Fact from Fiction: Developing Disciplinary Literacy in English Classrooms through Historical Fiction and Inquiry-Based Learning

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Abstract: The purpose of this study is to explore whether an inquiry-based approach to learning can increase students' attitudes towards reading, as well as foster the simultaneous development of both English and historical disciplinary literacy. Over a four-week period, the students read the novel *Refugee* (Gratz, 2017) and completed inquiry responses to draw connections between the historical fiction text and nonfiction articles to evaluate the authenticity of the historical fiction novel. The students were then asked at the end of the intervention to determine the author's ability to accurately represent the experiences of refugees based on the knowledge that they gained from the nonfiction sources that they read. The data showed that an inquiry-based approach to learning does not increase students' attitudes towards reading; however, the students were able to draw cross-curricular connections between two disciplines, and understand more about time periods through the figurative language that is used in the novel.

Introduction and Justification

Literacy is often associated solely with English language arts. Therefore, English teachers are left with the responsibility of developing students' literacy skills within their classrooms. Although literacy development is a key component of the ELA classroom, literacy is something that is present in all content areas. Each discipline contains its own specific literacy, and it is the responsibility of content area teachers to develop students' literacy skills while simultaneously increasing their content knowledge (Draper & Siebert, 2005; The New London Group, 1996). Literacy development is therefore something that must occur in all classrooms and all disciplines. Collaborative measures can be taken in order to allow students' literacy development to be interdisciplinary, spanning across different content areas (Denstaedt, Roop, & Best, 2014). There are ways in which teachers of all content areas can weave together cross-disciplinary literacy through the inclusion of texts and vocabulary that deal with concepts in other disciplines. The English classroom is an especially flexible setting for this intersection of disciplines, for the state-wide curriculums offer choices in texts that are relevant to different content areas and therefore

require the development of that specific type of literacy. Specifically, historical fiction is a genre that helps students to understand the historical context of the novel, while using literary elements to create an engaging and interesting story for readers to follow.

Historical fiction fosters the simultaneous development of reading comprehension skills and conceptual understanding of history. Fictional texts in general have been studied for their ability to increase readers' theory of mind processes, with different studies showing mixed results (Kidd & Castano, 2013; Panero et al., 2016). There is a notion that fiction provides readers with characters with whom they become connected, causing the historical context and thus the history itself to feel more personal (Levstik, 1981). Historical fiction texts are regularly included in state-wide curriculums for English classes; however, in the English classroom, they are intended to be read to analyze literary devices and other English content-related materials. Historical fiction is not typically used in the English classroom to develop students' historical literacy, which is one of the main reasons for this study.

In addition to placing names and characters on historical events, historical fiction serves as an opportunity for students to explore a specific time period or historical event through means that differ from a textbook. Therefore, the narrative qualities of historical fiction allow students to explore history in a more engaging and immersive way than simply reading from a textbook. In collaboration with historical fiction, inquiry-based learning provides an approach to learning that allows students to explore a concept or topic freely, allowing them to become immersed in the research process. It is the goal of inquiry-based learning to help students come to a deeper understanding of a concept through their own exploration (Hernández et al., 2019). Therefore, between the use of historical fiction and an inquiry-based approach to learning, students should come to a deeper understanding of both the literary devices that are used in the text as well as the historical time period which is represented in a text. In addition, by allowing students to explore concepts through their own inquiries, this approach to learning has the potential to increase student motivation and attitudes towards the subject (Bezen & Bayrak, 2020).

The purpose of this study is to analyze the interaction between the disciplinary literacies of both English and history as well as inquiry-based learning, and the impact of these variables on both student achievement and student attitudes towards their English class. In this study, an improvement in student achievement points to further development of students disciplinary and content-area literacy. The key terms for this study include: disciplinary literacy, content-area literacy, historical fiction, and inquiry-based approach to learning. Disciplinary literacy can be defined as the language used to discuss certain concepts and topics within a specific content area (Grysko and Zugouris-Coe, 2020). Content-area literacy focuses on the skills that students can apply to all content areas (Grysko & Zygouris, 2020). Historical fiction is a literary genre that fictionalizes a time in history and adds characters and storylines to allow the readers to become immersed in that time period, therefore bringing together literary text with history, and blending the two subjects. For the purpose of this study, the historical fiction texts that are used will be both accurate and authentic in their representations of history. Since historical fiction blends two content areas together, it is necessary for students to have an understanding of the historical context of the story in order to fully comprehend the novel. Therefore, inquiry-based learning, which is a hands-on and reflective approach to learning, allows

students to actively engage in experimentation to come to their own conclusions (Dewey, 1910). Finally, this study seeks to determine whether or not inquiry-based learning allows students to develop disciplinary literacy in other content areas--specifically history--within the English classroom. This study seeks to determine whether or not historical fiction texts can improve students' understanding of a historical time period with the help of fictional characters and storylines. Additionally, this study will measure whether or not students' attitudes towards reading increases as a result of the autonomy that is provided to them through inquiry-based learning. I am specifically interested in answering the following questions:

- 1. Will providing students with inquiry-based approaches to learning better enable the simultaneous development of both English literacy and historical literacy?
- 2. Does reading historical fiction increase students' understanding of a specific historical time period?
- 3. Will an inquiry-based learning approach increase students' attitudes towards reading?

In the following section, I will lay out the existing research on my topic as the foundation for the intervention that I implemented. Afterwards, I will explain the methodology of my intervention and the tools used to conduct the research.

Literature Review

Disciplinary Literacy Development

Disciplinary literacy is something that students are expected to gain from individual subject areas, demonstrating the different ways in which texts construct and communicate knowledge (Grysko and Zugouris-Coe, 2020). In an academic setting, disciplinary literacy is often used interchangeably with content-area literacy. Content area literacy, unlike disciplinary literacy, refers to the teaching of general literacy skills that can be used and developed across all content areas. Therefore, it is the responsibility of every classroom teacher--regardless of their content area--to develop their students' disciplinary literacy skills simultaneously with their content area literacy skills. Draper and Siebert (2005) emphasize the importance of collaboration between content areas in order to foster content area literacy across all academic domains. The responsibility of developing content area literacy is often placed in the hands of English teachers; however, these skills are used across all disciplines, and therefore need to be developed in all content areas.

Although disciplinary literacy is unique to each individual subject area, that does not mean that teachers are confined within the walls of their own disciplines. Rather, teachers should work to collaborate with teachers of other content areas whenever possible, for doing so fosters the development of disciplinary literacy for multiple subjects, while also allowing students to develop their content area literacy skills. Grysko and Zygouris-Coe (2020) sought to increase students' comprehension of scientific literacy in an intermediate science classroom, and found that refining literacy skills increased students' comprehension and inquiry in science, and that science instruction simultaneously served as a beneficial environment to continue developing students' content area literacy skills.

The overlap between these two content areas allowed students to build their content knowledge while also refining their content literacy skills.

Overlap between classes at the secondary level is quite common, which means that students must be able to use different disciplinary literacies in a singular class. Denstaedt et al. (2014) write that the only differences between courses, especially at the high school level, is the strategies and techniques used to distinguish one discipline from another. Therefore, with such high levels of overlap across disciplines, it is all the more important that educators work to help their students develop disciplinary literacies in multiple content areas, as well as content literacy skills.

Whereas Grysko and Zygouris-Coe (2020) brought disciplinary literacy from the English curriculum into their science classroom to increase content area literacy, my study sought to work backwards, bringing another discipline into my English classroom. The English classroom fosters the simultaneous development of both disciplinary literacy and content area literacy; however, I hoped to bring in another disciplinary literacy to determine whether or not students truly can develop multiple disciplinary literacies from the same class. Through the use of inquiry-based learning and historical fiction texts, I wished to see if students are able to develop both their disciplinary literacy skills in English and history as well as their content area literacy.

Historical Fiction

Historical fiction is a genre that blends historical authenticity with fictional characters and settings which allow students to become immersed in the lives of fictional individuals who lived through real events. Some of the most widely-read fictional books are of the historical fiction genre, including classics such as *The Scarlet Letter* (Hawthorne, 1850), The Grapes of Wrath (Steinbeck, 1939), and For Whom the Bell Tolls (Hemingway, 1940), as well as more modern favorites, including *Outlander* (Gabaldon, 1991), *The Book* Thief (Zusak, 2005), and Hamnet (O'Farrell, 2020). Historical fiction novels provide readers with the opportunity to become attached to fictional characters and to journey along with them through the trials and tribulations of the story that represent the experiences of real individuals during that time period. Fiction allows students to learn about events through the eyes of a specific character, allowing them to understand the setting and relationships to other characters through that character. Levstik (1981) explains that historical fiction brings historical events to life and raises concern from the readers to find a solution, all the while accompanying an "insider" who is experiencing the event firsthand as well (p. 175). By giving these students the opportunity to step into the world which they are studying, fictional texts allow students to empathize on a greater level with the individuals depicted in the story. Additionally, it personalizes the story, allowing the reader to gain a deeper understanding of the setting and characters from the perspective of the narrator or the main character. The Grapes of Wrath (Steinbeck, 1939), for example, places readers inside the wagon with the Joad family, allowing them to better understand the experiences of countless Americans who packed what little belongings they could afford into their wagons and headed out West during the Dust Bowl in the era of the Great Depression. In the case of historical fiction, readers are able to empathize with the real struggles of different people

from different cultures through fictional characters. Although the characters themselves are fictional, the experiences that they represent are very real.

Especially for younger students, such as middle school students, historical fiction serves as an opportunity for students to learn about traumatic events in history with the knowledge that the experiences of the fictional characters did not happen to the characters to whom they become attached. Therefore, the introduction of a historical event through the reading of historical fiction allows students to wade into the waters of the dark histories of so many different cultures. Huck, Hepler, & Hickman (1987) explain that historical fiction allows readers to "enter into the conflicts, the suffering, the joys, and the despair of those who lived before us" (p. 532). However, in order for readers to truly understand the experiences of those characters, it is important for the historical fiction novel to be authentic to the time period which it is meant to represent. When historical fiction texts provide accurate and genuine representations of their focused time periods, they can serve as a time portal to transport readers back to that historical period.

Fiction and Theory of Mind

Further studies have been conducted to analyze the benefits of fiction in its entirety. Kidd and Castano (2013) conducted a study to determine whether or not reading literary fiction, especially fiction which focuses on narratives which display the characters' inner feelings and thoughts, can be linked to theory of mind processes, including those that involve the ability to understand situations from a character's perspective. Theory of mind, or the understanding that others experience emotions and can hold beliefs and desires that differ from one's own, is believed to be something that is conveyed through fictional texts, which allow readers to become attached to and develop empathetic feelings for the characters (Premack and Woodruff, . In their study, Kidd and Castano (2013) conducted five experiments that demonstrated that subjects who read literary fiction texts performed better on tests of both affective and cognitive theory of mind compared to the subjects who read nonfiction, popular fiction, or nothing at all. The conclusions drawn from Kidd and Castano's (2013) experiment assert that theory of mind can be temporarily enhanced by reading literary fiction. Additionally, Mar et al.'s (2006) study found that those exposed to more fiction texts performed higher on tasks that had to do with mentalizing. There are replication studies and essays that argue the correlation between fiction and theory of mind processes are merely causal (Liberman, 2013; Panero et al., 2016); however, the idea that fiction--and thus historical fiction as well--can increase readers' ability to empathize with and for others represents the ability for readers to gain a deeper understanding of the traumatic events that fictional characters experience in authentic historical fiction novels.

Alan Gratz's Refugee

Refugee chronicles the journeys of three different children who are all living through different periods of racial, religious, and political discrimination. The novel alternates between Josef, a Jewish boy who is running with his mother and sister to escape from Germany and Hitler's Nazi Party; Isabel, who sets out across the sea from Cuba to Florida in hopes of escaping Fidel Castro and Communist rule; and Mahmoud, who flees from Aleppo during the Syrian Civil War in hopes of starting a better life with his family somewhere in

Europe. Gratz's book addresses a controversial and relevant topic through the stories of children, placing a face and name to the issue of immigration and refugees. Ratini (2019) discusses the benefits of using *Refugee* as a way to humanize these histories, and to allow the students to learn more about the time periods through the characters themselves.

This novel is an authentic and genuine representation of Jewish, Cuban, and Syrian refugees all at their respective time periods in history. Therefore, I felt that this would be an effective novel to use in my intervention as it is historically accurate and informational, while still a piece of fiction with fictional characters who experience real events. By reading this novel, it is my hope that students will have a better understanding of the three different refugee crises explained in this book and the time periods in which they are set.

Inquiry-based learning

The exploratory nature of inquiry-based learning allows students to explore materials in order to work towards answering a specific question. The question can either be assigned to the students by the teacher, or the students themselves can create their own inquiry. Dewey (1910) laid the foundation for what eventually became inquiry-based learning with his assertion that students should be actively engaged in their own learning. When students have the opportunity to develop inquiries towards which they work to answer, they are able to explore materials from a perspective that caters to their individual strengths and interests, thus personalizing the learning process for them, and allowing them to take on an active role. Inquiry-based learning approaches also allow students to develop their critical thinking, collaboration, and communication skills that can be applied across multiple disciplines and can help students achieve high learning outcomes (Hernández et al., 2019). In the development of their own inquiries, students are able to maneuver their own thinking processes in their exploration of materials to answer their questions. This process allows students to deepen their critical thinking, and to further develop other necessary skills that will be beneficial in all disciplines, therefore making this a multidisciplinary technique.

Types of Inquiry-Based Learning

There are various ways in which inquiry-based learning can be implemented in a classroom, and multiple groupings that allow different outcomes to be achieved through this approach. Tawfik, Hung, & Giabbanelli (2020) name three different approaches to inquiry-based learning: problem-based learning, lecture prior to problem solving, and case-based learning. Problem-based learning is a student-directed approach that requires students to answer questions that are poorly structured *before* they are given instruction by their teacher. Lecture prior to problem solving provides students with instruction before they are assigned to answer questions on the topic. Lastly, case-based learning features an instructor-driven discussion of the case between the teacher and student. There are many commonalities between these three approaches of inquiry-based learning, including a poorly-structured question, reflective learning, and student-directed learning that requires students to find a solution to the problem while the teacher serves as a moderator, rather than someone who gives the students a direct path to the solution.

In their study, Tawfik, Hung, & Giabbanelli (2020) found that students who experienced problem-based learning scored the highest on their posttests, and students who experienced case-based learning scored the lowest. The problem-based learning group earned a higher average mean score than the other two groups, with lecture prior to problem solving having the second highest score and case-based learning with the lowest (Tawfik, Hung, & Giabbanelli, 2020). The study points out the benefits of problem-based learning, and the student-directed qualities that can help students identify their own learning needs and find resources to help them work towards a solution. With the positive results that this approach to learning yielded in this study as well as the materials with which I am working, I decided that problem-based learning would be the best inquiry-based approach to learning to implement in my intervention. I will discuss more about the ways in which I implemented problem-based learning in the methodology section.

Student Attitudes Towards Inquiry-Based Learning

Although inquiry-based learning approaches are meant to give students the ability to explore resources on their own to come to their own conclusions, it is important to note genuine reactions from students who have used inquiry-based learning. Bezen and Bayrak (2020) sought to determine whether or not an inquiry-based approach to learning would improve the feelings and attitudes towards the subject in a class of tenth-grade physics. For the quantitative data collection, Bezen and Bayrak (2020) used an attitude scale that measured their feelings towards physics. The students completed this survey-style attitude scale both as a pretest at the beginning of the unit, and also as a posttest at the end of the unit. For the qualitative data, the study relied on semi-structured interview questions that asked students basic questions about what types of activities they typically do in their physics class. The students did not receive any guidance while answering these questions. Bezen and Bayrak (2020) found that inquiry-based learning did have a positive impact on students' attitudes towards the subject, for the students' scores on the survey-style attitude scale improved between the pre-test and post-test. By allowing students to explore resources on their own, it allows them to become a part of the learning process, and to take an active role in teaching themselves about a certain topic.

The freedom provided by inquiry-based learning approaches, although good in providing students with autonomy, can also be overwhelming to students. For some students, the freedom that they have and control over their own learning is stressful, for they are used to being told exactly what to write and answer (Fangfang, 2021). Therefore, the exploratory nature of inquiry-based learning can leave some students feeling lost in all of the steps of creating a problem and working towards a solution. Fangfang et al. (2021) writes about the downfall of inquiry-based learning, and the negative attitudes that some students can develop towards this learning approach. Some students believe that inquiry-based learning requires too much effort and thinking, which causes them to become frustrated (Fangfang, 2021).

Despite the stress that some students might feel towards inquiry-based learning, this approach allows students to think critically in order to find a solution to a question which they themselves have created. Therefore, ideally, as demonstrated in Bezen and

Bayrak's (2020) study, implementing inquiry-based learning in the classroom has the potential to increase students' attitudes towards learning in whichever discipline it is utilized. For the purpose of this study, I implemented an inquiry-based approach to learning in a middle school English class during a unit on historical fiction, which allowed students to explore the time period by analyzing factual information before reading the fictional text. More on the implementation of this learning approach can be found in the methodology section.

Methods

Intervention and participants

This action research intervention occurred over a four-week period in a public middle school in a predominantly White rural area in the Mid-Atlantic region of the United States. The class consisted of 25 seventh-grade students, nine of whom were reading below grade level, five of whom were reading at the seventh grade level, and ten of whom were reading above the seventh grade level. The school had a general socioeconomic status; however, within this class, 28% percent of the students identified as economically disadvantaged.

During these four weeks, the students studied and inquired about a specific historical fiction text, Alan Gratz's (2017) Refugee. The intervention began with a pre-assessment which asked the students to write down everything they knew about the three time periods which are represented in the novel (the Holocaust, Cuba in the 1990s, and the Syrian Civil War) and how they knew this information. On the first day, the students completed both a Likert scale as well as a self-report short answer question which asked them to reflect on their attitudes towards reading in their English class. I also compared the same Likert scale and self-report short answer question again at the end of the intervention. Over the course of the four week intervention, the students completed eight different inquiries about the text. These inquiries required the students to explore a nonfiction source about that day's specific topic. My mentor teacher and I also collected the daily inquiry responses and read as a way to measure the students' development of disciplinary literacy throughout the intervention. The end of the intervention culminated into a short writing prompt in which the students chose one of the three main characters and took a stance on the author's ability to represent the experience of refugees from that character's country of origin. In their summative writing responses, students pulled evidence from both the novel as well as the nonfiction sources about refugees from that country.

Data Collection

The instruments used to implement this intervention included the Likert scale measuring students' attitudes towards reading in their English class, a short answer self-report question asking students why they do or do not enjoy reading in their English class, daily inquiries to accompany the class reading of the novel (including provided nonfiction sources for the students to explore in conversation with the novel), a rubric explaining the grading procedures for the daily inquiries, a pre-assessment comprised of three open-ended questions to determine students' understanding of the historical context of the novel, and a summative essay measuring students' comprehension gained from

reading the historical fiction novel. I averaged the Likert scale scores for reading attitudes after its first implementation at the start of the intervention, and once again when students completed it at the end of the intervention. I then compared the different averages from the Likert scale pretest and posttest using a paired samples t-test in order to determine whether students' attitudes towards reading increased. In accompaniment with the Likert scale, the students completed a self-report short answer question based on their attitudes towards reading. My mentor teacher and I graded the daily inquiries for both their quantitative value in order to evaluate for an increase in averages over the course of the intervention, as well as qualitatively in order to see if students' disciplinary language developed throughout the intervention. In order to evaluate the students' ability to incorporate evidence from both the novel as well as the nonfiction source, I also evaluated in the daily inquiry responses. I used the pre-assessment to measure students' knowledge of the historical context at the start of the intervention, and provide me with an idea of what students already knew and how they learned that information. Finally, the summative argumentative essay asked students to choose a character from the novel and argue whether or not the author accurately represented the experiences of real refugees from those countries. For the Likert scale and self-report short answer question, see Appendix A. For the list of daily inquiry questions, see Appendix B, and see Appendix C for the rubric used to assess the students' responses to the inquiries. For the pre-assessment open-ended questions, see Appendix D. Finally, for the summative, end-of-unit essay, see Appendix E.

I utilized a mixed-methods approach in my intervention, creating instruments that would yield both qualitative and quantitative results in order for me to gain a wide array of data to validate my research findings. The Likert scale measuring students' attitudes towards reading and the scores on the daily inquiries served as the quantitative data sources, as it provided me with numbers to evaluate whether or not students' attitudes, comprehension, and ability to respond to inquiries increased throughout the implementation of the intervention. The self-report short answer question on their attitudes towards reading, daily inquiry responses (the language used in the responses), and the argumentative summative essay all served as my qualitative data sources. I decided that a mixed-methods approach would best suit this study as it would provide me with numerical data to determine if students' performance increased from the beginning of the intervention to the end, as well as written data for me to analyze the vocabulary and disciplinary literacy development of the students throughout the intervention.

Data Table 1: Research Questions and Data Sources

Research Questions	Data Source 1	Data Source 2
1. Will providing students with inquiry-based approaches to learning better enable the simultaneous development of both	Student responses to these <u>daily inquiries</u> (Qualitative)	Grades of students' daily inquiry responses (Quantitative)

English literacy and historical literacy?		
2. Does reading historical fiction increase students' understanding of a specific historical time period?	Baseline test for understanding of the historical context that is used in <i>Refugee</i> (Qualitative)	Summative argumentative essay on the accuracy of the historical fiction novel and demonstration of comprehension based on vocabulary terms used (Qualitative)
3. Will an inquiry-based learning approach increase students' attitudes towards reading?	Reflective question that asks students to document their feelings towards ELA class (Qualitative)	Likert scale self-report survey on feelings towards reading in ELAclass (Quantitative)

Validity Concerns

In order to ensure that the intervention was unbiased and valid, I sought the assistance of both my college professor, who is familiar in both of my disciplinary areas, as well as my mentor teacher, who is familiar with many different historical fiction texts. Therefore, with the help of my mentor teacher, we decided on a historical fiction text that we felt accurately and authentically represented the experiences it intended to represent. Additionally, all of the instruments to measure the intervention were created with the help of my college professor to ensure effectiveness and to eliminate possible biases.

Results

During the intervention, the students first reported their reading attitudes using a Likert scale. The students rated their attitudes towards reading in their ELA classes on a scale of one (despise reading in ELA) to 10 (love reading more than anything else in the ELA class). Afterwards, the students self-reported their knowledge of the three time periods which are represented within Gratz's (2017) *Refugee*. Then, once we started reading *Refugee*, the students submitted their nonfiction connections using the eight nonfiction sources to compare the accuracy and representation of the historical events through fiction. After completing the novel, the students completed the same Likert scale and self-report short-answer question again, and completed a final post-assessment writing assignment in which they took a stance regarding Gratz's ability to accurately represent these time periods.

Effect of Inquiry-Based Learning on Reading Attitudes

Before the intervention, the students completed the Likert scale survey and short-response self-reflection question to document their attitudes towards reading. On the short-answer question, many of the students explained that they disliked reading because they felt it was boring and they wished they could have more choice in their readings. The two-tailed paired t-test indicated a p-value of 0.331, which indicates that there was no real change in students' reading attitudes from the pre-assessment (M=4.12, SD= 2.48) to the post-assessment (M=4.48, SD= 2.88).

Pre-Intervention

Student B

Rating: 5

Response: "I'd say 5 because it really depends on what it is with the activities along with we do with the reading. I like thinking of it visually so creative assignments with that I like it but when we don't do much with it."

Student R

Rating: 3

Response: "I choose the number 3 for the reason is that if I'm forced to read a book that I don't like but if I find a good book then I would enjoy it but if I'm forced to for a number of time then I would absolutely despise it."

Student W

Rating: 5

Response: "Reading is fun, I enjoy doing it, but sometimes I don't want to so that's why I chose a 5. It's about halfway between 'I don't like it' and 'I want to."

Post-Intervention

Student B

Rating: 6

Response: "[It's] heightened a little bit cause I liked the book we read this time, so it was kinda more fun than last time cause I enjoyed it."

Student R

Rating: 1

Response: "Because I like reading a good book in my opinion every book that were assigned is not a good book in my opinion because leaving every chapter on a cliffhanger gets old fast and I did not like these books [we're] forced to read because [they're] bad books."

Student W

Rating: 8

Response: "I chose an 8 for liking to read in English class because sometimes the books that we read I absolutely enjoy like *Refugee*, but there's some books that I don't really care for, like *Orbiting Jupiter*. I think that reading in general is fun and I enjoy doing it, but I also like when I'm able to pick my own books and read however much I want. I don't care much for being set a certain amount of time or a certain amount of pages read. I feel like reading should be independent and done in your free time."

As demonstrated in the students' responses, there are multiple reasons behind the changes in the students' attitudes towards reading both before and after the intervention. The reading additudes of Students B and W both increased over the course of the intervention. Although the *p*-value does not indicate a statistically significant increase in students' reading attitudes, several of the students' attitudes did increase following the intervention. The increase in their attitudes towards reading could be because of the specific book that we read, rather than the inquiry-based approach to the book. Student B explained that their interest in reading was "heightened a little bit cause [sic] I liked the book we read this time." Similarly, Student W explained that they "absolutely enjoyed" reading Refugee. Although students like Student B and Student W demonstrated an increase in their reading attitudes, there were several students whose reading attitude scores decreased over the course of the intervention. This could be credited to the students' dislike of the novel we read, or their general aversion to reading. For example, Student R explained: "every book that were [sic] assigned is not a good book in my opinion because leaving every chapter on a cliffhanger gets old fast and I did not like these books." Therefore, the changes in the students' attitudes towards reading were not due to the inquiry-based learning approach to the novel, but rather for other reasons, such as the book itself or a general dislike of reading.

Students' Understanding of Historical Time Periods

Through the inquiry-based approach, my goal was to help the students determine the accuracy of a representation of a historical event in a fictional text. Comparing the historical fiction text to the nonfiction articles about these time periods, the students were able to draw connections between fact and fiction. I measured accuracy through the eight inquiry responses that the students completed throughout the duration of the intervention. The

students' nonfiction connection scores improved between the start of the intervention (M= 8.36, SD= 1.0) and the conclusion (M= 9.24, SD= 1.12) of the intervention. The two-tailed paired t-test on the students' average scores on the inquiry responses calculated a p-value of 0.0007, which demonstrates a statistically significant difference in the students' abilities to connect fiction to nonfiction between the first and last inquiry responses. This increase is associated with a large effect size, as Cohen's d was calculated to be 0.84. The students' responses to the inquiries developed throughout the intervention, as can be demonstrated in the two inquiry responses included below from the first nonfiction connection and the last nonfiction connection.

Nonfiction Connection #1 (Beginning of Intervention)

Student T: "The repersentation of the Nazi party in the book was that they where scary mean people who didn't care about how the Jews felt and only about themselves."

Nonfiction Connection #8 (End of Intervention)

Student J: "It is very accurate to the novel because in the novel, Josef's father has saw people die and other awful things that when he came back, he was a different person. In the article the writer says that from what he has seen in the past few days will effect his personality for the rest of his life. They both show how the concentration camp had an effect on the people who were sent there."

Development of English Disciplinary Literacy and Historical Disciplinary Literacy

To measure students' understanding of the time periods represented within the novel before the intervention, they completed a three-question short-answer response pre-assessment. Each question asked the students to write down all of the information they know about each of the three time periods and how they learned about them. The majority of the students answered in ways that demonstrated their lack of understanding of these time periods–especially Cuban migration to the United States in the early 1990s and the Syrian Civil War. Before the pre-assessment, I created a list of words that are related to these specific time periods. After the students completed the pre-assessment, I counted the number of times that the students used these words. I then counted the number of times the students used the same words in their post-assessments. I also calculated the average number of target words that were used in the pre-assessment to be 0.84, and the average number of use on the post-assessment to be 3.16. The two-tailed *t*-test calculated a *p*-value of 0.019, which shows that there is a statistically significant difference between the students' abilities to use these words before and after the intervention. This increase was associated with a large effect size, as Cohen's *d* was calculated to have a value of 0.80. The

chart below demonstrates the words that were used to gauge understanding and frequency of usage.

Word	Pre-Test	Post-Test
Hitler	4	3
Nazi	3	12
Concentration Camp	2	6
Jewish	6	11
Invaded	0	1
Genocide	0	1
Castro	0	0
Riot	0	3
Starvation	0	8
Wet Foot, Dry Foot	1	1
Poor	0	1
Coast Guard	0	8
Bombing	0	7
Syrian Government	0	1

Additionally, the students' ability to draw cross-curricular connections between the historical aspect of the novel and the literary elements demonstrates their ability to simultaneously strengthen their development in both disciplinary literacies. In addition to the historical literacy terms listed above, many of the students identified different literary elements in their writing that demonstrated the way in which Gratz (2017) used his writing to portray the different historical events. One specific feature that multiple students focused on in their post-assessment was the way in which Gratz (2017) humanized these historical events through the character development. Different students explained that by creating characters to whom the readers become attached, they are more willing to learn about the environment and setting in which those characters are living in order to better understand the challenges they must overcome. Some specific examples of students' simultaneous development of both English and historical disciplinary literacy can be seen in direct quotes below. The students' responses have not been edited for grammatical or

spelling errors in order to preserve their original responses.

Student B: "The author, Alan Gratz, humanized the characters, story and their situation by not making them fake, mystical, or making them stupid. Instead, he made the stories suspenseful, and deep. He used words that made the story actually humane, and not a boring snooze-fest of a story. He made them believable and accurate."

Student C: "Alan Gratz did a great job of making us feel how it was like being in Aleppo at the time of the bombings. The article describes in more detail about how it was like being there, but the book gives us more emotion. In my opinion I loved this book (especially Mahmoud's chapter) Because Alan Gratz is just such a talented writer, and can really portray feelings and emotion while giving us action and thrill."

Student K: "I think he did a good job of accurately representing the events, he made the characters name pretty good for not living there, he said in the beginning about the wet foot, dry foot concept that if their caught on the water then they get sent back to cuba and if their caught on land then they can stay and become American citizens, the motor having problems tends to seem regular for people who are making or buying little rafts or boat to cross since the country is so poor. That's why I think that he did a good job of representing the experience. The Author uses this text to teach about what happened and what life was like back then in Cuba and why people were fleeing the country."

The students were able to evaluate Gratz's authenticity by comparing his text to the nonfiction articles. One student remarked that "by not making [the characters] fake, mystical, or making them stupid (sic)," Gratz was better able to humanize the historical events. Additionally, one student explained that his writing allowed them to feel as if they were really in the historical period. Using emotion to convey the historical time period, Gratz's (2017) text allowed the students to better understand the historical time period, thus enhancing their historical disciplinary literacy.

Discussion

Although it is difficult to significantly increase reading attitudes over a four-week duration, the students were given opportunities to take an active role in their learning. The inquiry-based approach of this intervention allowed the students to be involved in their learning (Grysko & Zugouris-Coe, 2020), which could have possibly contributed to the increase of the students' attitudes towards reading. The theme of independence and autonomy was common throughout the students' responses on their reading attitudes preand post-assessments. Additionally, *Refugee* (2017) exposed the students to a genre which they had not yet read this year, and asked them to think about the historical and social

context of the text rather than just the text itself. The students were exposed to multiple sources about the time periods represented in the novel, and were able to pull facts and details from both the nonfiction sources and the historical fiction novel (Huck et al., 1987). The calculated *p*-value of 0.331 demonstrates that there was no statistically significant increase in the students' reading attitudes before and after the intervention. It is possible that a similar intervention over a larger span of time, such as the entirety of a school year, would be more effective. Additionally, since the most common theme across the students' reading attitudes short-response answers pertained to autonomy, it is possible that providing students more choice in their reading selection–such as providing the students with a variety of historical fiction novels from which to choose–would be more appealing to the students.

Students' understanding of historical time periods after the intervention increased significantly in students' comprehension of and ability to demonstrate their knowledge of a specific historical time period. On the pre-assessment, students displayed a lack of understanding for the three time periods in the novel-especially Cuban migration to the United States in the early 1990s and the Syrian Civil War. At the end of the intervention, the students were frequently making connections between the text and the historical events themselves, based on the knowledge that they gained through the nonfiction articles and sources. Additionally, by studying the aspects of the characters whose experiences were intended to represent the authentic historical events, the students were better able to understand the time periods. The comparison between Student T's responses in the first nonfiction connection and the last nonfiction connection demonstrates their ability to delve deeper into the history of the events in the novel and to draw explicit connections between the fiction and the nonfiction. By demonstrating the ways in which the author makes use of different literary elements to represent the experiences of individuals who lived through these historical events, the students were able to better comprehend the historical events themselves.

What is most significant based on the results of this intervention is that the students developed the ability to view and understand the overlap between disciplines. When discussing *Refugee* (2017), students would often bring up topics and facts which they learned in their social studies class. By drawing these connections between English language arts and social studies, the students demonstrate their understanding of the interdisciplinary aspects of this project. When students are able to see the connections between different content areas, they are able to understand the importance of understanding one discipline in order to comprehend another (Draper & Siebert, 2005). The vocabulary recognition chart demonstrates the growth students made in their cross-disciplinary literacy. Additionally, the calculated *p*-value of 0.019 demonstrates that the increase in students' use of historical disciplinary literacy terms was statistically significant. Therefore, the students were able to draw the connections between the literary

elements used in the novel and the history being told in the story as well. The students combined terms pertaining to characterization and other grade-level English language arts-related vocabulary and the vocabulary listed above, demonstrating their ability to make cross-curricular connections. By drawing these connections, the students recognized the relevance of other subjects within one discipline. One student reflected in their short-answer response that they wished they could be provided with the opportunity to read more science fiction. This would be another way to tie a different discipline—and one that is less frequently combined with English language arts than social studies—into a content area. By adopting a cross-curricular approach to learning, the interests of students who enjoy different content areas could be piqued. Even over a four-week intervention, the students' ability to develop their English disciplinary literacy simultaneously with their historical disciplinary literacy was demonstrated; therefore, it would be interesting to see if students were able to simultaneously develop their English disciplinary literacy with different content areas to a greater extent over an extended period of time.

Conclusions and Implications

The results of this study show no significant correlational relationship between an inquiry-based approach to learning and students' attitudes towards reading. However, this study does demonstrate that adopting a cross-curricular approach to an English language arts classroom can help the students better understand both the content of English, as well as a different discipline. The positive correlational relationship between reading historical fiction and the students' understanding of the historical events represented in the novel indicates the way in which historical fiction can be used to teach students about the genuine experiences of individuals who lived through specific historical periods. By allowing the students to become immersed in a fictional text that humanizes a time period through characters' actions, feelings, and thoughts, the students are able to understand what it was like to experience those events, thus providing them with a deeper understanding of that time period. Additionally, the positive correlational relationship between inquiry-based learning and simultaneous development of English and historical disciplinary literacies demonstrates the ways in which an inquiry-based approach can be adopted in a classroom setting to provide students with different means of exploring a text. In addition to the historical fiction text-which was selected based on its authentic representations of time periods—the students were able to learn about the time periods through the exploration of nonfiction articles as well, which allowed them to draw conclusions from both texts and pull different perspectives and details from the different texts in order to come to an understanding of that historical time period.

The largest limitation was the time constraints of the intervention. The intervention had a maximum allotted duration of four weeks, and with multiple snow days, the intervention ended up being shorter in length. It is difficult to elicit a change in something

as significant as reading attitudes in a matter of four weeks, which could contribute to the calculations that demonstrates the lack of correlation between an inquiry-based approach to learning and reading attitudes. Additionally, amidst a pandemic and at the height of a new variant outbreak in the local community, many students were absent at some point during the four weeks, which made it difficult to collect consistent samples of work from the students. In the event of a missing data point due to absences, linear interpolation using the existing data was used to calculate a value for a missing data point.

Another limitation of this study was the small sample size of the students whose responses were collected for data. With the time constraints and limited resource availability, it was only possible to implement this intervention in one class, which resulted in a sample size of 25 students. Therefore, it is possible that different correlations could be found with a larger sample size. Therefore, were I to conduct a similar study, I would consider finding a way to implement the intervention across multiple classes.

In conclusion, although there is still much research to be done on this topic, an inquiry-based approach to learning has the potential to increase students' simultaneous development of both English and historical disciplinary literacy. Additionally, historical fiction texts can serve as beneficial texts in an English classroom, as well as a history classroom, for the study demonstrated the positive correlation between historical fiction and students' understanding of the time periods which are covered in the novel. Regarding reading attitudes, it is possible that a longer intervention could demonstrate more success in that area. However, this project was successful in demonstrating the benefits of adopting a cross-curricular approach in the classroom in order to foster the simultaneous development of different disciplinary literacies, and to create a classroom that is anything other than a "boring snooze fest."

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Appendix A: Likert Scale on Student Attitudes and Self-Report Short Answer Question

On a scale of 1-10 (1 being despise reading and 10 being love reading), how much do you enjoy reading the texts we read in our ELA class?

1 2 3 4 5 6 7 8 9 10

In 2-3 sentences, please explain your reasoning for selecting the number that you chose. Why do you or don't you like reading in ELA class? Please describe.

Appendix B: Daily Inquiry Response Questions

JOSEF:

Inquiry:	What vocabulary is used in the novel to give us knowledge about the Nazi Party?	What language is used in this chapter to tell us about Josef's experiences on the MS St. Louis?	How does Papa's story about Dachau affect Josef?
Article Title	"Nazi Party" (Stop reading at "Nazi Foreign Policy: 1933-1939")	"SS St. Louis: The Ship of Jewish Refugees Nobody Wanted"	"It is Difficult to Know How to Begin: A US Soldier Writes Home from Dachau"
Date Read	Thursday, January 6	Friday, January 14	Thursday, January 20
Link to Article	"Nazi Party" (Read until "Nazi Foreign Policy: 1933-1939")	"SS St. Louis: The Ship of Jewish Refugees Nobody Wanted"	"'It is Difficult to Know How to Begin:' A US Soldier Writes Home from Dachau"

ISABEL:

Inquiry:	What does the	What does the tone of	What challenges have
	language used by	Isabel and everyone	the Fernandez and
	both the author and	else in the boat show	Castillo families
	the rioters themselves	about their feelings	faced thus far on their
	tell us about what	towards immigrating	journey across the
	was happening in	to the United States?	sea? Did they
	Cuba at the time?		anticipate these
			challenges?

Article Title	"CubaBrief: The Maleconazo, the Castro Dictatorship, and their Will to Power"	"Refugees from the Caribbean: Cuban and Haitian 'Boat People'"	"What is it Like to Escape Cuba by Raft?"
Date Read	Friday, January 7	Tuesday, January 11	Tuesday, January 18
Link to Article by Itself	"CubaBrief: The Maleconazo, the Castro Dictatorship and their Will to Power"	"Refugees from the Caribbean: Cuban and Haitian 'Boat People'"	"What is it Like to Escape Cuba by Raft?"

MAHMOUD:

Inquiry:	What language does Mahmoud's father use to assure his wife and family that now was the best time to leave Aleppo?	How does the language used to describe the streets of Turkey compare to the language used to describe the city of Aleppo? Is this language effective? Why or why not?
Article Title	"In Two Charts, This is What Refugees Say about Why They are Leaving Syria"	"Aleppo Bombs Leave Quarter Million 'Living in Hell' and Without Hospital Care"
Date Read	Monday, January 10	Thursday, January 13
Link to Article by Itself	"In Two Charts, This is What Refugees Say about Why They are Leaving Syria Now"	"Aleppo Bombs Leave Quarter Million 'Living in Hell' and Without Hospital Care"

Appendix C: Inquiry Response Rubric

	1	2	3	4
Statement of Thesis CCSS.W.7.1: Write arguments to support claims with clear reasons and relevant evidence. CCSS.W.7.2: Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.	The thesis is missing from the inquiry response and or is entirely unrelated to the evidence that is used in the response.	Thesis is mentioned briefly at the beginning of the inquiry response or later in the inquiry response, but is not maintained throughout the remainder of the response. The thesis is not directly related to the evidence that is provided as support.	Thesis is mentioned at the beginning of the inquiry response, but is not thoroughly developed early in the inquiry response. Thesis is not fully developed throughout the response through evidence and explanations.	Thesis is clearly and explicitly stated at the beginning of the response, foreshadowing what the student will say in the remainder of their inquiry response. The thesis statement is maintained and developed throughout the entirety of the response.
Textual Evidence CCSS.RI.7.1: Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text. CCSS.W.7.1: See above	Student does not use textual evidence from class sources to support their thesis statement, and the thesis statement has no defending evidence as support.	Student uses little textual evidence from one class source to support their thesis, and it is not tied back to their thesis statement.	Student uses some textual evidence from one class source to support their thesis statement, but does not explicitly tie the evidence back to their thesis.	Student uses thorough textual evidence from multiple class sources to support their thesis statement, tying the evidence directly back to their thesis.

Comprehension of Text and Explanations CCSS.RL.7.1: Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text. CCSS.RL.7.2:Determin e a theme or central idea of a text and analyze its	Thesis statement and evidence are not explained, and comprehension of class texts is absent from inquiry response.	Thesis statement and evidence are explained briefly, with little connection between the evidence and the explanations, demonstrating weak comprehension of class texts.	Thesis statement and evidence are explained, with only a few clarifying points missing, but the evidence is still explained, demonstrating good comprehension of class texts.	Thesis statement and evidence are both thoroughly explained, demonstrating total comprehension of class texts.
Language Conventions CCSS.L.7.1: Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. CCSS.L.7.2: Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.	Inquiry response does not demonstrate an understanding of grade-level grammar and conventions, with five or more grammatical or convention errors.	Inquiry response demonstrates somewhat of an understanding of grade-level grammar and conventions with four or fewer grammatical or convention errors.	Inquiry response demonstrates good command of grade-level grammar and conventions with two or fewer grammatical or convention errors.	Inquiry response demonstrates strong command of grade-level grammar and conventions, with no grammatical or convention errors.
Completion of Response CCSS.W.7.4: Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience.	The inquiry response is one sentence or shorter, and contains none of the main parts of the response.	The inquiry response is incomplete, with only two sentences, and does not contain all of the main parts of the response.	The inquiry response is made of complete thoughts, and contains the main parts, but is not four sentences.	Inquiry response is thorough and contains at least four complete and coherent sentences, and includes all necessary parts.

Appendix D: Pre-Assessment Name: Date:_____ **Directions:** Answer the following questions to the best of your abilities. Please write in complete sentences. 1. Write down everything you know about the Holocaust. How do you know this information? 2. Write down everything you know about Cuban migration to the United States in the late 1990s. How do you know this information? 3. Write down everything you know about the Syrian Civil War. How do you know this information?

Appendix E: Summative Essay Prompt

<u>Directions:</u>Choose one of the characters from *Refugee* (Josef, Isabel, or Mahmoud).

Compare their life experiences in the story to real testimonials and stories that we have read in nonfictional sources in class. Does Gratz accurately represent this group of people?

Why or why not?