# Increasing Reading Comprehension and Student Engagement in Hybrid Learning 

## Environments

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Action Research Paper Presented to the Education Department in Partial Fulfillment of the Requirements for the Degree of Masters in Secondary Education

May 5th, 2021


#### Abstract

The purpose of this action research was to improve reading comprehension and student engagement in a hybrid learning environment as measured by performance on reading comprehension assessments and student self-reporting surveys. Due to the COVID-19 pandemic, I conducted classes for the 2020-2021 school year in a hybrid model. In my ninth grade English class, I noticed that while lack of engagement was initially correlated with difficulty of text, once we spent a class or two discussing and analyzing these complex stories as a group the students were quicker to respond and engage. In this manner, lack of comprehension presented as a lack of student engagement. Through a review of literature on reading comprehension strategies, three strategies were identified as potential ways to increase both reading comprehension and student engagement. Implementation of these strategies and data analysis of student self-reported surveys and classroom engagement demonstrated that increased reading comprehension positively correlated to increased student engagement as measured both through data collection and teacher observation and maintained short-term gains regardless of modality of instruction.

Keywords: Hybrid learning, remote teaching, virtual classroom, reading comprehension, student engagement, collaborative strategic reading, reciprocal teaching, story mapping


## Increasing Reading Comprehension and Student Engagement in Hybrid Learning Environments

The purpose of this action research was to improve reading comprehension and student engagement in a hybrid learning environment as measured by performance on reading comprehension assessments and student self-reporting surveys. In March 2020, virtual learning (also known as remote learning) became a widely embraced practice in order to maintain continuity of instruction during the COVID-19 pandemic. During this time, teachers worked to transfer their in-person instructional methods to virtual learning environments. Across the nation, teachers reported lower levels of student engagement (Chambers et. al., 2020), and as a practicing teacher I too felt the shift occurring in my own classroom. Teachers shared ways to increase student engagement - everything from putting stickers on faces to creative uses of cell phone applications normally discouraged in class - as they prepared for the 2020-2021 school year to start off in virtual learning (Esquivel et. al., 2020; Page, 2020). Emphasis was placed on making the classroom environment more accessible, interactive, and providing students with a sense of control (Ferlazzo, 2021; Trucano et. al., 2021).

Due to the COVID-19 pandemic, I conducted classes for the 2020-2021 school year in a hybrid model that combined virtual, in-person, and concurrently taught lessons. Teachers at the school noted lower student engagement in virtual and concurrently taught lessons, similarly to the end of the 2019-2020 school year. I initially believed that lowered student engagement was an endemic part of virtual instruction, but when I began analyzing and observing recordings of my ninth grade English class I noticed that while lack of engagement was initially correlated with difficulty of text, once we spent a class or two discussing and analyzing these complex stories as a group, students were quicker to respond and engage. In this manner, lack of reading
comprehension presented as a lack of student engagement, and I decided that this would be the focus of my action research paper.

Due to the learning profile of my class, I focused on strategies that were proven to be successful in-person for students with learning disabilities, hoping that this success would also translate to a hybrid learning environment. Through a review of literature on reading comprehension strategies, I identified three strategies as potential ways to increase both reading comprehension and student engagement: Reciprocal Teaching, Collaborative Strategic Reading, and Story Mapping. In my action research, I set out to improve reading comprehension and student engagement in a hybrid learning environment as measured by performance on reading comprehension assessments and student self-reporting surveys. I hypothesized that reading comprehension and student engagement were linked, especially in a virtual environment. After implementing three reading comprehension strategies over three weeks, final data analysis of student self-reported surveys and classroom engagement demonstrated that increased reading comprehension positively correlated to increased student engagement as measured both through data collection and teacher observation and maintained short-term gains regardless of modality of instruction.

## Teaching Philosophy Statement

My goal is to help students grow into global citizens who are empathetic, critical thinkers and responders who thrive in diverse environments and value the different perspectives that others bring to the table. I strive to provide a place for exploration and self-discovery where students can gain comfort and confidence in their voice as they take ownership of their learning. In my classes, I create an environment where students of all abilities and backgrounds can come and succeed. In knowing that they are not expected to achieve perfection on their first try,
students confidently step beyond their comfort level and dig deeper into the content. I am passionate about grounding my teaching and classroom in equitable, inclusive, and anti-racist practices.

I believe that in the right environment all students can learn and thrive and that it is my job to create a classroom space that provides that environment. Students cannot learn when they are angry or distrustful, but when they feel comfortable and respected, they will participate and push themselves. Above all, I trust my students - to show up, to do the work, to engage as they can - and they return that trust. I engage with my students as individual human beings, each with their own values, motivations, and beliefs. By approaching my students from a position of collaborator, not punisher, I create a classroom environment where students can safely bring their whole self to school. To discuss diversity is to discuss diversity of all identifiers: race, ethnicity, ability, gender, and more.

I intentionally create a culturally responsive classroom by providing opportunities to see the missing perspective in the room. Through curating course materials I can highlight cultural experiences different from those of the students in my class, allowing for the exercise of perspective taking, empathy, and cultural awareness as students strengthen their subject-specific skills. In a short story unit that reads Nadine Gordimer's Once Upon a Time and N.K. Jemison's Sinners, Saints, Dragons, and Haints in the City Beneath the Still Waters we take the time to learn not just about themes, motifs, and analytical writing but also about apartheid and Hurricane Katrina as we discuss the variance of human experience during these times. My students have passionately researched and written about climate change, racial justice, and gender equality both locally and globally. I work to help students become critical thinkers who can take in and
synthesize information from the world around them in order to make empathetic and informed decisions.

Through equitable grading, rubrics and assessment, and the power of immediate and focused feedback, students of all abilities can succeed in the classroom. I ground my teaching practice in the framework of Universal Design for Learning, designing lessons that allow for multiple entry points of engagement and displays of knowledge. Whenever possible, I give students a choice in how they wish to display their learning - for example, an analytical project that allows for a final project to take the form of an essay, podcast, book trailer, or series of letters. Regardless of the skills being worked on, I give students formative feedback and work with them to develop and advance their abilities. I engage students in dialogue and debate: When a student has a belief, learns facts contradicting that belief, and then adjusts their thinking to include new information, learning has taken place.

My classroom creates opportunities for the students to engage through meaningful, active learning that is relevant and applicable to the student's life. In a collaborative, safe, and inclusive environment, my students hook into the curriculum through their own experience and remain engaged as they begin to learn other perspectives. Students leave my classroom with the skills to apply their knowledge and understanding not just to technical information but also to people and situations, thinking and responding critically and empathetically to the world around them. As I often tell them: I believe that they are competent, capable, and in control, and I can't wait to see what they choose to do next.

## Problematic Statement

The 2020-2021 school year took place during the COVID-19 pandemic, requiring students and teachers to pivot to first remote, and then hybrid, learning environments. At my
school, the 2019-2020 school year ended fully remote, and the 2020-2021 school year began as such. On October 26th, 2020, the school moved into a hybrid learning environment where it remained throughout the writing of this paper. For the duration of this research, hybrid learning consisted of a two-week cycle where 6th, 7th, 8th, and 12th grade are on campus one week, and 9th, 10th, and 11th graders come to campus the following week. During the week they are not on campus, students engaged in fully virtual synchronous learning, following the same schedule they would follow on campus. Additionally, students and families have the option to remain home during "on campus" weeks and participate in virtual learning, leading to a concurrent learning situation where the teacher has some students in the classroom and some students attending via the video conferencing platform Zoom.

Throughout the school, teachers have discussed lower student engagement in classes and fewer student social interactions in-class compared to previous in-person years. In virtual classes, student engagement is assessed through camera use (particularly unprompted), verbal responses, written response in a messaging system, and completion of classwork (including exit tickets). In concurrent or in-person classes, student engagement is assessed through verbal responses and body language and tone in addition to work completion and written checks. Student social interactions are generally classified as off-topic conversations students have when they complete their work or as they work in small groups. Virtually, these conversations rarely happen instead, students turn off their camera and put themselves on mute. In person, students will default to individual work unless explicitly directed by the teacher to put away their phones and computers.

In my ninth grade English class, I see these same general issues with student engagement and fewer student social interactions. When remote, students hesitate to interrupt class to ask
clarifying questions or self-identify as not understanding. This leads to even less engagement on the part of these students, as the discussion passes them by and they can easily "check out" and engage with a different subject or distraction. At the same time, students who do understand the text are also reluctant to participate because of their distaste for remote learning and speaking on camera. Whereas in person students would be able to "turn and talk" with peers, sending students to breakout rooms to "talk" has proven ineffective, as students each share a single sentence and then disconnect from the conversation.

During our Short Stories Unit, I noticed lack of engagement was correlated with difficulty of story. Stories that were fairly straightforward, such as Shirley Jackson's The Lottery and Kate Chopin's Story of an Hour generated more initial discussion than deeply allegorical stories such as N.K. Jemison's Sinners, Saints, Dragons, and Haints in the City Beneath Still Waters, Nadine Gordimer's Once Upon a Time, and Ursula K. Le Guin's The Ones Who Walk Away from Omelas. Students would read the latter three stories and come to class with surfacelevel observations. Initial discussion was stilted, with students reluctant to participate either verbally or in the Zoom chat box. However, once we spent a class or two discussing and analyzing these complex stories as a group, students were quicker to respond and engage both vocally and in the chat. Once students understood the story on a deeper level, they were both able and willing to share their opinions. In this manner, lack of comprehension presents as a lack of student engagement.

Our final hybrid unit involves reading Emily Wilson's translation of The Odyssey. The Odyssey, a dense, epic poem, is packed full of references to Greek mythology and history and contains complex sentence structures and chains of dialogue. Knowing that my students struggle to break down this type of text has me worried about their engagement in this unit, which will set
them up for returning to campus after Spring Break. The purpose of this action research is to improve reading comprehension and student eng agement in a hybrid learning environment as measured by performance on reading comprehension assessments and student self-reporting surveys.

## Dilemma Discussion

In conceptualizing the struggle of teaching The Odyssey in a remote environment, I turned to Berlak and Berlak's conceptions of dilemmas of learning (1981). These dilemmas are "intended to serve as a language of inquiry for describing schooling and [systematically exploring] the origins and consequences of the schooling process upon children, and its contribution to social and cultural reproduction and change" (p. 135). Berlak and Berlak divided these dilemmas into three sets: control, curriculum, and societal. I drew upon each set to focus my discussion of learning in this research.

## Control Dilemma: Whole Child vs. Child as Student

Control dilemmas address the sharing of power in the classroom and the school. I believe that a purpose of education is helping students learn analytical, empathetic, and cultural skills that will help them to be positive and productive members of society in the future. This contrasts with those who view the purpose of education as pure 'book learning' or academic success. Because of this, much of my teaching is focused on the whole child, not just the child as a student. This dilemma is a primary conflict in a hybrid environment with a class of ninth-grade students, half of whom are new to the school and struggling to make social and emotional connections with their classmates as well. When observing breakout rooms, I noticed that students who were in eighth grade together were much more conversational, and thus productive, than students who did not have prior relationships.

The Odyssey unit views the child as a student, ensuring that I teach a prescribed text with a set schedule. However, this unit also allows for the individual ninth grade teachers to adapt the individual lessons to their liking and specific students. Within this flexibility, teachers are expected to conduct identical final assessments and hold students to the same set of standards. Knowing that my students are more willing to engage with their classmates when they are more comfortable with each other, I plan on embracing multiple realms of the child, including social and moral development, as I focus on intellectual aspects of the child as a student.

## Curriculum Dilemma: Knowledge as Given vs. Problematical

Curriculum dilemmas look at the import of knowledge, specifically if the knowledge itself has worth and purpose for the individual, and when thinking about The Odyssey, this leads into the dilemma of if knowledge should be given by the teacher or discovered by the learner. This specific dilemma looks at the struggle between "treating knowledge as truth 'out there', and the alternative pull towards treating knowledge as constructed, provisional, tentative, subject to political, cultural and social influences" (Berlak \& Berlak, 1981, p. 147). I discovered in the short story unit that the time it takes for students to discover facts is often not 'worth' the impact of discovery: for instance, explicitly telling students that Sinners, Saints, Dragons and Haints in the City Beneath Still Waters takes place in New Orleans during Hurricane Katrina and showing them a video of the wreckage and devastation provides them the ability to discover metaphors and deeper meaning in the text. Had the students needed to research the effects of Hurricane Katrina on their own, many of them would have run out of work time before they began to analyze the text.

I believe that the ideal teaching environment falls in the middle of this dilemma, with knowledge being discovered by the learner with guidance from the teacher. There are some
things in The Odyssey that students will be unable to infer from the text: for example, the entire context of The Iliad and the history of the Trojan War. Yet in order to understand The Odyssey, they need to not only be passingly familiar with this context, they also need a working awareness of major Greek deities. I will need to ensure that my students have the necessary framework to read the Odyssey so that they will be able to do the deeper analytical work that I am asking of them. I see my role as a teacher who provides resources for students before asking for their own opinion and analysis, rather than making initial analytical connections explicit.

## Social Dilemma: Equal Allocation of Resources vs. Differential Allocation

Societal dilemmas look at the role of education in the world surrounding it, as a means of transmitting knowledge as well as a micro-community within a larger community. In this category of dilemmas, I encountered the question of if time, materials and resources should be distributed evenly or differentially among learners regardless of individual student characteristics. This is a dilemma I encounter every day at in my class. Within my class, twothirds of the students have learning plans (the school equivalent of an Individualized Educational Plan), requiring them to have variants of extended time, executive functioning and writing support, and individualized attention. While it is clear to me that these students need their accommodations, it is extremely difficult to provide the necessary level of differentiation as it then leaves minimal time to support and push the students without accommodations.

When conceptualizing The Odyssey unit for a hybrid environment, the major resource that needs to be allocated is teacher time. In person, a conversation could happen at a desk with the teacher still aware of what the rest of the class is doing and able to respond as needed. However, when on Zoom, there is minimal ability for a teacher to be discussing with a single student in a breakout room and still be aware of the rest of the classroom. My goal for The

Odyssey unit is to look for reading comprehension strategies that support students with learning disabilities but are also proven to be effective for students without learning disabilities. By prioritizing these strategies, I will be able to provide full-class instruction that targets a wide swath of the recommended accommodations for my students. If even half of my class time can be devoted to full-group instruction, that will allow me to target my specific interventions much more effectively and more effectively allocate my resources.

## Pre-Implementation Data

In order to assess specific and targeted solutions, I first reviewed the data gathered from the Short Story unit to look for potential causes of learning difficulties and observed behaviors (presented in Table 1, below).

## Table 1

## Potential Causes and Solutions of Observed Learning Difficulties and Behaviors

In virtual learning environments, students are reluctant
to participate in class verbally.

In virtual learning environments, students are reluctant to participate in the chat box.

Class is not engaging to student and they are 'checking out', not fully present, or are doing other things online during class

Student is not interested in the material we are discussing

Student does not understand the material and does not want to admit it

Student is self-conscious about drawing attention to themselves

Class is not engaging to student and they are 'checking out'

Student learning plan needs are not being met or accommodated for

Small group work to provide opportunities and accountability out of a whole-class setting

Flexible grouping to ensure that learning plan needs are being accommodate for

Connecting to real-world or personal events so students are invested in the text
\(\left.$$
\begin{array}{lll}\text { Students do not demonstrate comprehension of material } \\
\text { read independently (as assessed through reading quizzes } \\
\text { and class discussion) }\end{array}
$$ $$
\begin{array}{l}\text { Student is not actually completing the reading } \\
\text { outside of class (either fully or in part) }\end{array}
$$ \quad \begin{array}{l}Initial directions are unclear to the student so <br>
they are unable to complete the assignment <br>
reading in class and analysis <br>

assignment for homework\end{array}\right]\)| Instructional strategies targeted at |
| :--- |

Through this review, I identified a primary learning behavior and a learning difficulty that I wish to address: student reluctance to participate (verbally or in writing) in virtual learning environments, and a lack of demonstrated comprehension of independent reading. Reluctance to participate was measured in the number of students who participated unprompted when a question was asked of the entire class. Lack of demonstrated comprehension was observed through student surveys, reading quizzes, and depth of initial discussion. As detailed in Table 1, there are many potential causes for these difficulties, including a line indicating that student learning plan needs are not being met or accommodated for.

In assessing the observed behaviors and difficulties, I noticed that many of the potential causes can be linked to accommodations that are often given to students when in-person. One thing that stuck out to me was the inability to remove or limit external distractions. Due to the nature of virtual learning, even when a student's camera is on it is impossible to fully confirm that they are entirely focused on class without external distractions, and very often it is possible to see these external distractions on camera (i.e, family members, pets, or siblings/friends in
other virtual classes). For many of my students, their learning plans indicate that they struggle to focus on lectures or readings when they have this type of distraction.

Nine out of twelve of my students have learning plans provided by the school, requiring accommodations to support various specific learning disabilities and other needs. In completing my literature review to identify potential solutions for these difficulties, I focused on solutions that utilized the recommendations for High Leverage Practices in Special Education as set out in a 2017 publication by the Council for Exceptional Children, supported by the CEEDAR Center (Collaboration for Effective Educator, Development, Accountability and Reform) and the Office of Special Education Programs of the U.S. Department of Education. These recommendations support learning for students with and without disabilities, thus increasing the performance of the entire class.

## Literature Review: Proposed Solutions to Observed Difficulties

Knowing that $75 \%$ of my class required learning accommodations, many for specific learning disabilities, I approached my solution search through the lens of High Leverage Practices for Special Education. As defined in the 2004 amendments to the Individuals With Disabilities Act (IDEA), a specific learning disability is either "a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations, including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia" (IDEA, 2004). Specific learning disabilities present in a variety of ways, however it is common to see unexpected underachievement, resistance to instruction, and processing and working memory deficits (Smith, 2018). This underachievement can present in a variety of ways, but often reveals itself in
reading and writing. Students with learning disabilities process information differently, and thus often need forms of reading and writing instruction different than those which are commonly found in a classroom setting - for example, summarizing, annotating, and completing worksheets - and which can vary widely by teacher and course (Ko \& Hughes, 2015).

In 2017 the Council for Exceptional Children (CEC), supported by the CEEDAR Center (Collaboration for Effective Educator, Development, Accountability and Reform) and the Office of Special Education Programs (OSEP) of the U.S. Department of Education, published a document listing a series of high leverage practices in special education. Of the twelve practices targeted towards instruction, I focused practices that utilized three instructional recommendations that can be used to increase reading comprehension of students with disabilities while still keeping them in the general education classroom: Use explicit instruction, Use flexible grouping, and Provide scaffolded support (McLeskey et al., 2017). This literature review assesses three proven practices for increasing reading comprehension through the lens of these high leverage practice recommendations.

## Reciprocal Teaching

Reciprocal teaching is an instructional method in which the leader - first the teacher, and eventually the students - leads a discussion in which the leader "summarizes the content, asks a question concerning the gist, clarifies any misunderstandings, and attempts to predict future content" (Brown \& Palincsar, 1985, p. 2). After the teacher introduces the structure of the discussion, students are assigned either individual roles (i.e, summarizer, questioner, predictor, and clarifier) or a group leader and independently go through the discussion protocol in small groups. Reciprocal teaching has shown statistically significant improvement in students who
initially participated in "fake reading", increasing their engagement and comprehension up to 80\% (Oczkus, 2018).

By design, reciprocal teaching includes scaffolded support of reading comprehension. It breaks down the process of comprehension and forces students to slow down their reading process. Teachers are also able to implement flexible grouping as they separate students into smaller groups. By intentionally, not randomly choosing groups, instructors can incorporate the high leverage practice of flexible grouping, choosing to pair strong students with struggling ones, or create homogenous groups in order to scaffold support (McLeskey et al., 2017). Because reciprocal teaching is intended to be a discussion technique, students are required to actively engage with their peers throughout the process, expanding their thinking and offering opportunities to collaborate on problem-solving (Oczkus, 2018).

## Collaborative Strategic- Reading (CSR)

Collaborative Strategic Reading (CSR) is a multi-component approach to reading comprehension that helps students engage with the text through four strategies: Preview, Click and Clunk, Get the Gist, and Wrap Up (The IRIS Center, 2008). Teachers instruct the students in how to implement each strategy, and students work individually and in groups to complete the CSR task. These strategies are used before, during, and after the reading occurs. CSR was initially designed to target students with learning disabilities and has proven to also enhance reading comprehension of students without learning disabilities as well, demonstrating its effectiveness for use in classrooms with mixed-ability students (Klinger et. al., 2012, as cited in Boardman et al., 2016). CSR blends reading comprehension and cooperative learning, aiding students through multiple instructional strategies (Capin \& Vaughn, 2017).

CSR is an approach to reading comprehension that is designed to provide explicit instruction in reading strategies as well as scaffolded opportunities to use those strategies throughout the process (Boardman et al., 2016). In this explicit instruction, CSR follows the high leverage practice principle of making "content, skills, and concepts explicit by showing and telling students what to do or think while solving problems, enacting strategies, completing tasks, and classifying concepts" (McLeskey 2018, p. 23). A common use of CSR is with groups of four students, where each student takes on a specific CSR strategy (The IRIS Center, 2008). Teachers can intentionally create specific groups, further implementing the high leverage practice of flexible grouping. Additionally, CSR provides opportunities for frequent teacher modeling and peer support, further increasing the learning opportunities. Additional support for students with learning disabilities is provided when teachers use the CSR process to accurately and actively monitor groups and check in with their students (Capin \& Vaughn, 2017).

## Story Mapping

Story Mapping is the practice of using visual-spacial representations to show the arc of a story and can be used before a reading to activate prior knowledge, during a reading to record relevant information, or after a reading to aid in review, processing, and comprehension (Boulineau et. al., 2004). Boon et al. found that many students with learning disabilities have a concept of story structure that lags behind their peers, and that explicit instruction in story structure can lead to demonstrable gains in reading comprehension (2015, as cited in Stetter \& Hughes, 2017).

Alturki (2017) undertook a study to examine the effectiveness of story mapping on ESL students with a learning disability in reading comprehension. Through explicit instruction in mapping out the major areas of a narrative story, the subjects in the study were more easily able
to articulate elements including setting, characters, problem, and solution (Alturki, 2017). This finding was consistent with Boulineau et al.'s 2004 study on story mapping as an effective means of increasing reading comprehension for students with learning disabilities by using outlines that required them to identify important story elements. The positive effect of this study was further tested and demonstrated not only immediate effect, but also appeared to maintain increased reading comprehension skills in students following the intervention (Bolineau et al., 2004).

When implemented with fidelity, story mapping provides the kind of explicit instruction that is recommended in high leverage practices guide. When looking at students using story mapping in a group, the process led to an increase in reading comprehension in all students in the group (Hart, 2020; Isikdogan \& Kargin, 2010). As explicit instruction in story mapping is proven to increase reading comprehension in students with learning disabilities when instructed in a group setting, teachers will be able to implement flexible grouping as they put students into groups. Additionally, story mapping groups are not required to remain the same for long term intervention (Hart, 2020), allowing teachers to use partners to scaffold academic support as well as social dynamics.

## Discussion: Proposed Solutions

Based on the review of the literature, I planned on implementing these three strategies on a weekly basis. Reciprocal teaching, CSR, and story mapping all bring specific techniques that I thought would promote student engagement as well as reading comprehension. Reciprocal teaching and CSR are designed to be implemented in small groups, allowing students to speak up without fear of the entire class watching them. Flexible grouping allows me to place students with both those they are comfortable with and those who will support their learning.

Additionally, these techniques provide specific roles and responsibilities for each student in the
group. This means that even students who are less inclined to offer opinions or optional comments will have a structured format with which to speak in. Story mapping allows students to express themselves in images as well as words, and by incorporating artistic license and visual concept mapping, students will engage with the text in a completely different manner. This addresses the whole child control dilemma, allowing for exposure and exploration in the artistic and aesthetic realms in addition to the intellectual. Through prioritizing these small group instruction strategies, I hoped to address the social dilemma of resources and more equitably allocate teacher time when in virtual learning environment

As an educator, I believe that it is my responsibility to create an environment where students of all abilities and backgrounds can succeed. By focusing my solutions through the lens of high leverage practices for special education, I aimed to create a learning environment that allows for different strengths and challenges to work with each other. I planned to implement one strategy approximately every week, allowing students multiple opportunities to engage with the text and become familiar with the strategy before assessing if it was successful. I intended for students to complete weekly surveys to collect self-reporting data. I assessed reading comprehension through class discussions, direct questioning, and analytical writing. My hope wass that by prioritizing implementation of these three strategies, I would increase student engagement and reading comprehension in the virtual learning environments.

## Data Review: Implementation of Solution Strategies

The Odyssey unit was structured so that I implemented one solution strategy each week prior to the school's Spring Break. Student reading comprehension was formally assessed through comparing the mid-unit reading comprehension from the prior short story unit with the
mid-unit, post solution strategy implementation, reading comprehension assessment for The Odyssey. Informally, reading comprehension was assessed daily in class through discussion participation and accuracy, responses to direct questions, and in responsive and analytical writing assignments. In addition to observational data collected both in the moment and through reviewing recordings of classes, students completed a weekly survey reflecting on engagement during the week (See Appendix 1). Over the course of the three-week solution strategy implementation, the average self-reported engagement score rose by $8.3 \%$ on a three-point scale and teacher observations noted a significant increase in voluntary student participation, side conversations, and instances of audible laughter. On the reading comprehension test postsolution strategies implementation, students averaged an $11.25 \%$ increase in their reading comprehension scores when compared to a similar assessment from the earlier short stories unit.

## Table 2

## Reading Comprehension Scores (Percentage of 100\%)

|  | Student | Pre-Implementation <br> Score (\% Correct) | Post- <br> Implementation <br> Score (\% Correct) | \% <br> Change |
| :---: | :---: | :---: | :---: | :---: |
| Writing <br> Accommodations | C-1 | 40 | 70 | 30 |
|  | M-1 | 60 | 70 | 10 |
|  | B-1 | 80 | 85 | 45 |
| Organizational | B-2 | 80 | 85 | 5 |
| Accommodations | M-1 | 80 | 85 | 5 |
|  | O-1 | 80 | 60 | -20 |
|  | Z-1 | 80 | 70 | -10 |
| A-1 | 40 | 100 | -10 |  |
| No | C-2 | 100 | 70 | 60 |
| Accommodations | L-1 | 80 | 100 | -30 |
|  | Z-2 | 40 | 70 | 20 |
| Average |  | 66.6666667 | 77.91666667 | 11.25 |

When viewing scores broken down by student, all students with writing accommodations made significant gains in their post-test scores, as did three of the four students with no accommodations. The fourth student with no accommodations went from a $100 \%$ on the pre-test to a $70 \%$ on the post-test, and when viewed in light of the student's regular class and assessment performance I believe this student's score is reflective of a day of hastily skimming the material before class rather than his ability to deeply comprehend a text.

Of the students who scored lower on the post-test than pre-test three of four were students with organizational accommodations, and the other two students with organizational accommodations demonstrated the lowest gains in the post-test. I believe this was a problem with the design of the post-test as it related to these students' accommodations: whereas the preimplementation test was on a standalone short story, the post-implementation test was on a chapter of a larger story. When looking at their specific test answers, all students gave answers related to The Odyssey, but often referenced material from the chapter prior to the one being tested. It is possible that rather than misunderstanding the story completely, these students were confused on when events happened in the story and mistakenly identified events from earlier readings as part of the current reading, a detail that the raw score of this test was too broad to measure.

## Table 3

## Student Self-Reported Engagement (Score out of 3)

|  | Student | Monthly Average PreImplementation Score | Post <br> Reciprocal Teaching | $\begin{aligned} & \text { Post } \\ & \text { CSR } \end{aligned}$ | Post Story Mapping | Change from Average PreImplementation Score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Writing Accommodations | C-1 | 2.5 | - | 3 | 3 | 0.5 |
|  | D-1 | 2.75 | 3 | 3 | 2 | -0.09 |
|  | M-2 | 2 | 1 | - | 2 | 0 |
| Organizational Accommodations | B-1 | 3 | 3 | - | 3 | 0 |
|  | B-2 | 3 | 3 | 3 | 3 | 0 |
|  | M-1 | 1.5 | 1 | - | 2 | 0.5 |
|  | O-1 | 2 | - | 3 | 2 | 0.5 |
|  | Z-1 | 2 | 3 | 3 | 3 | 1 |
| $\stackrel{\text { No }}{\text { Accommodations }}$ | A-1 | 3 | 3 | 3 | 3 | 0 |
|  | C-2 | 3 | 3 | 3 | 3 | 0 |
|  | L-1 | 2 | 2 | 1 | 2 | 0 |
|  | Z-2 | 1.5 | 1 | - | 2 | 0.5 |
| Average |  | 2.354166667 | 2.3 | 2.75 | 2.5 | 0.2425 |

Note. Each teaching method was assessed on the Friday following one week of implementation. Blank data cells represent students who were absent at time of data collection.

## Reciprocal Teaching

After engaging with The Odyssey through the reciprocal teaching model, students did not demonstrate gains in either self-reported reading comprehension confidence or proficiency in reading comprehension questions during class discussions this week. Students were unable to complete text analysis or debate, and were primarily struggling with plot and context.

Upon reviewing the recorded lesson, I realized that part of the failure of reciprocal teaching as a solution strategy was a lack of fidelity in teacher implementation. Across the studies of reading strategies referenced in the literature review above, the biggest challenge discussed in these studies was fidelity of implementation of practices. While teachers go in with
good intentions, they do not always execute the strategies in their lesson plans with fidelity. Teachers with the ability to self-select elements of a teaching program may not be providing an instructional environment that includes elements that are necessary to support students with learning disabilities (Boardman et al., 2016), and often confused cooperative learning practices with comprehensive and explicit reading instruction (Ko \& Hughes, 2015).

I found this to be true in my own practice. This week, I was unable to ensure that I taught the reciprocal teaching method with fidelity, and I believe this impacted my students' ability to use the strategy. Additionally, I believe that the complexity of the text did not work well with this strategy. Students struggled to predict what would happen (Step 1), as they were still working through the context of the story. As depicted in Figures B1, B2, and B3 in Appendix B, while they were able to flag words and situations for clarification (Step 2), they were unable to generate analytical questions (Step 3) prior to summarizing the text (Step 4). Failure in implementing the strategy, combined with the complexity of The Odyssey, meant that reciprocal teaching did not succeed in increasing student reading comprehension. While students were more active in class discussion and the majority were significantly more participatory in small group breakout rooms, this did not translate to increased student feelings of engagement: Overall, student self-reported engagement fell an average of .5 points, dropping from 2.7 (out of 3 ) to 2.4 (out of 3). As demonstrated in class discussion, there was no change in improving reading comprehension, with students continuing to ask clarifying questions and struggle with understanding plot. When asked to do deeper analysis or debate choices made by characters, the majority of students either answered incorrectly or were unable to back up their statements with textual evidence. While a few of the stronger readers in the class expressed understanding of the
text, I also received reflective comments such as "I just felt like everything went fast this week, and I got a little caught up/confused" (Z-2).

## Collaborative Strategic Reading

The following week I introduced students to the Collaborative Strategic Reading (CSR) method. CSR begins by "previewing" which worked very well with the book summaries included in our translation of The Odyssey. Students responded well to the previewing structure, and were quick to share their "clicks and clunks" with their partners. Review of recorded lessons indicated that this strategy was taught effectively, and that was borne out in final student homework, as shown in Figure B6 in Appendix B. Over the course of the week I modeled the CSR protocol, we completed the protocol as a class, students worked in small "expert groups" where each student was assigned a specific role, and students completed independent reading and CSR protocol for homework. Throughout this time, I was consistently modeling to the students how to use the protocol in order to improve their reading comprehension. Throughout the week, students responded positively to the CSR process, with one student stating on their Friday Check Out, "I think working on the sheets that we did today was very useful!" and another asking for "more of the [CSR] papers". It became clear that students were engaging with the text more actively, thinking through what they were reading as they were reading it, and asking questions when they encountered words or situations that they were unfamiliar with.

After three sessions of CSR, I instructed students to independently apply this technique for homework, writing their CSR protocol as annotations in their books. They entered class fully comprehending the section of text read at home, as assessed by a "Seven Point Summary" of the chapter created as a bellringer. For the first time this unit the class was able to participate in an analytical debate ("Polyphemus: Monster or Martyr?") where they close-read the text and used
contextual evidence to prove their arguments. This type of debate was only possible because we did not have to spend the majority of the class reviewing plot, and their debate demonstrated advanced text analysis skills, indicating true comprehension of the text. In addition to their demonstrated comprehension in class, students also felt more confident in their reading comprehension ability, with self-reported data showing an increase from 2.7 (out of 4) to 3.3.

Throughout the final class of the week, discussion and debate was lively and student engagement was some of the highest I have seen during academic coursework. In addition, students began engaging in side conversations unrelated to the text, leading me to have to redirect them back to their assignment. This did not happen during the prior unit. Both engagement and confidence were shown in student self-reporting surveys, with engagement rising .55 points from the previous week to 2.75 (out of 3 ) and individual confidence in "ability to understand the story/plot/characters" and "ability to close-read the text" either raising student response by 1 point or remaining neutral. While students initially struggling with the text, including those with learning differences, demonstrated the most gain through this method, this strategy had no negative reported impact for other students. The one student who self-reported a "Check Minus - Meh" also acknowledged that she did not do the reading for the final class period at all. With this student's score excluded, student self-reporting data demonstrated $100 \%$ response of "Check Plus - I had a great week!" and an average score of 3 out of 3 - the highest positivity rate of the entire school year.

## Story Mapping

The third week I implemented the solution strategy of story mapping. Due to the success of CSR the prior week, I continued assigning students CSR-style annotations for homework reading. The majority of students reported finding these annotations helpful, and my hope was
that story mapping could help students to place individual chapters and adventures into a broader context. Using story mapping, students were placed into groups of four and asked to "Map Odysseus's Quest", creating a timeline and/or annotated map that discussed where Odysseus traveled, in what chronological order he traveled there, and to analyze six separate adventures to come up with "potential souvenirs" that Odysseus could bring back from that location. Initially students struggled with the open-ended assignment ("What do you mean, all our maps could look different?"), but once they understood that they were being asked to demonstrate their knowledge in whatever visual map made most sense to them the groups were easily able to begin work. Story Mapping proved to be an effective intervention based both on student-self report data and teacher observation. Students reported higher than average engagement this week (2.5 out of 3). While this is lower than during the CSR week, it is still higher than the January/February average of 2.35 out of 3 .

Teacher observations were conducted based on the three groups that the students worked in for this project. Group 1 was one of the most engaged as assessed by teacher observations: they were constantly discussing, devolving into related tangents, and making analytical connections between parts of the book. Additionally, this group chose an online collaborative software (Miro Board) to develop their map, allowing all students to add, write, and edit the document. Despite this, the self-report engagement scores were the lowest of the three groups, averaging 2.25 out of 3 . Within this group, however, there was an instance of individual success: Group 1 included a student, M-2, who struggles to connect and engage with their peers. During this project M-2 took the lead in their group, provided commentary and guidance, and led the group's full-class presentation. This is the most on-task volunteer engagement I have seen from M-2 this year. After Story Mapping, M-2’s self-report engagement scores rose by one point.

Group 2 was composed of strong readers who have not demonstrated struggles with reading comprehension. In prior situations when this group finished an assignment early, they would turn off their cameras and microphones, leaving their breakout room a silent black box. This week, however, the group continued their story mapping assignment by asking to adjust part of the assignment. Instead of looking for images of souvenirs, Group 2 asked permission to use physical objects from their homes. After this, every time I entered their breakout room it was to laughter, debate, and deliberation: Why would a bowl full of ketchup-as-blood be a better representation of the underworld than a skeleton? How, exactly, can we show a bag full of wind? Student-self report data from this group reflected higher engagement ( 2.5 out of 3 ), but this was still lower than I predicted based on their behavior. I hypothesize that if I had had the opportunity to ask further questions of this group, they would have said they had fun but did not feel sufficiently challenged by the assignment.

Interestingly, while Group 3 was the least engaged as measured by teacher observation, they were the most engaged when assessed on the student-self reporting survey ( 2.75 out of 3 ). When finished with a task, this group would disengage from working with each other and required constant prompting to think of ways they could improve their project and performance. This prompting allowed the group to immediately and unhesitatingly re-engage with each other. When compared to the other groups, Group 3 self-reported lower levels of reading comprehension ( 3.25 out of 4 ), but when compared to self-report reading comprehension data from the Monday of this week, two of the four group members reported increased reading comprehension, with the other two remaining constant.

Each group was individually assessed on their reading comprehension during the group presentations, during which they demonstrated knowledge of the plot and adventures of the first

13 books of The Odyssey. Over the course of the week, student self-report data showed a halfpoint increase in confidence in student reading comprehension from Monday (3 out of 4) to Friday (3.5 out of 4).

## Discussion

In my action research, I set out to improve reading comprehension and student engagement in a hybrid learning environment as measured by performance on reading comprehension assessments and student self-reporting surveys. I hypothesized that reading comprehension and student engagement were linked, especially in a virtual environment. The data in this action research showed that increased reading comprehension correlated to increased student engagement as measured both through data collection and teacher observation and maintained short-term gains regardless of modality of instruction.

During our previous unit, students scored an average of $67 \%$ on their formal reading comprehension checks and demonstrated low engagement as measured by both teacher observation and student self-reporting surveys. After implementing the solution strategies, students averaged a $78 \%$ on their formal reading comprehension checks. Throughout the process, reading comprehension was informally assessed through discussion questions and oral responses. As the rate of correct student responses increased, so too did voluntary student participation in discussions. During these discussions, students would actively correct each other when incorrect statements were made, would build off other discussion points, and draw connections between events in the text. Virtual engagement, including use of the Zoom chat function and reaction buttons, also increased. In observing my class recordings, it was clear that engagement through voluntary participation was correlated with increased student comprehension of the material. Students who felt confident in the story were eager to argue
about deeper meaning and motivation. While there were students who remained silent during discussion, these students were increasingly students who admitted they had not completed the assigned reading, rather than those who acknowledged they did not understand the material - the inverse of prior units. Although this data was collected informally through discussions and student self-disclosure, were I to run this research a second time I would quantify this data through formal weekly comprehension checks in addition to a structured engagement survey.

A surprising finding was that the students also increasingly found "inside jokes" in the material, leading them to offer callbacks to prior class discussions and having classmates burst into laughter. In this manner, deeper understanding of the content also contributed to shared class community and identity. While I had hypothesized that reading comprehension and student engagement were positively correlated, I was not expecting to find such a strong correlation between reading comprehension and classroom environment. A further study looking at this correlation could provide additional possibilities for building community through curriculum in a hybrid or virtual learning environment.

## Transformative Reflection

Over the course of implementing the solution strategies, I not only watched the students grow as learners, but I feel as though I grew as a teacher. Although I have been in the classroom for nine years, I have never run a targeted and measured implementation of a strategy through action research. The practice of weekly data collection and reflection meant that I found myself constantly adjusting my teaching strategies and practice in order to best meet the needs of my students.

I began this process through the lens of three dilemmas: Whole Child vs. Child as a Student; Knowledge as Given vs. Knowledge as Problematical; and Equal Allocation of Resources vs. Differential Allocation of Resources. The dilemma of allocation of resources was one that I feel I successfully planned for: by selecting solution strategies that prioritized differentiated group instruction, I was able to provide full-class instruction that targeted a number of the recommended accommodations for my students, allowing individual time to be extremely targeted towards student need. One thing that surprised me was that by initially focusing on the multiple realms of the whole child I was able to increase my teaching of the child as a student. When the students were more comfortable with each other and the classroom environment, classroom management became simpler and I was able to more effectively engage with the children as students. Conversely, while I initially assumed that I would need to provide context for the students (Knowledge as Given) I was pleasantly surprised to discover that as we moved through the text and their understanding increased, they began to discover connections and events on their own (Knowledge as Problematical). Being aware of this dilemma allowed me to step back from providing answers and move towards my ideal solution of allowing students to make the first steps towards discovery on their own.

The Elements of the Learning Environment, as set out in CUA's conceptual framework, provided me another way to view the classroom. I was able to specifically identify the elements of my teaching philosophy - namely, accessible and inclusive instruction - in order to select solution strategies to address the diversity of student academic needs while simultaneously drawing on my theories of classroom community and culture to address the socioemotional needs of students. I collaborated with my department chair and English 9 team teachers to ensure that the needs of the administrative stakeholders were being met while also ensuring I was
addressing parent feedback that the school had received in the mid-year survey. I was fortunate to have been in the classroom since the beginning of the school year, and as such had standardized routines and classroom structures already in place. I had also been preparing to teach The Odyssey with the English 9 team, strengthening our own knowledge of the book before beginning the instruction.

The conceptual framework also addresses instructional strategies and assessment, two things I focused on in this action research project. My main variable was instructional strategies, and I used assessments to identify the effectiveness of the implementation. At the beginning of the year, I was encouraged by my department chair and teaching team to move away from weekly formal/summative assessments and towards informal data collection and observation. Through this action research project, I learned that not all formal data collection needs to be perceived by the students as formal. Casual reading quizzes are not the norm in our school, and as such were not part of my action research. However, upon reviewing the data, I realized that there would have been an added element of reflective practice had I been able to implement this kind of low-key, yet regularly formalized, data collection. Without this data I was unable to empirically confirm that students whose post-implementation reading comprehension scores demonstrated lower performance were outliers or not representative of a broader trend in their learning. Instead I had to rely on their in-class performance data gathered through observing discussions and accurate answers to verbal questions in order to have multiple data points with which to assess their learning. This element of the conceptual framework, combined with my action research experience, will certainly continue to have a lasting impact on my teaching practice in the future as I add these assessments into my curriculum.

Although this may sound small, I believe it is a fundamental shift in my practice. I have traditionally done most of my informal assessment through oral discussion and observation, while providing both formative and summative assessments formally. The ability to increase formal conceptual checks while keeping the tone light and informal is a shift for me, and one I think will serve me and my students well. I had kept "community building" separate from "academic achievement", not realizing the benefits of integrating and the correlation between the two. As I continue to prioritize building a safe space and create this classroom community, I am thrilled to find another pathway towards doing so - this time through the pursuit of academic knowledge and learning.

If I could begin this year again, knowing what I do now, I would begin this kind of collaborative academic practice far earlier in the year. I would make sure to prioritize reading comprehension strategies before beginning the unit on paragraph writing, as I believe that it would now be beneficial not just to student comprehension and analysis, but also to creating an environment that could encourage robust peer review and discussion. I look forward to not only continuing to use CSR and Story Mapping in future years, but to find additional ways to incorporate explicit reading comprehension and strategies in my classroom.

In this action research I set out to improve student reading comprehension, and thus increase their engagement in the classroom in the hybrid learning environment. This goal still seems like an extremely worthy one, especially in light of my findings: after implementing my solution strategies, the virtual classroom environment during The Odyssey unit felt completely different in terms of student engagement. Test data showed that students understood the material more at the end than the beginning, and both self-reported engagement scores and observational data bore out increased engagement. While I had hypothesized that reading comprehension and
student engagement were positively correlated, I was not expecting to find such a strong correlation between the two. I truly am grateful for this opportunity to discover that I can create community through academic understanding and shared exploration of knowledge, and I plan to bring this into my teaching practice moving forward.

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## Appendix A

## Weekly Student Self-Report Engagement Survey

For the entire year, students completed a weekly "Friday Check Out" survey asking four questions, one on a three-point scale and three open ended questions. This data was collected since the beginning of the year and provided a consistent data-gathering method that the students were accustomed to.

## Figure A1

Image of the first question in the Friday Check Out. For analysis purposes, this data was converted to a three point scale of 1 (Check minus), 2 (Check), and 3 (Check plus).

How was English class this week for you?Check plus - I had a great week!
Check - It was good/fine.
Check minus - Meh.


## Figure 42.

Image of the three open-ended questions in the weekly Friday Check Out.

What was something you liked or want to see more of? *

Long answer text

What was something that didn't work for you this week? *
Long answer text

What's on your mind as we go into the weekend? *

Long answer text

HAPPY FRIDAY!
Description (optional)

## Appendix B

Examples of Student Work

## Figure B1.

Reciprocal Teaching example from Student D-1, day 1 in class.

| PREDICT <br> What do you think will happen? | CLARIFY <br> What do you need help understanding? Words, analogies, or context? |
| :---: | :---: |
| It will talk about Homer and he ios stuck on an island and a godess appears and tels him he can leave if he dosent eat any pigd but all of his sailman do eat the pig and they turn into pigs exept him, Posidon the god of the sea is furius and braks his boats so he swins to land were he meats his wife that cheated on him he goes to war with troy wins and wins his wife back | None |
| QUESTION <br> What questions do you have? Think not just analytical and debatable questions, but also questions about the specifics, point of view, literary elements, structure of the story, or perspective of the author or characters? What are you curious about? | SUMMARIZE <br> What happened here? |
| none |  |

## Figure B2.

Reciprocal Teaching example from Student D-1, day 2 in class.

| PREDICT <br> What do you think will happen? | CLARIFY <br> What do you need help understanding? <br> Words, analogies, or context? |
| :--- | :--- |
| Odysseus will be left stranded. | Sack of troy?? <br> Ethiopians?? |
| QUESTION <br> What questions do you have? Think not <br> just analytical and debatable questions, <br> but also questions about the specifics, <br> point of view, literary elements, structure <br> of the story, or perspective of the author <br> or characters? What are you curious <br> about? | SUMMARIZE <br> What happened here? |
| What do ethiopians have to do with Greek <br> mythology? | Odysseus is the only greek hero left on a <br> stranded island because the goddess <br> Calypso falls in love with him, trapping him <br> and refusing to let him leave. |

## Figure $B 3$.

Reciprocal Teaching example from Student D-1, day 3 homework.

| PREDICT <br> What do you think will happen? | CLARIFY <br> What do you need help understanding? <br> Words, analogies, or context? |
| :--- | :--- |
| I think that It will introduce the main character <br> and his story. | l'm still confused on the whole idea of the <br> people staying at their house? |
| What questions do you have? Think not <br> just analytical and debatable questions, <br> but also questions about the specifics, <br> point of view, IIterary elements, structure <br> of the story, or perspective of the author <br> or characters? What are you curious <br> about? | SUMMARIZE |
| What happened here? |  |
| Why does Athena like Odysseus so much. <br> Why isn't the son of Odysseus surprised <br> when he finds out Athena is a god? | Odysseus is trying to get home and Athena <br> wants to help him so he asks zeus for <br> permission and permission is granted. Then <br> Athena goes to Odysseus's son and tells him |
| not to loose hope and take control of his life. |  |

## Figure 34.

Reciprocal Teaching example from Student C-2, day 0 in class.


## Figure 85.

Reciprocal Teaching example from Student C-2, day 1 in class.


Figure $B 6$.
Reciprocal Teaching example from Student C-2, day 3 homework.


## Figure $\mathbf{B 7}$.

Story Mapping example from Student B-2, L-1, M-2, and O-1, day 3 in class.


