the levels of writing proficiency across the nation, Brozo (2009) states, "Nearly 32% of high school graduates are not adequately prepared for college-level English composition courses," while "Approximately 40% of high school graduates lack the literacy skills employers seek" (p. 277). These studies show the lack of writing proficiency is extremely startling at both the middle and high school levels. With these numbers demonstrating the decline and lack of command in writing across the nation, writing skills must be developed in the classroom to best prepare students to become functioning and communicative citizens outside of the classroom.

At the state level, many New Jersey students struggle with important writing and literacy skills. The statewide grade six New Jersey Start Strong state testing in Fall 2021 shows that of the total 95,359 students who took the test, 33% of students needed strong support in English Language Arts and 26% needed some support–meaning that a total of 59% of students who tested were below grade level expectations. The same test showed that only 41% of students needed less support–meaning those students met or exceeded grade level expectations. This data

shows that more students are struggling and need additional support in English Language Arts (ELA). According to the New Jersey State Performance Report, the 2021-2022 New Jersey state testing for ELA data shows that New Jersey has a 49% proficiency rate in ELA as a state–meaning that 51% of students in New Jersey are not proficient in ELA.

The decline in writing proficiency has been noted in my district through a poll of the 12 ELA middle school teachers and two supervisors in my district. The findings of the poll show that all participants have noticed a significant decline in student writing ability and basic understanding of grammar and mechanics. State testing data also reflects the decline in writing proficiency in my district. The Spring 2022 grade five NJSLA state testing in my Title I district shows that 55% of students who took the test are below grade level proficiency, while the Spring 2023 NJSLA state testing for grade six shows that 64% of students are below grade level proficiency. This data shows the decline in ELA proficiency within a year of taking the test instead of increasing the scores.

In my experience as a sixth-grade English Language Arts teacher, I have noted the low level of writing proficiency in my own classroom. I have found that students often do not include basic grammar and mechanics in their writing, which often leaves their written work hard to understand and follow. Students often use punctuation marks where they should not be used only to try to appease me as a teacher when I tell them to check their grammar or to write a minimum amount of sentences in an effort to get them to write. Students struggle with properly writing their teachers appropriately written emails and instead resort to following "texting" rules (e.g. using abbreviations instead of typing out multiple words like "IDK"), which would be extremely unprofessional and unacceptable in the workplace.

I have found that my students struggle with basic writing and mechanics as they did not

have the traditional classroom experience in elementary school due to remote learning as a result of the COVID-19 Pandemic. Students may not have been as engaged in the remote environment of online learning as they might have been in person, and as a result, students may have missed out on foundational writing skills. I have found that students are more likely to retain writing skills when they are utilizing hands-on notetaking and activities. These observations, along with the data presented, lead us to this study of how interactive notebooks can help students to incorporate skills into student writing.

Research Questions

Based upon the problem identified above of students not incorporating foundational writing skills into their writing, a primary question and secondary questions have been identified. The research questions are: How does the use of interactive notebooks help students to identify grammatical errors? How does the use of interactive notebooks impact sixth-grade students' use of grammar in narrative writing? What are students' perceptions about the interactive notebook?

Definition of Terms

This section gives a definition of terms that will be used throughout this research study. This research study will be designed to answer the research questions: How does the use of interactive notebooks help students to identify grammatical errors? How does the use of interactive notebooks impact sixth-grade students' use of grammar in narrative writing? What are students' perceptions about the interactive notebook? For the purpose of this study, these terms are defined as follows.

Students: In this study, *students* refers to the nine English Language Arts students in my

sixth-grade class who participated in this research study. These students range between the ages of 11-13 and represent a wide array of ability levels in a general education classroom. Some students have exited the district's English Language Learner (ELL) program within less than a year.

Period: In this study, *period* refers to the 55-minute time blocks that I have class with the students as they only see me once a day for ELA class.

Grammar Topic: In this study, grammar topic refers to the type of grammar skill that is examined in the diagnostic tests and the narrative writing pieces. There are nine grammar topics: commas for formatting, identifying parts of speech, singular vs. plural possessives, commonly confused words III (may be/maybe, quite/quiet, except/accept, good/well, effect/affect, roll/role, allowed/aloud, whom/who), plural vs. possessive nouns, rules of capitalization, identifying sentences and fragments, choosing the appropriate conjunctions, and commonly confused words (here/hear, it's/its, then/than, your/you're).

Pre-diagnostic test: In this study, *pre-diagnostic test* refers to a digital diagnostic test students will take on through a set program utilized by the district.

Post-diagnostic test: In this study, *post-diagnostic test* refers to the same digital diagnostic test students will take on through a set program utilized by the district, however, the diagnostic for the post-test will be given after students have completed the unit.

Narrative Writing Piece #1: In this study, narrative writing piece #1 refers to the first narrative essay students write before using the interactive notebook. This is a narrative story students will write in first person point of view in response to a short story. Students will rewrite the short story that we read as a class from the perspective of another character. Students will have an entire 55-minute period to edit the story for grammatical errors before submitting it.

Narrative Writing Piece #2: In this study, narrative writing piece #2 refers to the second narrative essay students write after using the interactive notebook. This is a narrative story students will write in first person point of view in response to a short story. Students will continue writing the story that we read as a class from the perspective of the main character. Students will have an entire 55-minute period to edit the story for grammatical errors before submitting it.

Interactive Notebook: In this study, *interactive notebook* refers to a 100-page composition notebook that each student was supplied with. In this notebook, students will attach or glue in a variety of grammar and writing activities. This notebook will be split into four sections (Grammar, Grammar Practice, Reading/Writing Fiction, and Reading/Writing Non-Fiction). The Reading/Writing Non-Fiction section will not be utilized during the timeframe of this research.

Grammar Notebook Section: In this study, *grammar notebook section* refers to the section of the interactive notebook that will house all of the grammar notes and rules for reference.

Grammar Practice Section: In this study, *grammar practice section* refers to the section of the interactive notebook that will house all of the grammar practice worksheets students will work on. Students may reference their grammar notes in the *grammar notebook section* as they wish.

Reading/Writing Fiction Section: In this study, *reading/writing fiction section* refers to the section of the interactive notebook that will house all notes and practice on how to read and write fiction pieces.

Notes: In this study, *notes* refers to the worksheets and activities in the interactive notebook that we fill in as a class.

Theoretical Framework

This section presents the theoretical framework selected based on the research questions. This research questions are: How does the use of interactive notebooks help students to identify grammatical errors? How does the use of interactive notebooks impact sixth-grade students' use of grammar in narrative writing? What are students' perceptions about the interactive notebook? These questions were used to identify the theoretical framework. This framework includes the following theory: Flower and Hayes' (1981) cognitive process theory.

The cognitive process theory focuses on the importance of thinking processes in writing (Flower & Hayes, 1981). Zimmerman (1998) explains that "writing is a set of hierarchically organized thinking processes rather than a series of linear steps or discrete stages" (p. 25). This means that instead of viewing writing as different, independent steps that students move through to complete a piece of writing, students utilize each aspect of the writing process in order to proceed to the next step in the process. Still, writers must not move on and forget about the previous process as they continue through each aspect of the process as they are interconnected within the process of writing.

Flower and Hayes' theory breaks the writing down into three units: task environment, writer's long-term memory, and writing process. For the purpose of this study, the focus will be on the writing process aspect of this writing theory. Writing is broken down into three processes: planning, translating, and reviewing. The research in this study will focus on the translating aspect of the cognitive process theory of writing.

Translating is used "over other terms such as "transcribe" or "write" in order to emphasize the peculiar qualities of the task" (Flower & Hayes, 1981, p. 373). The purpose of this is because the act of writing is to *translate* any information and thoughts created in the planning process into meaningful language that is elaborate syntax. During the process of translating,

writers must incorporate the different demands of the written English language while producing coherent writing and ideas. This poses an issue for "children and inexperienced writers [as] this extra burden may overwhelm the limited capacity of short-term memory" (Flower & Hayes, 1981, p. 373). This is important to note because if writers are struggling with their grammar and mechanics skills, they have two options: they can focus on the rules and demands of written English–like spelling and grammar–which can result in poor planning and translation of ideas into writing, or they can ignore the rules and demands of written English, which produces writing with error throughout it (Flower & Hayes, 1981, p. 373). Writers must continue through the process of writing by using each aspect of the process as interconnected and supplementary aspects of each other, rather than individual steps to complete before moving on to the next step. If writers are struggling with the translating aspect of the writing process due to a lack of foundational writing skills, the remainder of the process will suffer.

Educational Significance

The purpose of this study is to examine the research questions: How does the use of interactive notebooks help students to identify grammatical errors? How does the use of interactive notebooks impact sixth-grade students' use of grammar in narrative writing? What are students' perceptions about the interactive notebook? These questions are extremely significant because it is important to learn more about how students can incorporate skills into their writing. Teachers, administrators, and other educational professionals will be able to learn from this study so they will be able to understand how to support students will a resource to help them incorporate skills into their writing. Students are severely struggling with writing and many are struggling at the foundational level. With the incorporation of the interactive notebooks, students

will be able to refocus on their writing skills and begin to reference the notebook in order to improve their writing and incorporate the skills into their writing in a more fluid process.

This study is important because students need additional support to improve their writing. In order for students to strengthen their writing, each aspect of the writing process must rely on each other, and a strong foundation will greatly benefit students. Students struggle with writing, but with a refocus on foundational skills, they may have a better chance at improving it.

CHAPTER II

Review of the Literature

Overview

This chapter reviews the literature that is relevant to the primary questions identified in this study. The research questions are: How does the use of interactive notebooks help students to identify grammatical errors? How does the use of interactive notebooks impact sixth-grade students' use of grammar in narrative writing? What are students' perceptions about the interactive notebook? This review of the literature examines research studies that looked at the fifth-grade, junior secondary, and secondary grade levels' impact and use of interactive notebooks, impact and practice of note-taking, and writing.

Impact and Use of Interactive Notebooks

This section will focus on the use of interactive notebooks in fifth grade, junior secondary grades (grades six to eight), and secondary grades (ninth grade and higher). Interactive notebooks, in this case, have been used in a variety of classrooms in different grades. Many of the interactive notebooks in this research have been focused on in math and science classrooms, as there has not been much research on interactive notebooks in Language Arts classrooms.

The first study is Green's (2010) study on the effects of interactive notebooks on fifth-grade mathematics and science. This study focused on the research question of: Do instructor-provided notes increase student achievement? This study lasted for 18 weeks and took place in a large urban district in the southeast United States where 42 fifth graders were broken into two groups: one control group which used traditional note-taking and one experimental group which used the interactive notebook. The use of interactive notebooks was rooted in the

theory of multiple intelligences and took into consideration the different ways students learn and comprehend concepts based on a diverse classroom of learners and different learning styles. The interactive notebooks were used to keep students more organized and help them synthesize information they learned and were given in class by using different instructional strategies. While the interactive notebooks did not have a statistically significant impact on the students' math and science scores, they provided teachers with another form of formative assessment. Teachers were able to see how students worked in the interactive notebooks with different abilities and learning styles, and when reviewing the notebooks, teachers were able to formatively assess what students learned and understood in order to shape and plane future lessons to best fit the students' needs and learning styles.

Another study is Jaladanki and Bhattacharya's (2014) study on learning approaches in interactive notebooks. This study focused on the research question: How can educators make physics instruction more effective for their students? This study focused on the experiences of Bill Jacobs, a physics teacher in an inner-city high school in South Texas. The researchers collected data from interviews with the teacher, participant opinions, document analysis, and participant observations over five months. In this study, interactive notebooks were also rooted in the theory of multiple intelligences. This research found that the interactive notebooks were a good point for formative assessment for students of all participation levels–whether students were active participators, students who tended to pose issues, or students who did not participate or ask questions. Jacobs also shared in an interview that he found the use of interactive notebooks helped students shift from being passive listeners to active learners in their lessons. This research found that the use of interactive notebooks was effective in promoting students' questioning, helped form lessons to fit different students' needs and learning styles, and helped

identify interactive notebooks as a way to improve learning, lesson personalization for student comprehension, and student metacognition.

Further, Macklin's (2020) study focuses on using interactive notebooks to construct personal meaning of content and promote language acquisition of English Language Learners. This was a qualitative study done in middle school where it relied on teacher feedback as a data source. Teachers in this study shared that students lacked many skills in note-taking, but understood how to copy from the board. In this study, students worked in their interactive notebooks, which allowed them to be in control of their learning by being aware of the knowledge and skills required for the content. This implementation of using interactive notebooks gave students the opportunity to shift from simply copying from the board to working toward simplifying notes, asking questions during the lesson, and summarizing what they learned by the end of the lesson. This research found that students' use of the interactive notebooks allowed students to personalize their learning and create their own understanding of the lesson content. While the study mentions that teachers should be trained on how to incorporate the interactive notebooks into their classrooms in order for them to be successful, it was found that the response to using the interactive notebooks was positive for students and teachers.

An additional study is Hughes et al.'s (1998) study on using a digital interactive notebook to support student inquiries in a collaborative setting. This study focused on the research questions: What kinds of products emerged from the electronic notebook environment? In what ways did they marshal evidence to support arguments? This study focused on 10 small groups of two to three Masters-level students who were in a reading methods course. All study participants were practicing teachers or specialists. In this study, participants used the Reading Classroom Explorer's ("RCE") program to create their own notebooks to present their ideas to their own

questions on the topic of literacy issues and teaching reading. These notebooks allowed participants to support their claims in different ways and formats. Overall, the analysis of the notebooks and structure of arguments allowed the authors to organize and present their thoughts in a way that fit them and their understanding, allowing readers to understand their experience in each of their presentations and notebooks. This varied opportunity for organization and argumentation allowed participants to share their ideas and claims through formal papers and different means, like personal narratives, think-alouds, and connections to themselves. This allowed participants to share their understanding and comprehension in ways that best represented themselves and their interests.

A final study on interactive notebooks is Yaylak's (2020) case study on interactive notebooks in social studies. This study focused on the research questions: How did students define social studies interactive notebooks ("SSIN")? What are the attitudes of the students towards the SSIN? What are the aspects of the SSIN practices that students disliked? Do the students want the SSIN practices to be applied to other lessons? If so, which lessons? Do the students believe the SSIN practices contributed to their learning process? How? This was a qualitative study done in the 2017-2018 school year in a public school in Izmir, Turkey. A mix of 21 fifth and sixth-grade students were selected through a random sampling of 267 students. Data was collected each week when students were interviewed for 10-20 minutes during each session. The interactive notebook in this study was considered to be a portfolio of what students had learned. This allowed teachers to use the notebooks as a formative assessment tool to help students develop their writing skills and differentiate learning. The findings in this study indicated that students enjoyed using the interactive notebooks and that the notebooks made contributions to student learning. Students in the study also shared that they would want to use

the interactive notebook practices in other classes and subjects.

Impact and Practice of Note-taking

This section will focus on the activity of note-taking in junior secondary grades (grades six to eight) and secondary grades (ninth grade and higher). Note-taking is a common practice in many educational settings, however, there are many different aspects and processes of note-taking that students utilize and go through during the activity.

One study is Piolat et al.'s (2005) study which focused on specifying the processes, knowledge, and working memory resources that note-takers utilize when they produce notes. This research looked at the different ways undergraduate college students take notes during lectures and how it is done successfully. It found that note-taking cannot be simplified to writing abbreviations of information that students hear or see. Instead, it must be seen as an activity that relies on the functions of working memories to manage and balance comprehension of information, selection of wording and ideas, and produce words and writing that support the comprehension of new ideas.

Another study is Flanigan et al.'s (2023) study on computerized note-taking and longhand note-taking and revision. This was a qualitative study that focused on 189 college students in educational psychology courses in a large Midwestern university in the U.S. Students were randomly assigned to four different groups: computerized notes with no revision, computerized notes with revision, longhand notes with no revision, and longhand notes with revision. This was a qualitative study where students were to complete an eight-item vocabulary assessment and a 30-question multiple-choice test. While there is an idea that students would take better notes on a computer since they can type faster than they can write, the study did not support the idea that

computers improve note-taking. At certain points in the lesson, there would be a three-minute period where students in the revising groups could revise, add in images, or finish their notes, while students in the non-revising groups could only rewrite the same notes they wrote word for word until the time was up. The research found that the time for revision of notes allowed for the increased quantity of notes or completion of notes, but overall, it was found that longhand note-takers scored better than computer note-takers, regardless of having an opportunity to revise notes or not. Despite the findings of this study, it was noted that further research should be done on whether there is a superior form of note-taking.

A final study on note-taking is Larson's (2009) study on student recall of written notes. This study focused on having students take notes on handouts with blanks to produce higher short-term recall than taking notes on lined paper. This study focused on 179 undergraduate business school students in the Midwest region of the United States. The researchers explored if students would correctly answer short recall questions better if they were taking notes on a handout with blanks compared to a blank paper. The researchers found that taking notes on handouts that had fill-in-the-blank spaces for notes was positive for students, which suggests that providing students with handouts that have blanks to be filled in improved short-term recall. This research found that to improve student recall of key points, teachers can make handouts for students to take notes on in order to use class time efficiently, keep students engaged during a lesson, and keep students focused on a lecture while still taking the necessary notes.

Writing

This section will focus on the activity of writing in junior secondary grades (grades six to eight) and secondary grades (ninth grade and higher). Writing is an important skill that all

students need in order to be successful, so providing them with the proper writing skills and opportunities to write is essential in developing their skills.

One study is Hand and Prain's (2002) study on following a writing-to-learn model. The research focused on teachers' concerns about implementing writing-to-learn strategies in the science classroom. This was a qualitative study that focused on eight teachers in three junior secondary schools working with students ages 12-16 in Australia. Data was collected through interviews with teachers, field notes, classroom observations, and recorded group in-service sessions over the course of four years. In order for students to be successful in writing, they must be able to organize and explain their understandings, interpret new information, and synthesize information to meet the needs of the writing piece. In order to develop their writing, students must take the information they know and practice their writing and understanding in order to develop higher-order thinking skills to best serve themselves in their writing. The research found that in order to best serve students in the practice of writing to learn, teachers feel that they would benefit from attending professional development on the writing-to-learn model and strategies.

Another study is Mehmet and Çifci's (2021) study on supporting students' writing by using visuals in writing activities. This study focused on the research questions: What kind of activities can be developed to improve students' writing skills? What activities can be developed to improve students' writing attitudes? What activities can be developed to improve students' general writing skills? This was a quantitative study of 20 student participants in seventh grade in a secondary school in Turkey. Student work was analyzed using an outcome checklist. This study focused on providing students with visual aids to help them with their writing. The research found that visually supported activities were beneficial to student writing in terms of

teaching and developing student skills when writing a story.

Summary of the Literature Review

This section provides a summary of the relevant studies used in this literature review. Studies were selected for this literature review based on the research questions. The research questions are: How does the use of interactive notebooks help students to identify grammatical errors? How does the use of interactive notebooks impact sixth-grade students' use of grammar in narrative writing? What are students' perceptions about the interactive notebook?

Many of these studies focused on using interactive notebooks as an option for formative assessment (Green, 2010; Jaladanki & Bhattacharya, 2014; Yaylak, 2020). Many studies also found that interactive notebooks allow students to personalize their learning by utilizing their different learning styles (Green, 2010; Jaladanki & Bhattacharya, 2014; Hughes et al., 1998). The studies mentioned also shifted students from being passive listeners to active learners and participators through the use of interactive notebooks for note-taking (Jaladanki & Bhattacharya, 2014) as they were able to take more complete, organized notes with the support of the interactive notebook or provided handouts (Hughes et al., 1998; Flanigan et al., 2023; Larson, 2009). The organization of notes can benefit student understanding, which further benefits student writing when it comes to synthesizing information to write or relying on visuals to complete a writing piece (Hand & Prain, 2002; Mehmet & Çifci, 2021).

Some studies did yield conflicting results. Flanigan et al. (2023), for example, found supporting data that students who took handwritten notes scored better than students taking computerized notes, however, further research was suggested to determine if there was a superior form of note-taking, regardless of what the study results supported. Green's (2010) results also

did not find significant effects of the interactive notebooks on achievement scores in math and science. While the interactive notebooks did provide teachers with beneficial formative assessments, Green (2010) calls for further research utilizing the interactive notebooks in elementary and high school for at least two consecutive years in order to determine if they will have a more significant impact on achievement scores.

The literature reviewed in this section touches on many elements relevant to the research question, but they do not touch upon all of the elements of this particular research study. Many of the studies done on this topic consist of studying participants in high school, college, and graduate school, but few studies focus on middle school students. Many of the research studies focus on the subjects of math, science, and social studies, but exclude the subject of Language Arts. The limited amount of research available on this topic in the middle school Language Arts setting demonstrated the need for this research study to take place.

CHAPTER III

Research Design

Introduction

This section presents the setting for this research study. This study is designed to answer the research questions: How does the use of interactive notebooks help students to identify grammatical errors? How does the use of interactive notebooks impact sixth-grade students' use of grammar in narrative writing? What are students' perceptions about the interactive notebook? This research study is set in a school district located in northern New Jersey. This study was designed in response to the need to improve students' writing skills at the foundational level. This chapter describes the research design and data collection methods relevant to this study's primary questions.

In this study, I played the role of teacher-researcher and participant-observer. In this role, I conducted a mixed-methods approach by using an embedded design to collect quantitative data and qualitative data. The collection of quantitative data dominated the study, and the qualitative data collected was rooted within the quantitative data collection. Data was analyzed using a descriptive statistics method that identifies patterns within and across data sources. Thematic analysis of qualitative data was quantified. This was a hypothesis-generating study designed to determine the effects of using an interactive notebook on sixth-grade students' writing skills. The study was conducted over three weeks in a sixth-grade English Language Arts classroom. Several sources of data were collected throughout the study, including pre- and post-diagnostic tests, student work samples, and written student reflections about the use of the interactive notebook. Pre- and post-diagnostic tests were given at the start of the study and at the end to collect quantitative data. Student work samples were collected at the beginning and end of the

study to collect quantitative data about how students incorporate grammar skills into their writing when using the interactive notebook. Written student reflections were given at the end of the study to collect qualitative data about student perceptions of using the interactive notebook.

Research Setting

This section describes the setting in which the research was conducted. This study was conducted in a city located in northern New Jersey. The population is 89,460, of which 46% is white; 38% is Hispanic; 9% is Asian; 4% is Black or African American; 2% is two or more races; and 1% is other. 11.3% of the population speak English less than well. The median household income is $86,616.

The school district has a total of 18 schools; one early learner academy, 14 elementary schools (grades K-5), two middle schools (grades 6-8), and one high school (grades 9-12). The district enrolls over 10,490 students–752 of which are sixth graders–and has 888 full-time teachers. After graduating eighth grade, students have the opportunity to apply to a vocational high school in the county or attend the district's public high school. The racial makeup of the district is 60.6% Hispanic, 26.9% white, 6.6% Asian, 4% Black or African American, and 1.9% other. 49.2% of the students enrolled in the district speak a language other than English at home. About 31.3% of students in the district are considered economically disadvantaged and are eligible for free or reduced lunch. The district Language Arts proficiency is 31.8%, which is less than the New Jersey state average of 49%. The math proficiency is 23.8%, which is less than the New Jersey state average of 36%.

The school has a total number of 1,159 students and 117 teachers in grades 6-8. The school has a total of 379 sixth-graders enrolled. The racial makeup of the school is 69.4%

Hispanic, 23.1% white, 3.4% Black or African American, 2.9% Asian, and 1.2% other. There are many extracurricular activities available to students, including the Chess Club, Garden Club, Musical, Novel Writing Club, intramural sports, chorus and instrumental programs, and more. Each student in the middle school has a school-issued Chromebook that they use throughout the school day and can take home. Students in the middle school have seven 55-minute class periods each day–including a split period of lunch and a silent study period–with a three-minute passing time between classes.

Research Participants

This section describes the participants involved in the research study. In this study, I played the role of teacher-researcher and participant-observer. This was my third year teaching overall, but my second year teaching as a general education teacher; my first year teaching I was a Basic Skills Instruction (BSI) co-teacher where I taught with three different general education teachers. I have been employed at the same school for all three years and have taught sixth grade each year. I teach four 55-minute class periods.

The participants of this study were nine sixth-grade students in my second Langauge Arts period of the day, which has a total of 14 students in it. All 14 students received 55 minutes of Language Arts instruction from me each day. Of the 14 total students, 12 students obtained consent from their parents or guardians, however, only nine of those 12 students assented to take part in this research study. Of the nine research participants, five of the students were female and four of them were male. Three students were identified as needing additional BSI support in math. One student is exited from the district's English Language Learner (ELL) program within one year of this study taking place. According to the Grade 5 NJSLA ELA testing in May of

2023, of the research participants in this study, 11.1% of them were not meeting expectations, 11.1% were partially meeting expectations, 11.1% were approaching expectations, and 66.7% were meeting expectations.

Data Sources

This section describes the data sources that were collected throughout this research study. The data was collected to answer the research questions: How does the use of interactive notebooks impact sixth-grade students' use of grammar in narrative writing? How does the use of interactive notebooks help students to identify grammatical errors? What are students' perceptions about the interactive notebook? Data sources included pre- and post-diagnostic tests, student work samples, and written student reflections.

Diagnostic Tests

This data was collected to gather quantitative data about students' identification of grammatical errors. This diagnostic test was given to students before utilizing the interactive notebooks and after. This data tracked student understanding of a variety of grammatical skills that students focused on during this study. The diagnostic test broke down different grammar skills into four levels of proficiency: struggling, beginning, approaching, and proficient. Common skills examined in the diagnostic tests were using commas, singular and plural possessives, homophones, and conjunctions.

Student Work Samples

This data was collected to gather quantitative data about the students' use of grammatical skills and writing progress when writing narrative pieces. Students wrote a narrative piece before utilizing the interactive notebook at the beginning of this student and wrote another one after the

three-week research period of utilizing the interactive notebook. Students' understanding of writing skills was tracked and grammatical errors were examined between the first narrative piece and the second narrative piece in response to two short stories. Student work samples were scored on a seven-point rubric that was broken down into two subsections: Writing Expression (0-4 points) and Knowledge of Language and Conventions (0-3 points).

Written Reflection

This data was collected to gather qualitative data about the students' perceptions of using the interactive notebook at the end of the research period. Students were given a sheet of paper with guiding questions to help them think about how using the interactive notebooks impacted their writing. Students were to write in at least one complete sentence describing their perceptions of using the interactive notebooks. Student responses were collected and examined through thematic analysis.

Data Analysis Procedures

This section describes the data analysis procedures for this research study. The data was collected to examine how the use of an interactive notebook can impact sixth-grade students' writing and grammatical skills. Three different data sources were collected: pre- and post-diagnostic tests, student work samples, and written student reflections. Data was collected over three weeks, with the results of the pre-diagnostic test and narrative writing piece #1 being retroactively accessed after obtaining approval from the IRB due to district curriculum and pacing restraints. The data was collected and analyzed to find common themes across the data sources to answer the research questions: How does the use of interactive notebooks help students to identify grammatical errors? How does the use of interactive notebooks impact

sixth-grade students' use of grammar in narrative writing? What are students' perceptions about the interactive notebook?

Pre- and post-diagnostic tests were administered at the start of the study before utilizing the interactive notebooks and then at the end of the study after using the interactive notebooks. The pre- and post-diagnostic tests are identical. The diagnostic test is 99 questions–where students are required to complete 45 total questions as it is an adaptive pre-test-and students have the entire 55-minute class period to complete it. For the post-diagnostic test, students received the same 45 questions they received the first time they took it. Students' understanding of identifying grammatical errors was recorded and tracked using this data source. When analyzing data results for each diagnostic test, I examined the percentages of proficiency levels per grammar topic and overall between all topics. I then looked further into the individual results of students to quantify how many questions the participants got correct overall and individually. Once all data was collected and analyzed, I compared the data from the pre-diagnostic test to the post-diagnostic test to determine if there was any change between overall proficiency, proficiency per topic, and correct answers as a whole group and individuals.

Student work samples included two narrative pieces students had to write based on reading a short story. These work samples were collected to examine how students incorporated the grammar skills that were studied inside the interactive notebooks in their writing. This data was collected from the narrative essay students wrote before they were utilizing the interactive notebook and after they were using the interactive notebook. This data was collected to examine the progress of students' grammar usage and writing progress. Student work samples were graded based on a three-point rubric system for grammar usage. Student work samples were collected before and after edits were made to quantify the amount of grammatical errors made

before and after editing. Grammatical errors were quantified as an overall total. They were then broken down into the nine grammar topics included in the diagnostic tests to identify any instances of consistency in student proficiencies among topics. The amount of corrections was also quantified as a total among the class and individually to determine the impact the interactive notebooks had on grammar usage in narrative writing pieces.

Written reflections were collected from students at the end of the three-week research period. Students were provided with guiding questions to help their responses, but they were able to share any opinions about utilizing the interactive notebooks throughout the research period. This data was coded to identify different themes of student perceptions about using the interactive notebooks. The themes identified included the following: the impact of the notebook on learning, the use of interactive notebooks, and the expansion of interactive notebooks. This qualitative data was quantified to support the identified themes.

Validity and Reliability

This section describes the validity and reliability of this research study. This study was designed to answer the primary research questions: How does the use of interactive notebooks help students to identify grammatical errors? How does the use of interactive notebooks impact sixth-grade students' use of grammar in narrative writing? What are students' perceptions about the interactive notebook? The data collected in this study was reliable because all nine students participated in the same Language Arts classroom and received the same instruction and activities. All students had access to Chromebooks through the district's one-to-one Chromebook distribution program, all students were supplied with composition notebooks, glue, notes, worksheets, and handouts, and all students were administered the same tests and writing

assignments. Students also had proficiency in the diagnostic test program used. Students received the same instruction from me as their usual classroom teacher in their usual Language Arts classroom.

This study was valid because it examined two different quantitative aspects of students' grammar usage (diagnostic tests and written student work samples) and students were able to share their thoughts and perceptions on the research topic of utilizing the interactive notebook. The qualitative data collected from the students' written reflections allowed students to accurately share how they felt the interactive notebooks impacted their writing. The research was also valid because the variety of activities found in the interactive notebooks can impact individual students differently depending on their learning styles and preferences. By examining the different aspects of grammar usage (identifying grammatical mistakes through diagnostic tests and creating written work with grammatical usage through narrative writing pieces) and accepting student feedback on the usage of the interactive notebook, I was able to conclude how the use of interactive notebooks impacted students' grammar and writing progress.

Limitations

This section describes the limitations of this research study. This study was designed to answer the primary research questions: How does the use of interactive notebooks help students to identify grammatical errors? How does the use of interactive notebooks impact sixth-grade students' use of grammar in narrative writing? What are students' perceptions about the interactive notebook? The first limitation of this study was time. Due to time constraints, this study took place over three weeks. During those three weeks, students had a total of three days off due to Election Day and the NJEA convention. Due to these days off, lessons were more

spread out with days off between them, resulting in an inconsistent schedule for instructional delivery and limiting the amount of data that could be collected.

Another limitation was the students' knowledge of the diagnostic test program. Before entering this study, students had not used the program that was utilized for the pre- and post-diagnostic tests. This could have impacted testing results as students may have needed additional time to understand the controls and how to use the diagnostic tests.

The next limitation was the number of students participating in the study. Nine total students participated in the study. This limited the amount of data that was collected limited my ability to make generalized conclusions based on the results collected during the study. A larger group of participants may allow for a more diverse population of data and more in-depth results.

An additional limitation was the attendance of the students participating. There were some days when students were absent. This resulted in them missing instructional time. This also resulted in them needing to complete the interactive notebook on their own to have it filled in with the notes and activities. If the students did not take the time to complete the notes and activities that they missed while absent, their interactive notebook may have been missing information.

Chapter IV

Findings

This chapter presents the findings of this research study. This study is designed to answer the research questions: How does the use of interactive notebooks help students to identify grammatical errors? How does the use of interactive notebooks impact sixth-grade students' use of grammar in narrative writing? What are students' perceptions about the interactive notebook? The results of this study do not show that interactive notebooks had a significant impact on identifying grammatical errors, however, it did show that the use of interactive notebooks improved sixth-grade students writing and was found to be helpful by student participants.

Data Collection

Data was collected as students completed two digital diagnostic tests, two writing pieces, and a written reflection. The activities are detailed as follows:

1. Students completed 45-question diagnostic tests on identifying grammatical errors. Diagnostic tests were administered before utilizing the interactive notebooks and after the three-week research period of using the interactive notebooks.

2. Students completed two narrative writing pieces where they either rewrote the story from another character's point of view (Narrative Writing Piece #1) or continued the story from the main character's point of view (Narrative Writing Piece #2). Narrative Writing Piece #1 was administered before students began utilizing the interactive notebooks. Narrative Writing Piece #2 was administered after the three-week research period of using the interactive notebooks.

3. Students completed a written reflection where they were asked to write about how they thought the interactive notebooks impacted their writing. Students were provided with the following guiding questions to consider when writing: How do you think the interactive notebook has impacted your writing? Do you feel like you have a better understanding of grammar? How often do you think you look at your notebook to help you? Would you like to use an interactive notebook like this for more skills and topics?

Diagnostic test results were collected to check for student understanding of identifying grammar errors in nine grammar topics: Commas for Formatting, Identifying Parts of Speech, Singular vs. Plural Possessives, Commonly Confused Words III (may be/maybe, quite/quiet, except/accept, good/well, effect/affect, roll/role, allowed/aloud, and whom/who), Plural vs. Possessive Nouns, Rules of Capitalization, Identifying Sentences and Fragments, Choosing the Appropriate Conjunctions, and Commonly Confused Words (here/hear, it's/its, then/than, and your/you're). Narrative writing pieces were collected before and after the editing process to check for student understanding of grammar usage when creating a written piece. Written student reflections were collected after the three-week research period was completed and students had completed their post-diagnostic test and Narrative Writing Piece #2. These reflections were collected to understand student perceptions of using the interactive notebooks to support their writing.

Data Analysis

After the three data sources (diagnostic tests, student work samples, and student written reflections) were collected, diagnostic test data and student work samples (Narrative Writing Piece #1 and Narrative Writing Piece #2) were analyzed to identify the impact the interactive notebooks had on students' identification of grammatical errors and students' grammar usage

when creating written narratives. Student written reflections were coded to look for student perceptions of using the interactive notebooks.

The findings of the analyzed diagnostic tests identified the following theme:

- The impact of interactive notebooks on the identification of grammatical errors

The findings of the anaylzed student work samples identified the following theme:

- The impact of interactive notebooks on using grammar in narrative writing

The three themes identified from the analysis of the student written reflections are as follows:

- The impact of the interactive notebooks on learning

- The use of the interactive notebooks

- The expansion of interactive notebooks

The impact of interactive notebooks on identifying grammatical errors

To determine students' understanding of identifying grammar mistakes, students completed two identical diagnostic tests. Students completed the pre-diagnostic test at the start of the school year on nine main topics. Students completed the diagnostic test on their district-provided Chromebooks. The diagnostic test was adaptive, assigning students 45 questions to answer out of a total of 99. Students answered five questions in each of the nine topics that were assigned in the diagnostic test. Students had an entire 55-minute period to complete the pre-diagnostic test before they began utilizing the interactive notebooks and an entire 55-minute period to complete the post-diagnostic test after the three-week research period of utilizing the interactive notebooks.

The diagnostic test broke the proficiency of students down into four levels: struggling, beginning, approaching, and proficient. The breakdown of proficiency levels for the

pre-diagnostic test shows that students who struggled with the identification of grammatical errors made up the largest grouping of the proficiency levels, while students who were proficient in identifying grammatical errors made up the smallest grouping of the proficiency levels (Figure 1). The pre-diagnostic test shows that 77.7% of the students were struggling or beginning in their proficiency level of identifying grammatical errors, meaning that more than half of the students were not near grade-level proficiency.

The results of the pre-diagnostic test show that of the nine grammar topics assessed, students were struggling in proficiency level in 35.9% of the grammar topics and beginning in proficiency level in 27% of grammar topics. Students were approaching proficiency in 21% of the grammar topics and fully proficient in only 16% of grammar topics (Figure 1).

When administering the post-diagnostic test, students did not significantly improve in their proficiency levels. The breakdown of proficiency levels for the post-diagnostic test shows that students who struggled with the identification of grammatical errors made up the second largest grouping of the proficiency levels, while students who were approaching proficiency in identifying grammatical errors made up the smallest grouping of the proficiency levels and there were no students who tested proficiently (Figure 1). The post-diagnostic test shows that the number of students in the approaching and proficient levels generally declined or were maintained overall, where 44.4% of students declined in proficiency, 22.2% of students maintained proficiency, and 33.3% of students improved in proficiency. The post-diagnostic test shows that 88.8% of the students were struggling or beginning in their proficiency level of identifying grammatical errors, meaning that the majority of the students were not near grade-level proficiency.

The results of the post-diagnostic test show that of the nine grammar topics assessed, students

were struggling in proficiency level in 34.7% of the grammar topics and beginning in proficiency level in 39.5% of grammar topics. Students were approaching proficiency in 16.1 of the grammar topics and fully proficient in only 9.8% of grammar topics (Figure 1).

Students generally declined in their general proficiency as a whole (Figure 1). Students did not utilize the entire 55-minute period to complete the assessment, even though they were able to use the entire period. Many students completed the assessment within 15 minutes.

Figure 1

Pre- and Post-Diagnostic Test General Proficiency Level Results
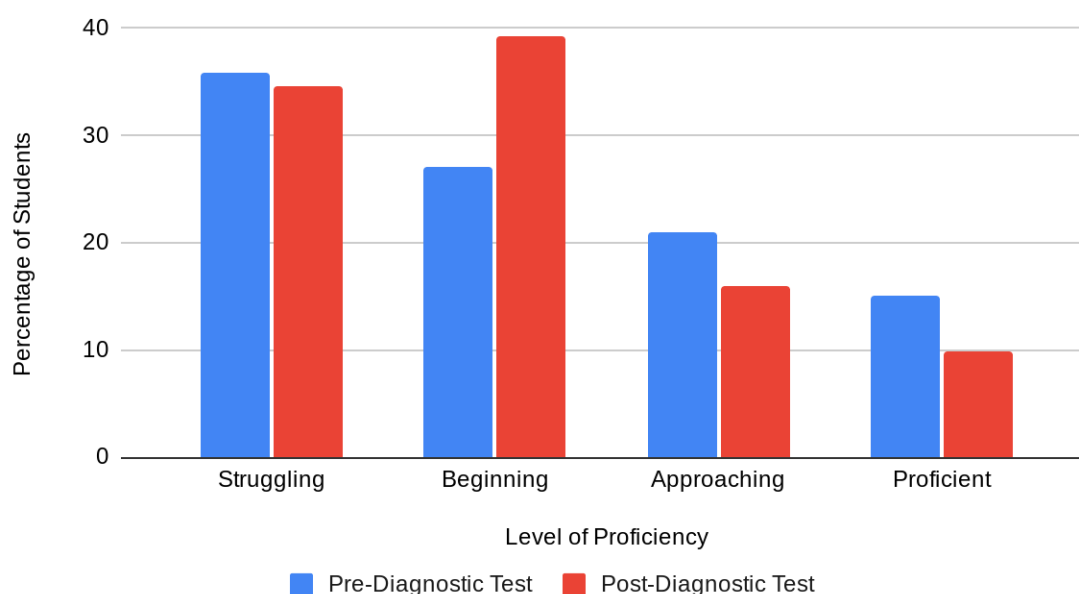
When examining the data collected for each grammar topic, general proficiency improved in 33% of grammar topics: identifying parts of speech, singular vs. plural possessives, and rules of capitalization (Figure 2). General proficiency was maintained in 11% of grammar topics: commonly confused words (its/it's, than/then, here/hear, your/you're). General proficiency decreased in 56% of grammar topics: commas for formatting, plural vs. possessive nouns, choosing appropriate conjunctions, identifying sentences and fragments, commonly

confused words III (may be/maybe, quite/quiet, except/accept, good/well, effect/affect, roll/role, allowed/aloud, whom/who).

Figure 2

Pre- and Post-Diagnostic Tests: Correct Answers - All Participant Results
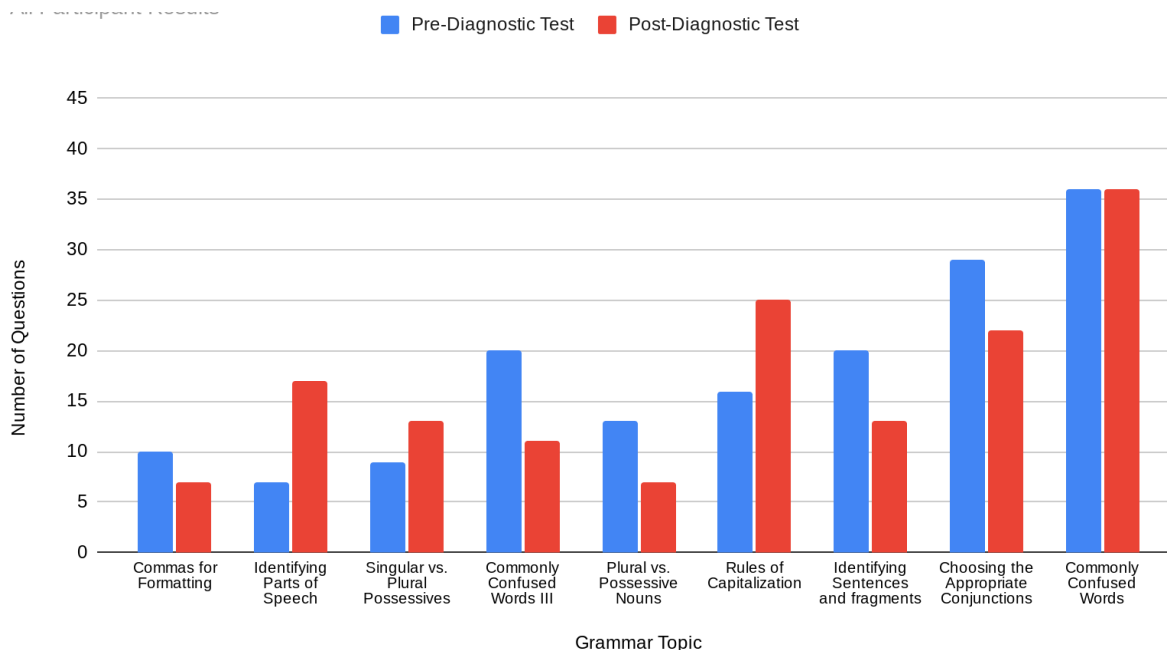
Student results varied per topic based on the number of correct answers. Student results were scattered among grammar topics, and there is no specific pattern in which students improved or declined.

Student #7's pre-diagnostic test results placed her in the struggling proficiency level for overall grammar topics. After the post-diagnostic test, she improved and was placed in the beginning proficiency level for overall grammar topics. She improved in 33.3% of grammar topics, however, she declined in 66.7% of grammar topics (Figure 3). Still, based on her scores, Student #7's overall proficiency improved as a result of her growth in some topics and getting more than one question correct in each topic in 66.7% of the grammar topics.

Figure 3

Pre- and Post-Diagnostic Tests: Correct Answers - Student #7 Results
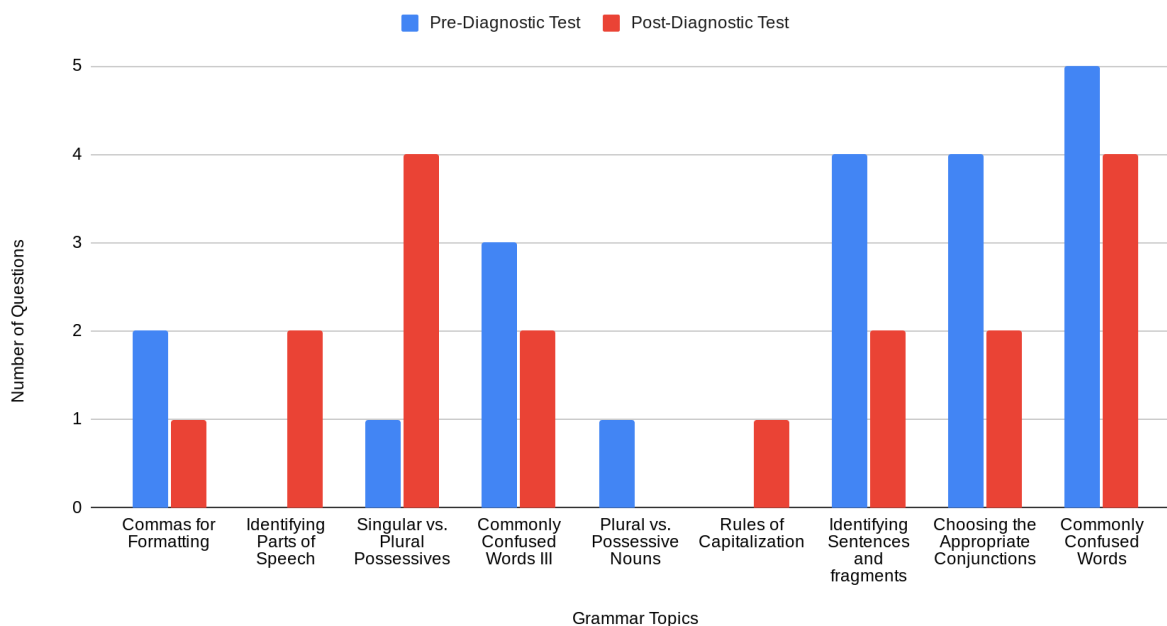
Student #9's pre-diagnostic test results placed him in the struggling proficiency level for overall grammar topics. After the post-diagnostic test, he improved and was placed in the beginning proficiency level for overall grammar topics. He improved in 33.3% of grammar topics, however, he declined in 22.2% of grammar topics and maintained his score in 44.4% of grammar topics (Figure 4). Based on his scores, Student #9's overall proficiency improved as a result of his growth in some topics, getting more than one question correct in each topic in 55.6% of the grammar topics, and maintaining his scores in almost half of the grammar topics.

Figure 4

Pre- and Post-Diagnostic Tests: Correct Answers - Student #9 Results

Student #8's pre-diagnostic test results placed her in the beginning proficiency level for overall grammar topics. After the post-diagnostic test, she declined in proficiency and was placed in the struggling proficiency level for overall grammar topics. She declined in 66.7% of grammar topics. She increased in 11.1% of grammar topics and maintained her score in 11.1% of grammar topics (Figure 5). Based on her scores, Student #8's overall proficiency declined as a result of her getting one or fewer questions correct in each topic in 77.8% of the grammar topics.
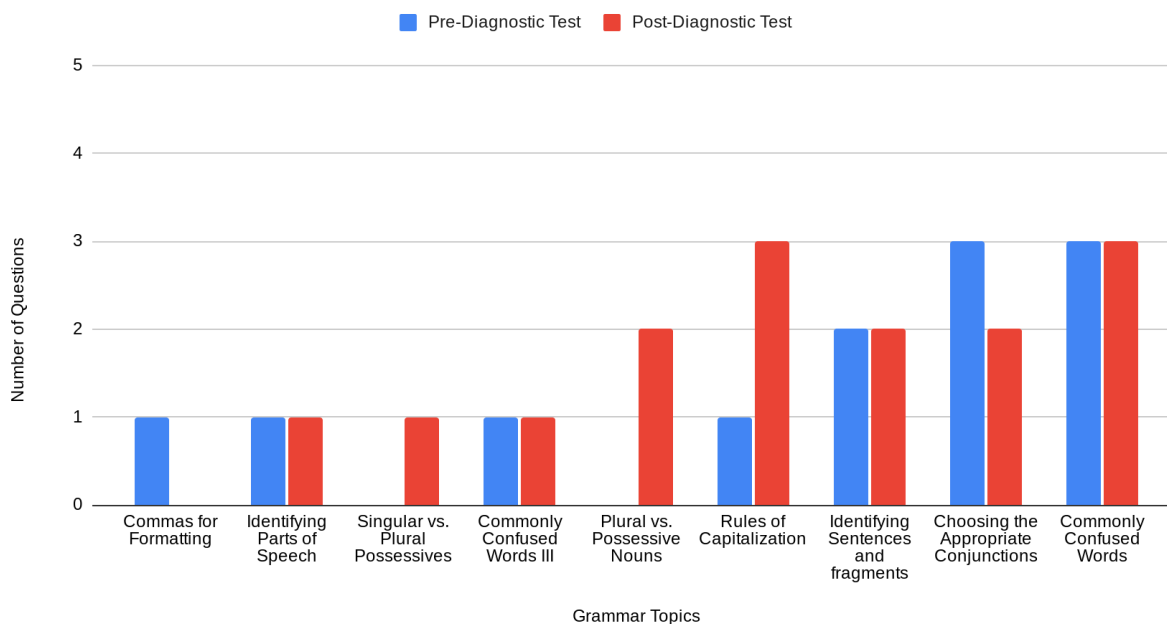
Figure 5

Pre- and Post-Diagnostic Tests: Correct Answers - Student #8 Results

Student #6's pre-diagnostic test results placed her in the approaching proficiency level for overall grammar topics. After the post-diagnostic test, she declined in proficiency and was placed in the struggling proficiency level for overall grammar topics. She declined in 55.6% of grammar topics. She increased in 22.2% of grammar topics and maintained her score in 11.1% of grammar topics (Figure 6). Based on her scores, Student #6's overall proficiency declined as a result of her declining in over half of the grammar topics and getting one or fewer questions correct in each topic in 55.6% of the grammar topics.
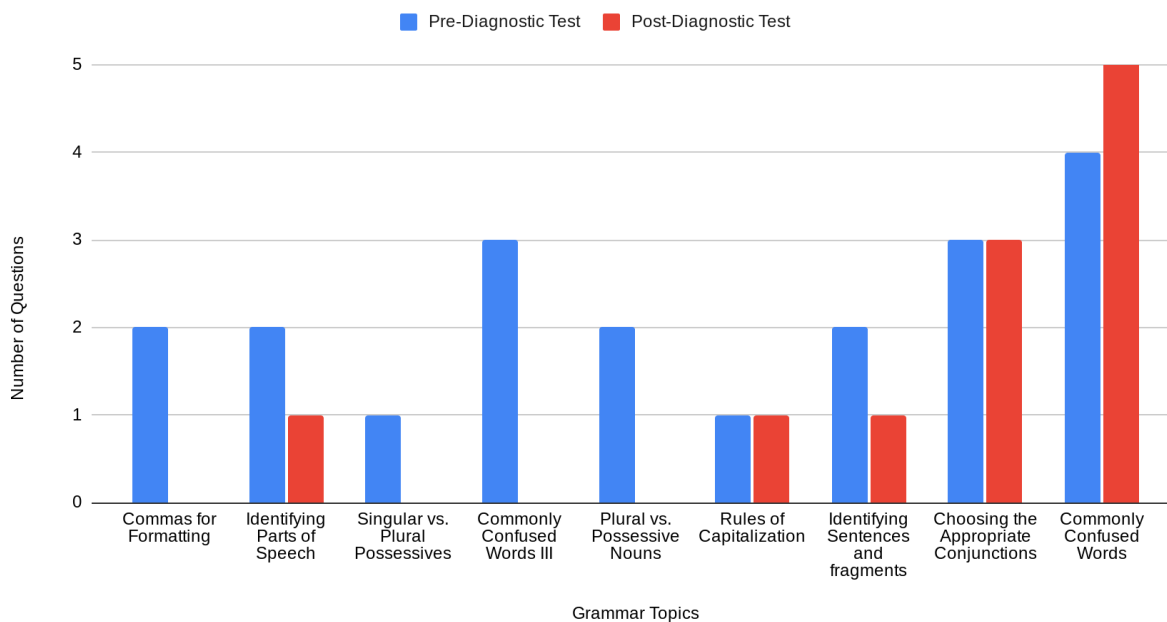
Figure 6

Pre- and Post-Diagnostic Tests: Correct Answers - Student #6 Results

Student #5's pre-diagnostic test results placed him in the proficient proficiency level for overall grammar topics. After the post-diagnostic test, he declined in proficiency and was placed in the approaching proficiency level for overall grammar topics. He declined in 55.6% of grammar topics. He increased in 44.4% of grammar topics (Figure 7). Based on his scores, Student #5's overall proficiency declined as a result of his declining in over half of the grammar topics and getting three or fewer questions correct in each topic in 77.8% of the grammar topics. Still, Student #5 tended to get more questions correct in most of the grammar topics than his classmates.
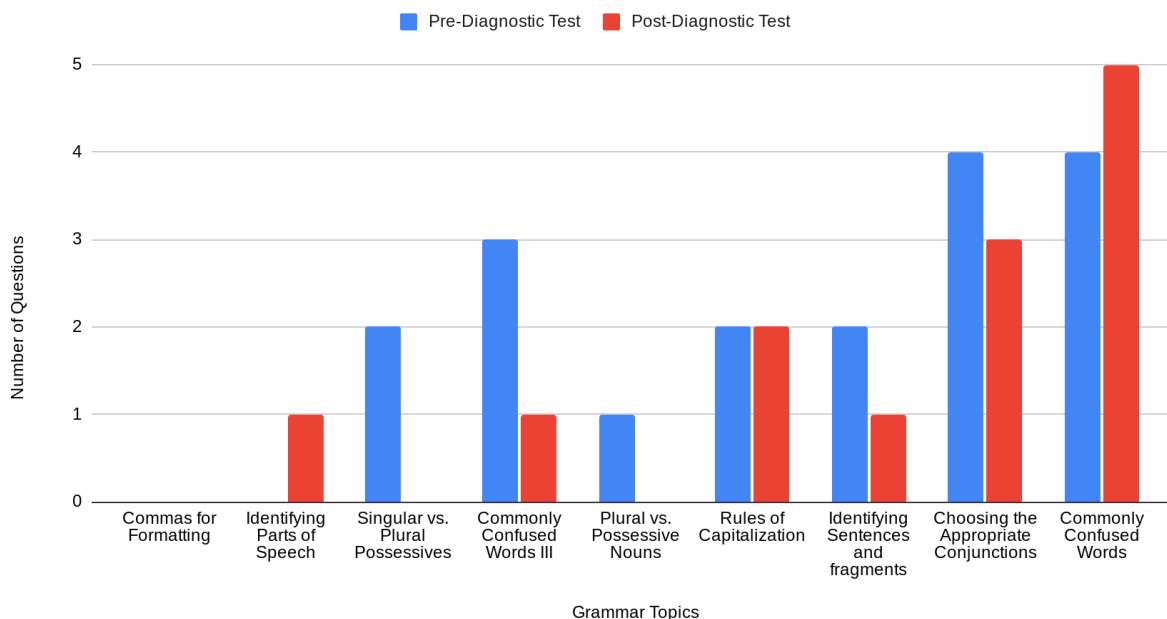
Figure 7

Pre- and Post-Diagnostic Tests: Correct Answers - Student #5 Results
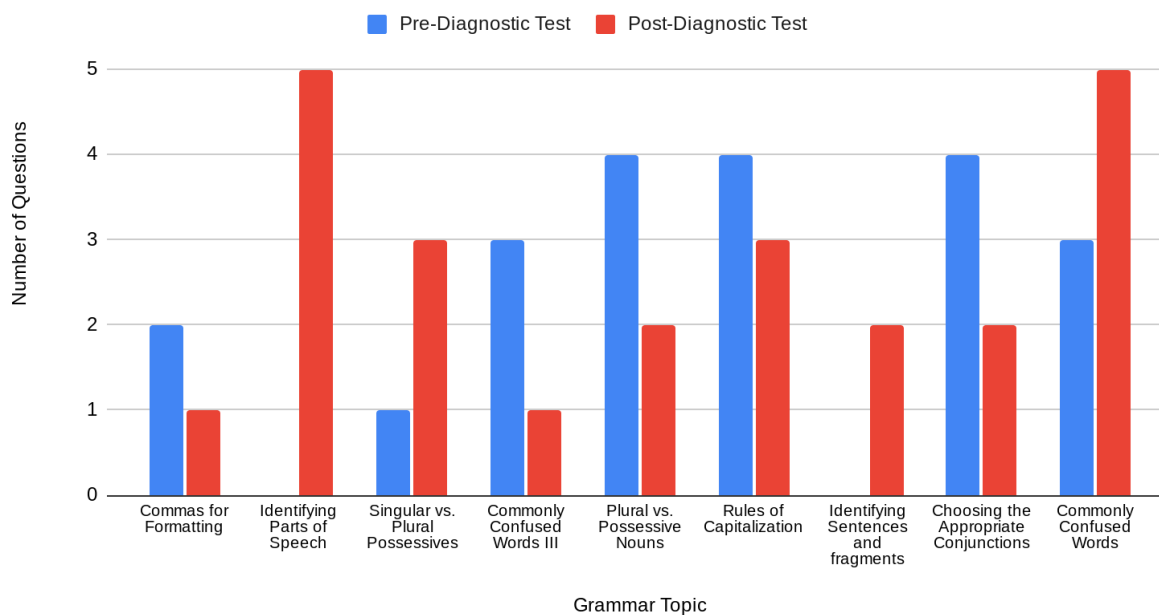
Student #4's pre-diagnostic test results placed him in the beginning proficiency level for overall grammar topics. After the post-diagnostic test, he maintained beginning proficiency for overall grammar topics. He increased in 22.2% of grammar topics. He maintained in 33.3% of grammar topics. He declined in 44.4% of grammar topics (Figure 8). Based on his scores, Student #4's overall proficiency was maintained as a result of him increasing or maintaining scores in over half of the grammar topics and getting two or fewer questions correct in each topic in 88.9% of the grammar topics. Still, Student #4 scored as proficient in 11.1% of grammar topics.

Figure 8

Pre- and Post-Diagnostic Tests: Correct Answers - Student #4 Results
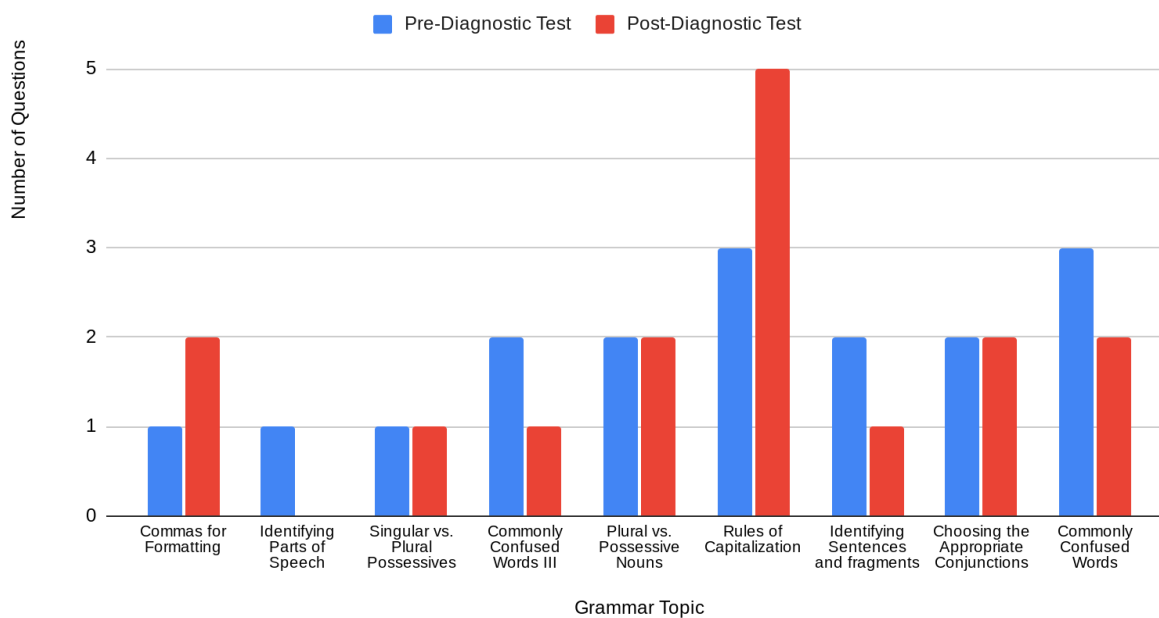
While some students improved in some grammar topics, they declined in other grammar topics. There is not a direct, identifiable pattern of what grammar topics are the main areas of difficulty for students since the diagnostic test results are so varied. Overall, the impact of interactive notebooks on the identification of grammatical errors is inconclusive.

The impact of interactive notebooks on using grammar in narrative writing

Student work samples were narrative writing pieces students wrote in response to reading a short story. For Narrative Writing Piece #1, students rewrote the short story in first person point of view from another character's perspective. For Narrative Writing Piece #2, students continued writing the short story in first person point of view from the main character's perspective. Students were graded based on the following 3-point rubric for their knowledge of language and conventions (grammar):

- Rubric score 0: The student response to the prompt does not demonstrate command of the conventions of standard English at the appropriate level of complexity. Frequent and varied errors (more than 13) in mechanics, grammar, and usage impede understanding.

- Rubric score 1: The student response to the prompt demonstrates limited command of the conventions of standard English at the appropriate level of complexity. There may be 10-13 errors in mechanics, grammar, and usage that often impede understanding.

- Rubric score 2: The student response to the prompt demonstrates some command of the conventions of standard English at the appropriate level of complexity. There may be 6-9 errors in mechanics, grammar, and usage that occasionally impede understanding, but the meaning is generally clear.

- Rubric score 3: The student response to the prompt demonstrates full command of the conventions of standard English at the appropriate level of complexity. There may be a few (less than 5) minor errors in mechanics, grammar, and usage, but the meaning is clear.

The rubric scores were broken down to coincide with the four proficiency levels from the diagnostic tests: rubric score 0 = struggling, rubric score 1 = beginning, rubric score 2 = approaching, rubric score 3 = proficient. Data collected for Narrative Writing Piece #1 showed that 77.8% of students were grouped into the struggling level of proficiency (Figure 9).

Narrative Writing Piece #2 was administered after the three-week research period of utilizing the interactive notebooks. After the narrative writing pieces were edited, rubric scores showed that 33.3% of students were grouped into the struggling proficiency level (Figure 9). The rubric scores for Narrative Writing Piece #2 showed that 55.5% of students were struggling or beginning in their proficiency level when using grammatical skills in their narrative writing,

which is an improvement from Narrative Writing Piece #1. 66.7% of students improved in rubric score, while 22.2% of students maintained their rubric score and 11.1% of students declined in rubric score.

Figure 9

Rubric Scores - Narrative Writing Piece #1 and Narrative Writing Piece #2
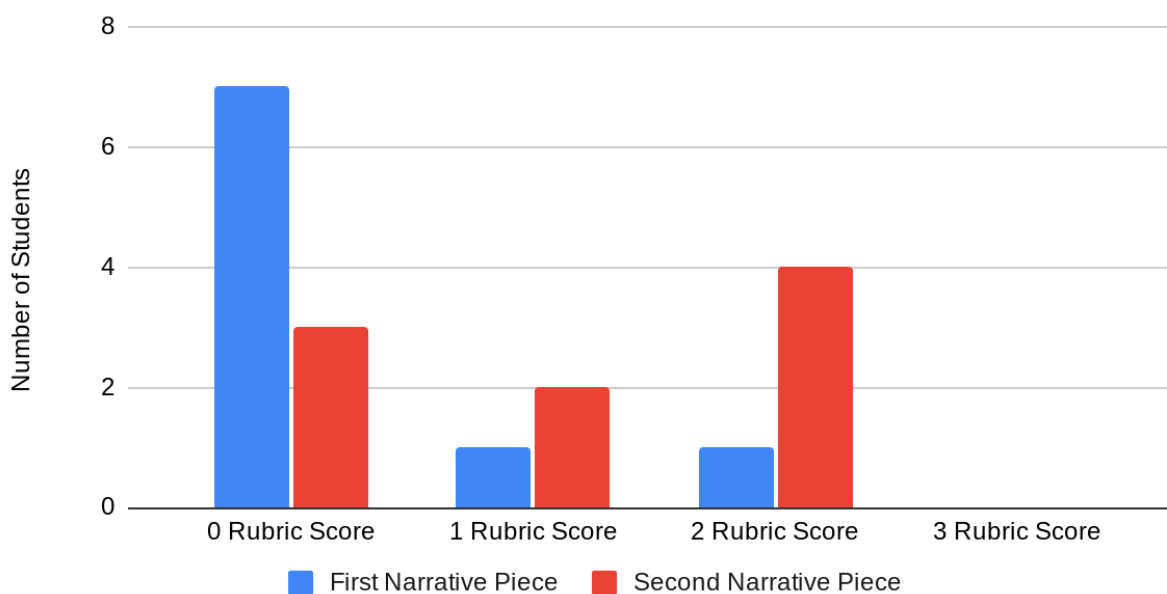
The number of grammatical errors in each narrative piece ranged from 7-10 total mistakes after editing, with a total of 209 grammatical errors between all of the writing pieces (Table 1). An average of 23.3 grammatical errors per writing piece were made in Narrative Writing Piece #1. As Narrative Writing Piece #1 was administered before students began utilizing the interactive notebooks, no changes or edits were made by students to correct grammatical errors.

Table 1

Narrative Writing Piece #1: Rubric Scores, Edits, and Total Grammatical Errors

Student	Writing Expression Rubric Score (0-4)	Knowledge of Language and Conventions (Grammar) Rubric Score (0-3)	Number of Changes when Editing	Total # of Grammar Mistakes (After Editing)
Student #1	2	0	0/Did not edit	44
Student #2	2	0	0/Did not edit	21
Student #3	2	0	0/Did not edit	36
Student #4	2	0	0/Did not edit	36
Student #5	1	2	0/Did not edit	7
Student #6	1	0	0/Did not edit	15
Student #7	4	1	0/Did not edit	10
Student #8	1	0	0/Did not edit	16
Student #9	1	0	0/Did not edit	24

Student work samples were also analyzed to determine the common types of grammatical errors that students were making (Table 2). Common grammar topics for errors were commas for formatting, rules of capitalization, and identifying sentences and fragments.

Table 2

Narrative Writing Piece #1: Categorized Grammar Errors by Student

Student (and Total Errors)	Commas for Formatting	Singular vs. Plural Possessives	Plural vs. Possessive Nouns	Rules for Capitalization	Identifying Sentences and Fragments	Choosing the Appropriate Conjunctions	Commonly Confused Words
Student #1 (44)	10	4	1	7	3	4	0
Student #2 (21)	11	0	1	0	3	3	0

Student							
Student #3 (36)	7	1	1	5	1	0	1
Student #4 (36)	9	1	0	4	4	3	0
Student #5 (7)	1	0	0	1	0	0	0
Student #6 (15)	4	0	1	2	1	1	0
Student #7 (10)	2	0	0	2	1	1	0
Student #8 (16)	3	1	1	2	1	0	1
Student #9 (24)	5	0	0	6	2	1	0

The number of grammatical errors in each writing piece ranged from 7-23 total mistakes after editing, with a total of 113 grammatical errors between all of the writing pieces, which is 96 fewer mistakes than Narrative Writing Piece #1 (Table 3). An average of 12.6 grammatical errors per writing piece were made in Narrative Writing Piece #2. After utilizing the interactive notebooks, students made a total of 218 corrections in their writing.

Table 3

Narrative Writing Piece #2: Rubric Scores, Edits, and Total Grammatical Errors

Student	Writing Expression Rubric Score (0-4)	Knowledge of Language and Conventions (Grammar) Rubric Score (0-3)	Number of Changes when Editing	Total # of Grammar Mistakes (After Editing)
Student #1	2	2	13	8
Student #2	2	1	27	12
Student #3	3	1	49	12

Student #4	2	0	19	23
Student #5	1	0	1	17
Student #6	1	0	17	17
Student #7	4	2	29	8
Student #8	1	2	46	9
Student #9	1	2	17	7

Student work samples were also analyzed to determine common types of grammatical errors the students were making (Table 4). Common grammar topics for errors were consistent with the topics identified in Narrative Writing Piece #1: commas for formatting, rules of capitalization, and identifying sentences and fragments. There was consistent improvement in 44% of grammar topics, including the following: singular vs. plural possessives, plural vs. possessive nouns, choosing the appropriate conjunctions, and commonly confused words. There was no data for the topics of identifying parts of speech or commonly confused words III in either of the narrative writing pieces. Formatting was also a main focus of corrections–especially starting new paragraphs when using quotation marks for dialogue—and while errors in formatting for that were counted as errors for the overall total, they are not included in the nine grammar topics tested.

Table 4

Narrative Writing Piece #2: Categorized Grammar Errors by Student

Student (and Total Errors)	Commas for Formatting	Singular vs. Plural Possessives	Plural vs. Possessive Nouns	Rules for Capitalization	Identifying Sentences and Fragments	Choosing the Appropriate Conjunctions	Commonly Confused Words
Student #1 (8)	5	0	0	0	0	1	0

Student #2 (12)	5	0	0	6	1	0	0
Student #3 (12)	7	0	0	3	2	0	0
Student #4 (23)	11	0	0	7	4	0	0
Student #5 (17)	4	0	0	3	1	0	0
Student #6 (17)	9	0	0	0	1	0	0
Student #7 (8)	3	0	0	4	0	0	0
Student #8 (9)	7	0	0	1	0	0	0
Student #9 (7)	4	0	0	1	0	0	0

Student #1's corrections focused mainly on commas and capitalization errors (Figure 10). Student #1 improved by 2 rubric points from Narrative Writing Piece #1 to the Narrative Writing Piece #2. Her Narrative Writing Piece #1 had a rubric score of 0 with 44 total grammatical errors. Her Narrative Writing Piece #2 had a rubric score of 2 with 8 remaining grammatical errors after she corrected 13 of her own mistakes during the editing process. Student #1 made 36 fewer grammatical errors in their Narrative Writing Piece #2 than in her Narrative Writing Piece #1.

Figure 10

Student #1 First Draft Narrative Writing Piece #2

him, with the floor creaking. He slowly steps into my room, facing me. "Thank you, Grandpa." I say as I hug him tightly. "You're welcome," He says. I let go and look up at him. "It's beautiful," I replied. He nodded slightly, still having that small smile on his face. We stayed silent for a minute, then he finally spoke. "I knew you'd love it." He said with a calm voice. "Don't ever think you are not beautiful enough." I nod and smile.

A few minutes later Grandpa left the room. I sighed, I got up and walked towards the door, leading to my bathroom. I examined the freckle remover cream. I took a deep breath before picking it up in my hands and tossed it in the trash. I knew that it wouldn't work anyway, and decided to listen to Grandpa. I knew I would never be pretty as my cousin, but I know I'm still pretty.

Student #1 Final Draft Narrative Writing Piece #2 (Edits are Highlighted)

"Thank you, Grandpa," I say as I hug him tightly.

"You're welcome," he says. I let go and look up at him.

"It's beautiful," I replied. He nodded slightly, still having that small smile on his face. We stayed silent for a minute, then he finally spoke.

"I knew you'd love it," he said with a calm voice. "Don't ever think you are not beautiful enough." I nod and smile.

A few minutes later Grandpa left the room. I sighed, I got up and walked towards the door, leading to my bathroom. I examined the freckle remover cream. I took a deep breath before picking it up in my hands and tossed it in the trash. I knew that it wouldn't work anyway, and decided to listen to Grandpa. I knew I would never be as pretty as my cousin, but I know I'm still pretty.

Student #2's corrections focused mainly on commas (Figure 11). Student #2 improved by

1 rubric point from Narrative Writing Piece #1 to Narrative Writing Piece #2. His Narrative

Writing Piece #1 had a rubric score of 0 with 21 total grammatical errors. His Narrative Writing

Piece #2 had a rubric score of 1 with 12 remaining grammatical errors after he corrected 27 of

his own mistakes during the editing process. Student #2 made nine fewer grammatical errors in

his Narrative Writing Piece #2 than in his Narrative Writing Piece #1.

Figure 11

Student #2 First Draft Narrative Writing Piece #2

" Grandpa, can you just drive me to school?", I said in an annoyed tone.

Mary Ellen and Grandpa arrive at school.
While in school one of my classmates started making fun of me.

"Haha Mary Ellen is a Freckle face."I just couldn't take it anymore. "Leave me alone!", I

said, screaming at her.

When that happened the teacher stepped in and stopped the fight. The day had ended, and grandpa came to pick me up. As he picked me up we were talking about what happened at school. Grandpa told me,
"Why do you care what other people say?"
."They hurt my feelings and I just couldn't take it anymore."
After that we went home and mom was cooking dinner.
" How was school?" asked mom. Since the I brought the tiger lily down stairs.
Grandpa gave me an idea!
"Grandpa! Let's go plant tiger lilies in the garden!" I screamed with excitement. " Ok lets go!" Grandpa agreed. The lesson learned is you should always love yourself and think about how beautiful you are.

Student #2 Final Draft Narrative Writing Piece #2 (Edits are Highlighted)

"Grandpa, can you just drive me to school?" I said in an annoyed tone.

While in school one of my classmates started making fun of me.

"Haha Mary Ellen is a Freckle face."

I just couldn't take it anymore. "Leave me alone!" I said, screaming at her.

When that happened the teacher stepped in and stopped the fight.
The day had ended, and grandpa came to pick me up. As he picked me up we were talking about what happened at school.
Grandpa told me, "Why do you care what other people say?"
"They hurt my feelings and I just couldn't take it anymore."
After that we went home and mom was cooking dinner.
"How was school?" asked mom.
Since then I brought the tiger lily downstairs. Grandpa gave me an idea!
"Grandpa! Let's go plant tiger lilies in the garden!" I screamed with excitement.
"Ok lets go!" Grandpa agreed.

Student #3's corrections focused mainly on quotation marks. There were also some changes to the content of the story for clarity (Figure 12). Student #3 improved by 1 rubric point from Narrative Writing Piece #1 to Narrative Writing Piece #2. Her Narrative Writing Piece #1 had a rubric score of 0 with 36 total grammatical errors. Her Narrative Writing Piece #2 had a rubric score of 1 with 12 remaining grammatical errors after she corrected 49 of her own mistakes during the editing process. Student #3 made 24 fewer grammatical errors in her Narrative Writing Piece #2 than in their Narrative Writing Piece #1.

Figure 12

Student #3 First Draft Narrative Writing Piece #2

my stuff. I ran to school so I wouldn't get late.I made it to class right on time. First period I had a

math test. After the first period I started to go to the second period and on the way there my bully

stopped and her name was Belle and her two friends Harry and Ron. They started laughing and

Belle said she still has freckles, she looks so ugly with them,She said. I am not ugly,I said. There

is not a single flower in the world that has freckles, she said. There is one type of flower that has

freckles an

d, I can prove it to you, I said. Really if you bring the flower that has freckles then we

will stop bullying you, she said. I will, I said. When I got home I did my homework and wrote a

Student #3 Final Draft Narrative Writing Piece #2

wouldn't get late. I made it to class right on time. First period I had a math test. After the first

period I started to go to the second period and on the way there my bully stopped and her name

was Belle and her two friends, Harry and Ron.

They started laughing and Belle said, "She still has freckles. She looks so ugly with

them."

"I am not ugly," I said.

"There is not a single flower in the world that has freckles," she said.

"There is one type of flower that has freckles and I can prove it to you," I said.

"Really if you bring the flower that has freckles then we will stop bullying you," she said.

"I will," I said.

Student #4's corrections focused mainly on commas. There were also some changes to

the content of the story for clarity (Figure 13). Student #4 maintained his rubric score of 0 from

Narrative Writing Piece #1 to Narrative Writing Piece #2. His Narrative Writing Piece #1 had 36

total grammatical errors. His Narrative Writing Piece #2 had 23 remaining grammatical errors

after he corrected 19 of his own mistakes during the editing process. Student #4 made 13 fewer

grammatical errors in his Narrative Writing Piece #2 than his Narrative Writing Piece #1.

Figure 13

Student #4 First Draft Narrative Writing Piece #2

> After work I decided to look up the flower but a bunch of different articles came up with nothing I liked. As I got off my bed I walked to the kitchen "Hey grandpa." I said "Yes?" he replied "what's the flower's name you gave me?" "Tiger Lilly." He replied, with a firm voice. "Really, that's a very unique name." I replied. "Yes, it was named after a man and his friendship with a tiger." He answered. "Tell me the story…please. I Reply. "Sure" He chuckled. "It starts as a man and his wife living happily but then something horrible happens. His wife got terribly sick. The man was very sad so he got his wife a flower and took care of her until she passed. The man started a garden since his wife loved to garden. But he noticed something a little sprout, as the plant grew it turned i I said. As I walked to bed I thought of the beautiful story. Maybe I am really beautiful.

Student #4 Final Draft Narrative Writing Piece #2 (Edits are Highlighted)

> "What's the flower's name you gave me?"
>
> "Tiger Lilly." He replied, with a firm voice.
>
> "Really, that's a very unique name." I replied.
>
> "Yes, it was named after a man and his friendship with a tiger." He answered.
>
> "Tell me the story…please," I reply.
>
> "Sure!" He chuckled. "It starts as a man and his wife living happily but then something horrible happens. His wife got terribly sick. The man was very sad so he got his wife a flower and took care of her until she passed. The man started a garden since his wife loved to garden. But he noticed something a little sprout, as the plant grew it turned into a tiger lily."
>
> As I walked to bed I thought of the beautiful story. Maybe I am really beautiful.

Student #5 only made one edit which was starting a new paragraph for dialogue (Figure

14). Student #5 decreased by 2 rubric points from Narrative Writing Piece #1 to Narrative
Writing Piece #2. His Narrative Writing Piece #1 had a rubric score of 2 with 7 total grammatical
errors. His Narrative Writing Piece #2 had a rubric score of 0 with 17 remaining grammatical
errors after he corrected 1 of his own mistakes during the editing process. Student #5 made 10
more grammatical errors in his Narrative Writing Piece #2 than in his Narrative Writing Piece
#1. It should be noted that student #5 was disciplined at the start of the period and received
detention the day students were editing papers and refused to do work, resulting in him not
editing during the editing day before the final assignment deadline.

Figure 14

Student #5 First Draft Narrative Writing Piece #2

> Mary Ellen goes home and tells her grandpa. He says that it is good to ignore but you should've told the teacher. Mary Ellen says "Okay, Thank you Grandpa". Mary Ellen smiles.
>
> Grandpa says "Good job, Child".
>
>
> Grandpa shows Mary Ellen the Tiger Lily, he says "You see this flower? It is beautiful and shouldn't be made fun of".
>
> Mary Ellen says "It's, like me." Grandpa nods and says "Exactly".

Student #5 Final Draft Narrative Writing Piece #2 (Edits are Highlighted)

Mary Ellen goes home and tells her grandpa. He says that it is good to ignore but you should've told the teacher. Mary Ellen says "Okay, Thank you Grandpa". Mary Ellen smiles.

Grandpa says "Good job, Child".

Grandpa shows Mary Ellen the Tiger Lily, he says "You see this flower? It is beautiful and shouldn't be made fun of".

Mary Ellen says "It's, like me."
Grandpa nods and says "Exactly".

Student Written Reflections

Student written reflections were written pieces that students wrote to share their perceptions of using the interactive notebooks. When coding data from their reflections, the following three themes were identified: finding the interactive notebooks helpful, the use of interactive notebooks, and the expansion of interactive notebooks for other skills and topics. Student #7 was not present during the day reflections were collected, so the following data analysis is based on the collection of eight student written reflections.

The Impact of Interactive Notebooks on Learning

Based on the eight reflections collected, 100% of the students found that the interactive notebooks were helpful to them and their understanding of grammar. Student #1 shared, "I think that my interactive notebook has impacted my writing…My understanding in grammar was way better than before." Student #3 shared, "I think it helped me a lot. Without my notebook, I would not get good grades." Student #9 shared, "I feel better understanding grammar with the notebook." Student #4 echoed that idea and added, "I think I can express myself more than I

could before." The students' reflections were general in the theme of finding the interactive notebooks helpful, so it was not clearly stated if students found that it was more helpful in one aspect (identifying grammatical errors) or the other (using proper grammar in writing).

Use of Interactive Notebooks

Of the eight written reflections that were collected, 100% of the students shared that they look at their interactive notebooks when they need help. Student #8 shared, "I would use my notebook every time I struggle with specific topics." Student #6 shared that she looks at her notebook when she needs help by writing, "When I don't remember something that we learned." 25% of students shared that they look at their interactive notebooks specifically when they write. Student 1 shared, "I often look at my notebook, but only when I write." Student #4 shared, "I use my notebook every so often. I use it for questions when I need to write, like these." Student 1's and Student #4's reflections both explicitly stated that they use their interactive notebooks when writing.

Expansion of Interactive Notebooks for Other Skills and Topics

Of the eight written reflections collected, 100% of the students shared that they would want to utilize the interactive notebooks for other skills and topics. Student #2 shared, "I personally would like to use this for other skills because it helped me keep my grades up." Student #3 echoed the idea of the interactive notebooks being helpful and shared, "...it helps me a lot so I want to use it more for other skills." Student #4 shared, "...I would like an interactive notebook like this for another class," and suggested that it would be helpful in social studies.

Summary

Diagnostic test results do not show a significant impact on the identification of grammatical errors after using the interactive notebooks. However, the difference in scores and amount of grammatical errors between Narrative Writing Piece #1 and Narrative Writing Piece #2 shows that the use of the interactive notebooks can have a significant impact on students' use of grammar when writing narrative pieces. Students made more edits and grammatical corrections after utilizing the interactive notebooks in Narrative Writing Piece #2 than in Narrative Writing Piece #1. Student perceptions of the interactive notebooks were positive in regards to them being helpful when they are struggling to remember what was learned or if they need help. Students also shared that they would want to expand the use of interactive notebooks to other skills and topics in the future.

Chapter V

Conclusions, Discussions, and Recommendations

This chapter presents conclusions, discussions, and recommendations regarding this research study. This study is designed to answer the research questions: How does the use of interactive notebooks help students to identify grammatical errors? How does the use of interactive notebooks impact sixth-grade students' use of grammar in narrative writing? What are students' perceptions about the interactive notebook? Three main conclusions were drawn from the results of this study. Recommendations are also included for teachers and future research.

Conclusion I

Interactive notebooks did not have a significant impact on the identification of grammatical errors.

Discussion

Based on the data collected and analyzed during this study, it can be concluded that interactive notebooks did not have a significant impact on identifying grammatical errors. For example, after the post-diagnostic test was administered, the majority of students either declined in or maintained proficiency in identifying grammatical errors. However, it must be noted that students took the entire 55-minute period to take the pre-diagnostic test while many students completed the post-diagnostic test in less than half of the period. This could be a result of students knowing the diagnostic test would not count against their grades and that they knew they could complete other work for the class if they finished early. This could have resulted in students rushing, which could present skewed results in this study. With some additional time for the research period, results might show a different result on the identification of grammatical

errors.

Green's (2010) study focused on the effects of interactive notebooks on student achievement. The study found that there was not a statistically significant impact on math and science achievement when using interactive notebooks. Like my study, the interactive notebooks were used to support student learning of topics in an organized manner, however, the results of my study did not show that the interactive notebooks impacted or improved student identification of grammatical errors.

Flower and Hayes' (1981) cognitive process theory and its focus on the act of translating during the writing process relates to this conclusion as students who struggled with basic grammatical skills did not score well on the diagnostic tests. Students who struggle with the foundations of grammar will either focus on grammar and produce weak writing content, or focus on the content of writing while making many grammatical errors (Flower & Hayes, 1981). This can be seen in my study as students who spent less time focusing on identifying grammatical errors scored lower on the post-diagnostic test, compared to students taking their time during the pre-diagnostic test to focus on identifying grammatical errors.

This conclusion is significant because in order for the use of interactive notebooks to be effective in the identification of grammatical errors, students must be able to complete a test like the post-diagnostic test with ample time and minimal distractions. As they edited their narrative writing pieces, they were able to identify the different grammatical errors they had made in their writing, however, there was no secondary assignment they could complete that would prompt them to rush through the editing process. With the opportunity to complete other Language Arts work upon completing the post-diagnostic test, many students rushed through the post-diagnostic test in order to move on to the graded work for the class. With this lack of time spent on the

post-diagnostic test, results may be skewed, resulting in the conclusion that interactive notebooks do not have a significant impact on identifying grammatical errors.

Conclusion II

Using interactive notebooks affects students' use of grammar when writing narrative pieces.

Discussion

Based on the data collected and analyzed during this study, it can be concluded that students' grammar usage when writing narrative pieces can be improved when using interactive notebooks. For example, students who completed the writing piece and the editing process made more edits and corrections in grammar in Narrative Writing Piece #2–which was written after using the interactive notebooks–than in Narrative Writing Piece #1–which was written before using the interactive notebooks. Student #5 made more mistakes in Narrative Writing Piece #2 compared to Narrative Writing Piece #1 and the least amount of grammatical corrections in Narrative Writing Piece #2 compared to the other students as he was given a detention due to inappropriate behavior in the classroom at the start of the editing period and refused to do any work for that day. All other students utilized the interactive notebooks to aid them in their writing and editing process to make grammatical corrections in Narrative Writing Piece #2.

Jaladanki and Bhattacharya's (2014) study that focused on the use of interactive notebooks to make instruction more effective for students reached a similar conclusion. In their study, interactive notebooks helped students of all participation levels to become active learners during their lessons to promote questioning, help lessons fit different learning styles, and promote student comprehension. Similarly, Macklin's (2020) study focused on students using interactive notebooks to understand the knowledge and skills required for content. The study found that the students' use of the interactive notebooks allowed them to personalize their

learning and create understandings of the lessons and content as individuals. This study found interactive notebooks to be positive on students' learning and the balance of input and output. Similarly, in my study, students actively used their interactive notebooks during the writing and editing process on their own accord in order to correct grammatical errors, resulting in them using the interactive notebooks to their benefit depending on their individual needs and support for grammar use, which improved their writing.

Hughes et al. (1998) study on using interactive notebooks to support writing in a collaboration found that the interactive notebooks allowed participants to share their understandings in ways that best represented themselves. During their study, the interactive notebooks provided participants with the ability to organize their undertsandings in different ways and formats. Similar to the interactive notebooks in my study, students were able to reference notes and create their own examples using the grammar skills covered in each topic. This also relates to Piolat et al.'s (2005) study on the processes of working memory and note-taking. They found that note-taking extends beyond copying from the board and using abbreviations, but it is also the production of writing and the functions of working memories to manage and balance comprehension while producing writing. The students in my study used the notes in their interactive notebooks to support their understanding of concepts of grammar skills in order to support their writing, resulting in them making meaning of the notes while producing coherent and improved writing.

Flanigan et al.'s (2023) study found that handwritten notes resulted in students scoring better than computer note-takers. Larson's (2009) study also found that providing students with fill-in-the-blank notes improved short-term recall in students. Similarly, the notes utilized in the interactive notebooks in my study were provided to students by me in an interactive format,

meaning there were fold-out flaps that concealed or revealed notes or examples, broke away from the typical note-taking on lined paper by providing students with different visual aids or note layouts for different topics, and students were required to complete the notes provided by handwriting information into the provided note sheets. Mehmet and Çifci's (2021) study focused on using visuals in writing activities, which found that visually supportive activities were beneficial to student writing when developing skills in story writing. The visual aspect of the notes and the interactivity in my students helped students to organize their notes and understand their grammatical skills with additional visual supports, which improved their narrative writing when they began the writing and editing processes using their grammatical skills. Hand and Prain's (2002) study focused on the writing-to-learn model which found that in order for students to write successfully, they must organize their understandings and take the information they know and practice it in their writing. The organization of the interactive notebooks in my study allowed students to identify the different grammatical skills they were working on, and the activities in the interactive notebooks allowed them to create their own examples using the different grammar skills, while also using the notes to support their writing in their narrative writing pieces.

Flower and Hayes' (1981) cognitive process theory also plays an important role in supporting this conclusion, as students improved their use of grammar when they initially struggled with it. Their cognitive process theory views writing as a hierarchical thinking process where the process of writing is broken down into three processes: planning, translating, and reviewing (Flower and Hayes, 1981). My study focused on the process of translating, which is the act of writing, where poor grammar use impacts students' writing at a basic level. In this study, students acquired stronger grammar skills when using grammar in narrative writing, like

when they made more edits and grammatical corrections in Narrative Writing Piece #2 than in Narrative Writing Piece #1.

This conclusion is significant because many students struggle with writing and lack grammatical skills at the basic level. Without a proper grammatical foundation, students' writing would continue to suffer. The use of the interactive notebooks for the acquisition of grammatical skills positively impacted students' use of grammar in narrative writing pieces. It is necessary for students to have an understanding of the foundational writing skills of grammar in order to become stronger writers and grow to be more successful writers in the future, whether it be in school or out of school.

Conclusion III

Student perceptions of the interactive notebooks were positive.

Discussion

Based on the data collected and analyzed during this study, it can be concluded that student perceptions of the interactive notebooks were positive. For example, Student #1 and Student #9 shared that they felt interactive notebooks helped them to improve their grammar usage. Student #6 and Student #4 shared that they used their interactive notebooks when they needed help with different topics. Student #2 and Student #3 shared that they would want to use the interactive notebooks for other skills.

Yaylak's (2020) focused on student perceptions of the use of interactive notebooks. The results of the study showed that students enjoyed using interactive notebooks and wanted to use them in more classes than just social studies. This is similar to my study where students shared that they found the interactive notebooks helpful and wanted to expand them to other topics and subjects.

Flower and Hayes' (1981) cognitive process theory also supports this conclusion as the writing process is an interconnected process of different aspects of writing. The interactive notebooks provided students with support at the foundational levels of grammar, which was positively received by students. The students' positive perceptions of using the interactive notebooks allow students to support their grammatical skills as a foundation to support their writing, which is seen as beneficial to the writing process in Narrative Writing Piece #2.

This conclusion is significant because the positive perceptions of using the interactive notebooks help to further support students' writing. If students find the interactive notebooks helpful to their writing, they might be more inclined to utilize them when writing. The perception of wanting to expand the interactive notebooks to include other skills and topics to further support students provides the opportunity to help students grow further in their writing skills and abilities.

Recommendations for Further Research

Due to the limitations of this study, further research is required to understand the full support interactive notebooks can provide to sixth-grade students' writing. First, the study should repeated with a larger sample size over a longer period of time. Since this study was conducted over three weeks with nine participants, limited data was used to draw conclusions. Repeating this study over a longer period of time and with a larger group of students could yield more diverse results to conclude from.

Second, the quality of writing produced when more freedom is given should also be studied. This study focused on narrative writing pieces that students had to write in response to reading two different short stories. As a result of this, students were limited in the freedom of what they could write about since it had to fit with the theme and events of the original short

story. If students were given more freedom during this study to write about topics that they wanted to write about or a less strict story foundation, they might have produced different work that fit their styles and abilities better. Repeating the study with different prompts for writing could yield different results.

Third, reducing the amount of grammar topics as a focus should be studied. Due to the short data collection period, there were a few grammar topics on the pre-diagnostic test that were not included in the interactive notebooks (e.g. rules of capitalization and commonly confused words). Reducing the amount of grammar topics could allow for more time to be spent on certain topics and could yield more diverse results from which additional conclusions could be drawn.

Fourth, the results of the post-diagnostic test with the removal of secondary assignments should be studied. In this study, many students rushed through the post-diagnostic test in order to complete other Language Arts assignments when they finished. This may have resulted in skewed results in my study. Removing the opportunity to work on other Language Arts assignments could yield different results to draw conclusions from.

Finally, the results of this study create an additional question that should be explored: How does a stronger understanding of grammatical skills impact the quality of written content of middle school students' writing? My study focused on improving grammatical skills with the support of interactive notebooks, which showed that interactive notebooks positively impact sixth-grade students' grammar usage in writing. However, it does not delve deeply into the content produced by students in written pieces. How can an established foundation of grammar improve students' writing at the content level? How does an understanding of grammar influence students to produce stronger written content? Further research is required to answer such questions.

Recommendations for Teachers

Based on the conclusions of this study, I have three recommendations for teachers. First, implement the use of interactive notebooks as a regular activity in your classrooms. In my study, one day (Monday) was set as a note-taking day. This is when students would glue the interactive notes into their interactive notebooks, and students would fill them in as a class. Each week covered a different topic, using the previous week as a building block for the next grammar topic (e.g. identifying sentences and fragments before learning about conjunctions). This way, students are accustomed to using their interactive notebooks. As demonstrated in this study, students were able to use their interactive notebooks for support when needed as a result of having a routine of adding to them and using them.

Second, I recommend teachers focus mainly on the grammar topics that the majority of the students struggle with and are seen in their writing. For example, in this study, students learned the parts of speech, and while students need to know the parts of speech, it was not a topic that was seen in their writing. Having more time to focus on grammar topics that are seen and implemented into students' writing can help support students' grammatical usage by focusing on the grammar that they use.

A final recommendation for teachers is to establish an expectation of how absent students should fill in missing notes in their interactive notebooks. During this study, there were times when students were absent and missed notes, which required them to use class time on another day to fill in what they missed. This caused them to miss out on activities in the classroom that could have further supported their learning. It may be beneficial to have pre-filled copies of notes to provide to absent students so they do not fall behind.

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