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Bridging the Literacy Gap: A Critique of Computer-Based Instruction

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Abstract

As we move forward in an emerging digital society, a greater emphasis is being placed on technology-based instruction. As a result, computer-based literacy instruction has become more prevalent in schools and afterschool programs with the goal of strengthening students' literacy skills. Throughout Monterey County, a large portion of the student population are English Language Learners (ELLs). The focus of this Capstone project is a discussion and critique of a specific computer-based literacy program, Read Naturally. The developers of this program expect students to already have a basic knowledge of the English language and as a result, the difficult assessments and high expectations leave ELLs feeling discouraged and falling further behind academically than their non-ELL counterparts. This project is an effort to supplement the Read Naturally curriculum to increase student engagement and enhance their ability to retain information. The ultimate goal is to provide more effective strategies for ELLs to develop their literacy skills and foster a love for reading, rather than having them associate a computer-based literacy program with failure.

Bridging the Literacy Gap: A Critique of Computer-Based Instruction

When I was younger, my parents often referred to me as the “reader” of the family. I loved being able to escape from the real world and immerse myself into the storyline and lives of those in whichever book I chose to read at the time. My dad constantly explained to me, “If you know how to read a book, you will never be bored a day in your life.” Because of the important role that reading has played in my life, I was elated to be offered a job position in which I would be helping students, primarily English Language Learners, develop their literacy skills. I assumed that I would have the opportunity to introduce reading to these young children in a way that fostered their love for books and made them excited to enhance their vocabulary and reading skills. However, I quickly learned that the majority of my job revolved around testing these students’ level of understanding after they had completed several readings and quizzes through a computer-based program. Therefore, most of my instruction with them is in regard to whether or not they have passed or failed a lesson. Unfortunately, considering some of these students still have difficulty speaking, reading, and writing in English, I often have to deliver the bad news that regardless of if they improved, they still failed a lesson. The reason behind this is because for the specific computer-based literacy program that is used, students are required to complete several lessons that consist of reading a short story in sixty seconds or less with fewer than three errors, answering every question on a quiz correctly, and reading through a list of sight words in a short amount of time while making very few mistakes. Needless to say, the expectations and grading criteria for whether or not a student passes or fails a lesson is very extensive and as a result, students are often left feeling discouraged.

After I had been employed for a couple of weeks, some of the older students that I worked with started becoming upset when they would see me walk into the building. Regardless of the fact that they like me as a person, they associate my presence with the fact that I am going to be testing them, and often failing them, in terms of their literacy development. One day, I walked up to the building and one of the third grade students that I worked with had just gotten off the bus. He took one look at me, sighed heavily, and screamed with tears forming in his eyes, “I HATE reading!” Shortly after, he had been removed from our literacy program after begging his mother to let him drop out. This student had improved greatly since the start of the school year. However, despite his improvement, he often did not meet the program’s necessary requirements for passing a story and being able to move onto another level. As a result of the

short time requirements, students simply read through a story as fast as they possibly can. This often includes hardly taking any breaths in between sentences, not appropriately pausing when punctuation implies to do so, and practicing sight words so frequently that they simply memorize the words, rather than actually knowing how to read them. Because of this, I could go back to a story that a student had passed previously and just a few days later, they would have no knowledge of how to read many of the same exact words. Although some students have improved their literacy skills, a large portion are simply memorizing and doing whatever necessary to pass a story rather than actually retaining any of the information. The program that we use, along with many other computer-based literacy programs, place too great of an emphasis on assessment rather than improvement.

Learning to read is a difficult task and long process for any young child. However, this is much more challenging for students whose native language is not English. Rather than expecting these students to demonstrate their knowledge of these skills through difficult assessments with high expectations, they must be provided with opportunities to express their understanding of the information in alternative ways. Most importantly, the improvement of their literacy skills should be the top priority for every educator. There must be a way to supplement the curriculum to increase student engagement and enhance their ability to retain information while learning literacy through a computer-based program. The success of students' development of literacy skills should be important, but fostering a love for reading and having them become lifelong readers should be the goal.

Literature Synthesis and Integration

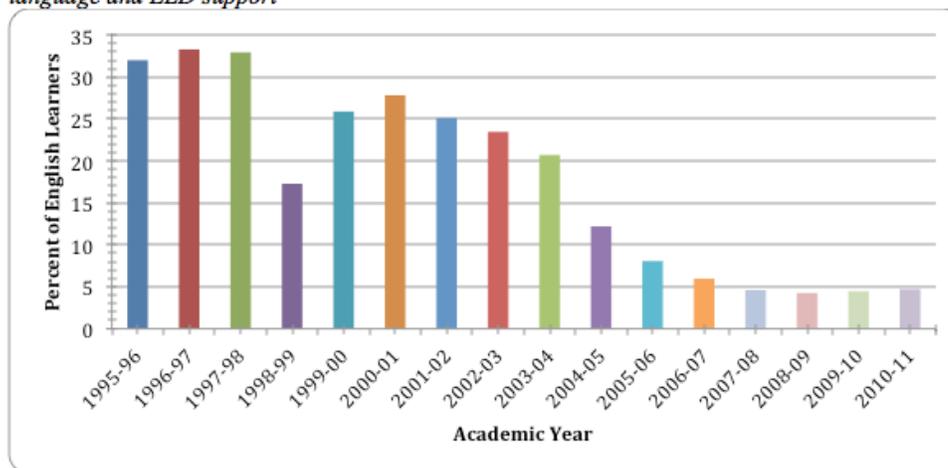
Throughout Monterey County, many young children are attending school for the first time as English Language Learners, also known as ELLs. With the evidently difficult transition of being in a school setting, knowing little English makes the process of learning much more challenging. Considering many students are expected to already have a good vocabulary and the ability to read simple books, little focus is placed on ensuring that these children are given the tools and proper instruction to develop their literacy skills. As a result, there are an alarming number of students reading either below or severely below their grade level. ELLs are continuing to fall behind in terms of their development of literacy skills. With an increasing reliance on technology, computer-based programs are being implemented into school settings to provide a form of literacy instruction aside from teacher instruction. However, there has been little

evidence describing the benefits of these programs and whether or not they have increased ELL students' literacy development.

What is the issue?

Many public schools throughout California are experiencing an increasingly diverse population of students. A total of 39.5% of students in Monterey County are ELLs who enter the school setting already academically further behind than their non-English Language Learner peers, also referred to as non-ELLs (California Department of Education, 2016). Perez and Holmes (2017) explain that ELLs represent the fastest growing population in public schools. However, evidence of ELLs' academic performance shows that only 25% of these students are reading at or above grade level, as opposed to the 75% of their non-ELL counterparts. According to the California Department of Education (2016), during the 2015-2016 school year, there were roughly 1.374 million English Language Learners throughout California's public schools. This number accounts for approximately 22.1 percent of the entire population enrollment in public schools. With this vast number continually growing, educating these students in English in addition to the other subjects and skills they need to be taught in order to be successful in the school setting represents one of the biggest challenges for public education in the United States (National Public Radio, 2017). Unfortunately, as shown in Figure 1, English Language Development (ELD) support has decreased in recent years. This data indicates that the quantity and quality of literacy instruction needs to be improved to ensure that all students are provided with an equal opportunity to develop their literacy skills.

Graph 1
Percent of district-level English Learners receiving academic instruction through their primary language and ELD support



Note. Source: California Department of Education, 2013

Figure 1. ELD support for ELLs. This figure illustrates the decrease in the percentage of ELLs receiving support through their native language and English Language Development in recent years.

Why is it an issue?

There is a widening gap between the literacy development of ELLs and non-ELLs (Abedi, 2004). An analysis of the reasons behind this widening gap can be better understood through a relevant theoretical perspective referred to as the emergent literacy theory which was an idea developed by Clay in 1966 (Blake, 2017). This theory suggests that literacy development begins at a very early age, far before students are taught literacy skills in the school setting. However, many ELLs do not have the opportunity to experience speaking, reading, or writing in English until they start attending school. This theory does not apply to ELLs because most of their knowledge prior to starting school comes in the form of their native language. Therefore, they do not have the same pre-existing knowledge of literacy skills in English as their non-ELL peers which places them at an academic disadvantage as they first attend school.

The No Child Left Behind Act, also referred to as NCLB, aimed to draw attention to the achievement gap between ELLs and non-ELLs. However, the National Education Association (2008) argues that the way that the law treats ELL students has a negative impact on their academic success. Considering these students must pass achievement tests as a requirement of proof that they are proficient in English, the students still learning English already have an inherent disadvantage compared to their peers whose native language is English. Although ELLs' academic achievement is a component of NCLB, studies suggest that this can have a negative effect on students because ELLs or students with limited proficiency in English "may possess the content knowledge but may not be at the level of English language proficiency necessary to understand the linguistic structure of assessment tools" (Abedi, 2004, p. 11). In order to lessen the achievement gap between ELLs and non-ELLs and make the NCLB requirement of achievement tests more effective, schools must have more assistance to improve the quality of assessment for ELLs by providing them with better accommodations and assessments in their native language.

In the emerging digital world we live in today, a greater emphasis is being placed on technology-based instruction (Trotti, Hendricks, & Bledsoe, 2017). As a result, many computer-based programs are being created and implemented in schools and afterschool programs with the

goal of strengthening students' literacy skills. However, evidence has not effectively shown whether this form of instruction has been beneficial for students (Trotti et al., 2017). There has been an increased reliance on computer-based instruction, also known as CBI, for developing children's early literacy development. CBI refers to specific activities or applications that assist in aiding teacher instruction (Trotti et al., 2017). Examples of computer-based instruction could be a program that contains several stories for students to read. In order to move onto the next level, students must be able to proficiently read the story as well as pass a test containing questions from that particular story with a teacher present. Unfortunately, many of these computer-based programs focus solely on fluency, rather than comprehension. Although many studies have been conducted to provide evidence pertaining to the benefits of CBI on student literacy achievement, most researchers have not been able to report significant findings of literacy gains (Trotti et al., 2017). When visiting the websites of certain computer-based programs such as Read Naturally, little to no information is given in regard to evidence that the program is effective in developing students' literacy skills (Read Naturally, 2017). The reliance on CBI proposes an issue for ELLs because they are expected to already have a basic knowledge of reading and vocabulary skills. Therefore, they would most likely need more additional support while completing CBI programs. According to Lesaux and Siegel (2003), "teaching children to read in a language in which they are not yet proficient has been identified as an additional risk factor for reading problems" (p. 1,005). Therefore, as many ELLs already struggle more than their non-ELL counterparts to develop their literacy skills, CBI programs can result in them falling even further behind.

What should be done?

In order to provide students with the opportunity to develop their literacy skills, teachers must evaluate their instructional practices and adapt when necessary to meet the needs of all students. Considering the large number of English Language Learners in Monterey County, it is essential that educators be prepared with the tools to ensure that these students are developing their literacy skills at a rate that is comparable with their non-ELL peers. Therefore, educators must take into account the different components involved in students developing their literacy skills as well as continue to search for different strategies for improving their literacy instruction. According to Trotti et al. (2017), "instructional practices are most useful when they are code-focused, involve shared reading, and promote language development focused on early literacy

skills” (p. 30). Considering CBI just started becoming more prevalent throughout schools and afterschool programs, there is little research that suggests what should be done to supplement this form of instruction in order to help students develop their literacy skills. However, many scholars indicate what teachers can do in order to ensure that ELLs are being provided with quality literacy instruction. Zhang (2017) explains that “the urgency of providing ELLs with the quality education that they need calls for teacher preparation programs to incorporate content-specific literacy instruction” (p. 168). Many studies state that teachers are not equipped with the tools and knowledge to assist ELLs in becoming engaged and capable of reading (Teale, 2009). Therefore, many of the solutions proposed regarding effective literacy instruction involve ways to accommodate the students in the classroom that may have a harder time learning literacy. Teale (2009) explains that during literacy instruction, teachers can make accommodations which will be helpful for ELLs including allowing for additional time to complete required tasks, reminding students to pay particular attention to key words and vocabulary, using images or other visual cues to help explain important information, and having students take the time to summarize or paraphrase what they are reading. These same strategies for instruction can also be used by educators implementing CBI programs into the curriculum. Although the majority of the work is completed on the computer with the students listening to headphones, teachers can keep these instructional strategies in mind whenever students need more clarification or are ready to pass a test to show that they understand the material.

In addition to making accommodations for ELLs, many studies also explain that in order for these students to develop their literacy skills and succeed academically, educators should promote additive literacy. Additive literacy suggests that “children’s first and second languages are interdependent and affect literacy development” (Bauer, 2009, p. 446). As a result, many scholars suggest that students learn literacy skills more effectively when they have the opportunity to build and expand on their knowledge of their first language to the language that they are learning. This can be connected back to the emergent literacy theory which describes that children first learn literacy skills far before entering the school setting (Blake, 2017). For ELLs, knowledge of reading and writing first occurs in their native language. Therefore, these students should have the opportunity to build on the information that they learn in their native language while learning and developing their literacy skills in English. Bauer (2009) gives several strategies for educators promoting additive literacy in the classroom setting including

allowing students to speak in their first and second language while completing activities, treating both languages with respect, and encouraging students' families to continue to speak their home language with their children. In today's society, many educators have English-only classrooms where other languages are not allowed to be spoken which interferes with students' abilities to make connections between what they know in one language to the language that they are learning. Unfortunately, the computer-based programs that are implemented in schools and afterschool programs today are in English and do not provide opportunities for students to build off of prior knowledge in their native language. The concept of computer-based programs is very current and as a result, there is not much research suggesting solutions to making the programs more beneficial to students. However, many of the strategies provided for quality literacy instruction can be implemented by educators to increase student engagement and their ability to retain information while learning literacy through these programs.

Conclusion

In conclusion, the growing number of ELLs throughout Monterey County and their limited literacy skills represent a problem in the form of literacy instruction. Considering only a quarter of ELL students are reading at or above their grade level, it is clear that these students need to be provided with better quality literacy instruction to ensure that they are succeeding academically as well as their non-ELL peers (Perez & Holmes, 2017). Despite our nation's increasing reliance on technology, we need to ensure that the computer-based programs that we expect children to use are benefitting them before depending on them to increase students' literacy skills. In addition, educators must continually adapt their teaching strategies in order to make certain that they are providing the best instruction for all of their students regardless of their cultural backgrounds and native languages. Although CBI may be useful, educators must find a way to supplement the curriculum to increase student engagement and enhance students' ability to retain information while learning literacy.

Method

At the afterschool program site, employees aim to develop students' literacy skills through a computer-based program called Read Naturally. The program is very redundant and results in students simply memorizing the information rather than retaining it. Many of these students are English Language Learners and should have the opportunity to be provided with more effective strategies to develop their literacy skills rather than sitting in front of a screen and

completing the same process time and time again. After interviewing three employees working directly with students using the program, I used what I learned to supplement the curriculum to increase student engagement and ensure that students are having more positive experiences while learning literacy through a computer-based program. This is important because there are an increasing number of students reading below or severely below grade level.

Context

This research took place at an afterschool program site in Sun City¹, California. This is a large site that can have as many as two hundred fifty to three hundred students a week. This site is located near several schools in the valley which makes transportation to the site very convenient. Parents have the option to have students picked up by a bus from their school, to be taken directly to the afterschool program site following the end of the school day. In 2015, Sun City was home to 77% Hispanic individuals, 14.5% White individuals, 5.5% Asian individuals, 1.3% two or more races, 0.9% Black individuals, 0.4% American Indians, 0.03% Hawaiian or Pacific Islanders, and 0.3% accounted for an “other” category (United States Census Bureau QuickFacts, 2016). At the afterschool program site, the majority of students are English Language Learners. The grade levels that are used for the purpose of this project in terms of literacy skill development are second and third graders. The site has several rooms including a gymnasium, an upstairs area, and a technology center fit with several computers where students gather if they are a part of the literacy program that the site offers: Read Naturally. The program contains roughly thirty students with three employees in the room whose job titles are “Impact Leads in Literacy” to assist the young children in developing their literacy skills.

Participants and Participant Selection

I invited three female club employees to participate in this study. This group of prospective participants were invited to participate because of their relevant knowledge and role in aiding the development of students’ literacy skills. The mean age of these participants is approximately twenty-four years old.

Tanya Gent. An African-American female who holds the title of “Technology Center Supervisor.” Tanya oversees everything that occurs in the technology center and is considered a

¹ Pseudonyms have been used for the names of people, places, and organizations.

Literacy Lead for the Read Naturally program. She works with students in kindergarten through fifth grade. She is twenty-eight years old and originally went to school to become a teacher. She initially worked for this after school program site for two years before moving to a different state. Upon her return, she was hired again for the company and now works at the afterschool program site and assists students while they develop their literacy skills. She is currently studying to take her CSET exam in the hope of going back to school to receive her teaching credential. She is working towards expanding her knowledge on the Spanish language to better meet the needs of the ELL students she works with.

India Cortez. A white female whose job title is “Impact Lead I-Literacy.” India was recently hired for this after school program to assist with the Read Naturally program. She is twenty-one years old and currently attends CSU Monterey Bay with the hope of becoming a teacher. She works with students from second to fifth grade and can speak a little Spanish. This is her first time working with young children as a job position but has experience working with students through required service learning hours for her major. She intends on maintaining her position with this after school program site until she starts her schooling for her teaching credential.

Andrea Leon. A twenty-five year old hispanic female whose job title is also “Impact Lead I-Literacy.” Andrea was the second employee hired for this position to assist with the Read Naturally program. She is fluent in Spanish and the ELL students appreciate her support when they struggle with understanding words in English. She is currently attending community college where she will be receiving her AA degree. Afterwards, she hopes to receive a bachelor’s degree in Liberal Studies to become a teacher. Andrea has a three year old son and has always had a passion for working with youth.

Researcher

This concern is personally meaningful to me because I work directly with ELL students aiming to further their development of literacy skills. I have noticed an increasing number of students reading below or severely below their grade level and since we introduced the computer-based program Read Naturally, I have not noticed a significant improvement in the literacy development of these students. Considering it is my job and personal goal to have these students develop their literacy skills and foster a love for reading, I wanted to supplement the curriculum to increase student engagement and enhance their ability to retain information in a

way that does not have them simply sitting in front of a computer screen. I have always had a passion for reading and writing. When I was younger, I read to my parents every night before bed and still enjoy the beauty behind getting lost in a great book. I believe that my love for reading has resulted in me having a great vocabulary and has also helped develop my writing skills. I also hold the job title of Impact Lead I-Literacy and I initially applied for the position because I wanted to help students develop their literacy skills and foster a love for reading that resulted in them becoming lifelong readers like myself. I am currently attending CSU Monterey for my bachelor's degree in Liberal Studies and will continue my schooling career to receive my teaching credential. Despite the knowledge that I have gained on working with students, I still have personal biases which could affect my research as one of the only white employees who has zero understanding of the Spanish language in a site where the majority of students are ELLs. I must continue to remind myself that reading does not come as easily for them considering that English is their second language.

Semi-Structured Interview and Survey Questions

1. How would you describe the ways in which the club is working to develop students' literacy skills? What do you see as the challenges of developing students' literacy skills solely through a computer-based program; or what are you concerned about when it comes to developing students' literacy skills through a computer-based program?
2. What is currently being done to improve the computer-based program, Read Naturally, or the use of it? By whom- and what do you think of these efforts? Why?
3. What do you think should be done to develop students' literacy skills? In regard to computer-based programs, what do you think should be done to improve them or the use of them?
4. What do you think are the obstacles to changing how we are developing students' literacy skills?
5. Is there anything else you would like to say about the development of students' literacy skills through a computer-based program and/or the improvement of students' literacy skills?

Procedure

Participants were recruited based on their affiliation and involvement with the Read Naturally program. I approached the employees and asked if they were willing to participate in the study of supplementing the curriculum to help develop students' literacy skills. Each employee agreed to individual interviews that took place face-to-face and lasted roughly forty minutes. Prior to starting the interview, participants were given a consent form to signify the use of the data collected being used for the purpose of this project. After conducting each interview, I was able to thoroughly analyze the information provided in order to generate ideas regarding which actions could be taken to help develop students' literacy skills.

Data Analysis

I was able to analyze the data retrieved from interviews in order to discover any connections between the answers from participants. By doing this, I was able to develop common themes and categorize the information based on the similarities and differences founded in my research and data from the interviews that took place. As a result, I was able to compare and contrast the provided information to discover plans of action to take in regard to developing students' literacy skills.

Results

For this Capstone Project, three club employees were interviewed to see what they think could be done to improve the computer-based literacy instructional program, Read Naturally, that their site offers to ELLs. This is important because throughout Monterey County, a large portion of the student population are ELLs. Considering the developers of the computer-based literacy program have the expectation that students already have a basic knowledge of the English language, the difficult assessments and high expectations leave ELLs feeling discouraged and falling further behind academically than their non-ELL peers. Based on an analysis of the data and the relevant research literature three themes emerged (see Image 1). Evidence-based decision making required evaluating each potential Action Option by the following criteria: time; reach; and possibility of impact. Based on the evaluation of each Action Option an action will be recommended and justified.

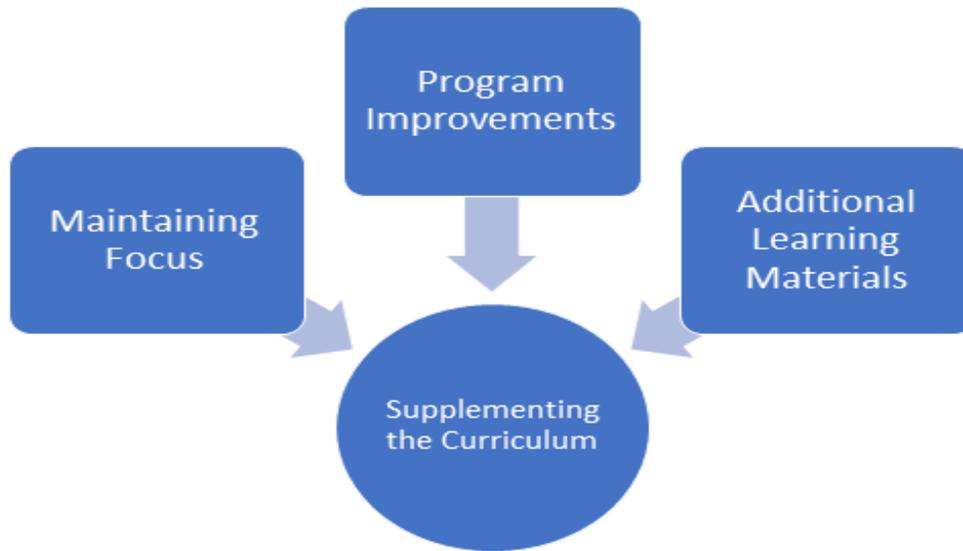


Image 1. Emergent themes based on an analysis of data and literature.

Table 1

Evaluation of Action Options

| | Time | Reach | Possibility of Impact |
|--|--------|--------|-----------------------|
| Provide an energy outlet for students: five minutes of free play for every twenty-five minutes of program instruction. | Medium | Low | Medium |
| Make program improvements: allow the students more time to complete each portion of a lesson. | High | High | High |
| Providing students with additional learning materials: flashcards and a game to go along with them. | High | Medium | High |

Maintaining Focus

Throughout each interview that was conducted, the most prevalent theme acknowledged the students' inability to maintain focus while developing their literacy skills through the computer-based program, Read Naturally. Students are expected to sit in their seats for nearly an hour every day while completing lessons on their computer. Students are required to work silently and not engage in conversation with any of their peers. Many of the interviewees explained that the students are too young to be expected to sit silently for the required period of time to complete their lessons and that they should be provided with some sort of energy outlet. One interviewee explained that considering there is a ratio of three teachers to approximately thirty students and the constant need for students to be tested by an adult, it is naive to expect them to sit silently for such a long period of time while they are anxiously waiting their turn to meet with a teacher (T. Gent, personal communication, November 3, 2017). Although computer-based instruction allows for students to receive different opportunities to learn than they would through being lectured by their teachers, it presents problems in the form of distractions. Students have easy access to browse the web and other computer applications rather than focusing solely on the work they are supposed to be completing. According to Rosenberg (2012), computer-based instructional materials do not give students the opportunity to ask questions and take into consideration the opinions of their peers. As a result, they may become antsy and lose focus quickly from having to sit silently. One interviewee explained that the younger students who are more unfamiliar with technology and how to use it properly often lose focus and begin to play with the computer and its different parts (I. Cortez, personal communication, November 1, 2017). After analyzing the research provided on the lack of student focus during computer-based instruction and the commonality between interviewee's responses on the matter, an action option was developed that allows students to receive five minutes of free play for every twenty-five minutes that they are required to sit down for computer-instruction. By implementing this action option, students will have more of an incentive to stay focused while completing their work because if they remain off-task, they would not receive their time for free play. By creating this energy outlet opportunity, the students will know that they will have time to move around and interact with their peers if they maintain their focus during the allotted time for completing the computer program.

Program Improvements

Another theme that was commonly addressed throughout each interview was the need for program improvements. Each interviewee was asked what was currently being done to improve the Read Naturally program and every response implied that they had no knowledge of efforts to improve the program. However, every individual expressed that they felt as if adjustments should be made in order for the students to be more successful. One interviewee stated, “The students are only given one minute to complete reading passages and word lists and are also expected to make fewer than three errors in order to move forward. These expectations are too high and leave students feeling discouraged” (A. Leon, personal communication, November 2, 2017). This has a negative impact on how students view the program as well as their perspectives on reading because regardless of if they are improving, they feel disappointed in themselves if they do not meet the program requirements. Abedi (2004) explains that while some ELLs may process the content knowledge of the English language, they may not be proficient enough to “understand the linguistic structure of assessment tools” (p. 11). This is very relevant to the students involved in the Read Naturally program because although they are improving their literacy skills, they often become confused when they are faced with quiz questions and are under a tight time constraint to complete certain components of the lesson. In order to more effectively meet these students’ learning needs, certain modifications should be made to the program. According to Teale (2009), accommodations should be made for ELLs such as allowing them to have more time to complete required tasks. Considering many of the ELLs involved with the Read Naturally program are still trying to master the English language, the short time requirements for them to complete certain parts of a lesson results in them feeling an unnecessary pressure to succeed. One interviewee explained that considering the students are so focused on meeting the time requirements, they are not retaining any information. Rather, they simply read the stories and word lists as fast as possible in order to beat the one minute time limit (T. Gent, personal communication, November 3, 2017).

After analyzing the literature pertaining to accommodations to be made for ELLs as well as the interviewees responses on the need for program improvements, an action option was developed. This action involves reaching out to program directors and expressing the importance of allowing students to have longer than one minute to complete certain tasks while learning literacy through the Read Naturally program. Many of the students completing certain portions

of a program lesson that have a time limit often do not meet the time requirement by only a few seconds (A. Leon, personal communication, November 2, 2017). If they were given as little as thirty seconds longer to complete each portion, totaling to a minute and a half as opposed to only one minute, they would feel less anxiety and pressure to read through everything as quickly as possible. By implementing this action option, students would have more time to focus on the proper pronunciation of words and grammatical cues, as opposed to being more concerned with time on the clock ticking down before they are completely finished reading. This would be extremely beneficial for the students by alleviating their feelings of discouragement and result in them having more positive experiences with the program.

Additional Learning Materials

The third evident theme that emerged during each interview was the need for additional learning materials. Each interviewee explained that although the students' literacy skills have improved since beginning the program, there should be other learning materials to supplement the computer-based program curriculum. Considering students are engaged with the program for only one hour each day, they often feel as if they are not given enough time to practice reading the stories and words that they are expected to master in order to move forward onto new lessons. Several students explain their desire to work on the program in the home setting so that they can feel more prepared when they are required to test during the program instructional time (A. Leon, personal communication, November 2, 2017). Considering the program entails an adult with the necessary log-in information to test the children, there is not a way for them to complete the program in their home environment. However, it is possible for them to be provided with tools to practice reading words similar to the ones that appear during their work with Read Naturally. When asked what should be done to further develop students' literacy skills, one interviewee explained that the students should be able to balance the use of the computer-based program with other learning materials such as books or flashcards (T. Gent, personal communication, November 3, 2017). Many of the interviewees also explained that besides the school setting and their time in the program, many students do not work on developing their literacy skills in their home environment. In addition, rather than simply placing words on a computer screen for students to learn and memorize, there should be a more effective way for students to understand the material. According to Teale (2009), teachers should make accommodations for literacy instruction that are especially helpful for ELLs such as reminding

students to pay particular attention to key words and vocabulary, as well as using images or other visual cues to help explain information.

After analyzing research regarding accommodations for ELLs and the information the interviewees provided on the need for additional learning materials, an action option was developed. This action option involves supplementing the computer-based program curriculum with flashcards containing “sight words” for the students containing the high frequency words that they encounter the most through the program. While one side of the flashcard would have a sight word written on it, the other side would contain a visual cue. For example, one side of a flashcard could have the word “sight,” while the back of the card had a picture of an eye. In addition, a game could be created to go along with the sight words that could allow the students to work together to enhance their vocabulary and ability to read and spell words correctly. This would be a more entertaining and engaging opportunity for the students to develop their literacy skills. They could practice their sight words and play games with their friends using the cards outside of school, while they wait for the program to begin, and whenever they are given time for free play. Rather than solely developing their literacy skills while sitting in front of a computer screen, this action option allows students to be provided with additional learning materials to make their experiences learning English as a second language more enjoyable.

Conclusion

The option that I recommend for supplementing the Read Naturally curriculum to increase student engagement and their ability to retain information is to provide additional learning materials, specifically in the form of flashcards containing sight words. Thoroughly analyzing the literature provided on ELLs development of literacy skills and interviewees responses on the matter greatly influenced my recommendation. In addition, having the opportunity to work with these students as they develop their literacy skills through the computer-based program has given me a better understanding and perspective of what action option would have the highest possibility of impact. In making this recommendation, a few concessions must be addressed considering the two other action options that were developed have significant strengths. If students were provided with an energy outlet such as receiving five minutes of free play for every forty-five minutes of program instruction, they would likely have an easier time maintaining focus. In addition, students would become more motivated to stay on-task and focused while completing their work for Read Naturally because they would know that

they would soon receive time to release some of their energy by moving around or interacting with their peers. Students would also benefit greatly from the action option of making program improvements by allowing more time to complete each portion of a lesson. This would allow students to feel less pressure while completing their work. By being given more time, students would be able to focus on the more important aspects of learning literacy such as pronouncing words correctly, recognizing grammatical cues, and retaining information. Despite my recommendation for implementing the action option of providing students with additional learning materials, there is a significant limitation to my analysis: I am assuming that the students will use the sight word flashcards in their own time to further develop their literacy skills. However, it is possible that they become intrigued by the additional learning materials for a short amount of time before losing interest. In addition, there are two potential negative outcomes that might result from following my recommendation. The first negative outcome is that students could become distracted by their sight word flashcards during program time. Considering the students already easily lose focus while working, this could serve as another distraction. The second potential negative outcome is that students could become divided when they are engaging in activities with their peers that they created to go along with the sight words. This could result in some students feeling alienated. Despite identifying these concessions, limitations, and potential negative outcomes, I strongly believe that providing students with sight word flashcards would be an extremely beneficial way to supplement the Read Naturally curriculum. The implementation of this action option would result in students being provided with the opportunity to build their vocabulary knowledge through the use of practicing key words and being given visual cues to help better understand what they are reading. By creating a game to go along with the sight words, students will be more engaged in the learning process rather than simply sitting behind a computer screen which would make their experiences of learning literacy more enjoyable. This action would not only assist students in further developing their literacy skills, but also help foster in them a love for reading.

Action Documentation and Reflection

Throughout Monterey County, a large portion of the student population are English Language Learners. At the afterschool program site in Sun City, the majority of students are ELLs reading either below or severely below grade level. As a result, a computer-based program, Read Naturally, was implemented with the goal of helping strengthen students' literacy skills.

However, the program contains high expectations and difficult assessments that lead to students feeling discouraged. In addition, the short time constraints on completing lessons leave students simply memorizing information rather than retaining any of it. In order to supplement the Read Naturally curriculum to increase student engagement and their ability to retain information, three employees that work directly with the Read Naturally program were interviewed. After thoroughly analyzing the literature provided on computer-based literacy instruction and the responses of the interviewees, three action options emerged. The first action involved providing an energy outlet for students, such as five minutes of free play for every twenty-five minutes of computer instruction. The second action option was to make program improvements by allowing the students to have more time to complete each portion of a lesson. Lastly, the third action option entailed providing students with additional learning materials such as sight words that can also be used for enjoyable learning games. The third action option of providing students with sight words was implemented. This option was ultimately chosen because it provided an opportunity for students to help develop their literacy skills outside of the afterschool program site environment. These cards provided them with the opportunity to review the high frequency words that they see for the Read Naturally program at any time during the day when they had free time. In addition, the incorporation of creating simple games that the students could play with their peers involving the sight cards created a more engaging and enjoyable experience for them to further develop their literacy skills.

After providing each individual in the Read Naturally program with sight words that contained high frequency words on one side and images on the other, they were also shown how to play a game with a light, beach ball in the class that contained all of the sight words that they were practicing written on it. During this game, students pass around the large ball. Once a student catches the ball, he or she has to say the two words that his or her thumbs land on. After, the student picks another student in the class to spell the two words that he or she just stated. If that person spells the words correctly, he or she will receive the bouncy ball next. This gives students more of an incentive to practice their sight words at home in order to do well during the game. In order to make the process of creating all of the sight words less time consuming, I typed all of the key words out and printed them onto labels. In addition, I created or found images on the computer and printed them out rather than drawing them. By doing this, I was able to quickly print everything and then only have to place the labels onto the sight cards. The only

modifications that needed to be made were that some of the sight words were different for a few students in the class because they were reading at a lower grade level than most of their peers in the program. The response from the students has been very positive. As they constantly explained that they wish they were able to do the program at home to have more practice, they were elated to be given tools to help them move further along with the program. In addition, they were very excited to have the opportunity to play the bouncy ball game and demonstrate their knowledge of the sight words. While the students have free time during the day and line up to wait to enter the center where they complete the program, most of the students are engaging in games with their peers involving the sight words that they were given. When asked whether or not they were also using the sight words at home, almost every student unanimously responded “yes.” One thing that I know now that I wish I had known from the start is that when given the proper tools to develop their skills, these students work their hardest to improve. Although they may become discouraged by some of the aspects of the program, every student hopes to do well and strives to pass a lesson and move forward. Important next steps are to try to implement the other two action options that emerged after reviewing literature and interviewing employees. By creating an energy outlet for students and making program improvements such as allowing students more time to complete certain portions of the program, they will likely be able to maintain better focus and feel less discouraged. As a result, they will be more engaged and retain information rather than simply trying to get through everything as fast as possible in order to beat time limits. In the end, these ELLs will have more positive experiences with developing their literacy skills and hopefully discover a stronger interest in reading.



Image 2. An example of the stack of flashcards that students were given and four of the sight words that students were given along with the images that represent the words.

Critical Reflection

I never anticipated the different emotions that I would experience as a result of completing this project. I learned more about myself than I could have ever imagined in terms of my work ethic and what I am most passionate about. I initially thought that this project would require simply choosing a research topic to discuss and writing an extensive paper explaining the issue. However, after completing all of the work that this project entailed, I feel as if I was able to make a difference in our community and shed light on the way that students can be better educated in terms of computer-based instruction. I also learned that although it may not be possible to make a huge difference all at once, it is possible to make gradual change in a way that leads to something very positive. I think that the biggest thing that I learned is to have more confidence in myself. In terms of working towards change, I have realized that it is not something that can happen over night. Initially, I wanted to think of all of the actions that I could

take myself in order to not have to depend on others to complete my work. I have always been a very self-reliant individual and have felt as if I cannot trust others to contribute to my quality of work. However, after conducting interviews and collaborating with individuals who had an interest in my topic, I quickly learned that I could not have completed this project alone. I learned that it is necessary to take into consideration the perspectives of everyone involved with the issue, particularly stakeholders. This project allowed me to realize how crucial it is to work with others to ultimately reach the best end result.

There are many themes from the Liberal Studies department in addition to required coursework that have impacted my professional development. One of the most prevalent themes was MLO 1: Developing Educator. I believe that I have been able to apply all that I have learned to the work that I have completed outside of the school setting through community involvement. In addition, I was able to use my developed thinking, writing, and speaking skills to communicate effectively with the stakeholders for this project. Another theme that impacted my professional development was MLO 2: Diversity and Multicultural Scholar. If I had not gone to CSUMB, I do not think that I would have had nearly as many experiences with diversity in education. My project is based solely around English Language Learners and as a result, I have been able to analyze the perspectives of those from different cultural backgrounds. Additionally, MLO 3: Innovative Technology Practitioner reflects my professional development because this major has helped me become more technologically advanced. I have never been very technologically inclined and I now realize how beneficial technology can be in the educational setting when used efficiently. Lastly, I believe that MLO 4: Social Justice Collaborator is the theme that has impacted my professional development the most. I have been able to reflect on social justice issues and the ways in which I can take action and advocate for providing equal opportunities for all students regardless of their diverse backgrounds. My work with English Language Learners has allowed me to change my mindset on how these students' needs can be better met.

In order to become the professional that I envision being, I must maintain a positive outlook on collaborating with others. In addition, I need to continuously work on being the most effective educator I can be by trying my best to meet the needs of all students. As a result of completing this project, I have realized ways in which educators can provide equal learning opportunities for all students, specifically ELLs, who represent a large portion of the population

in Monterey County. Overall, this project has allowed me to realize that I am capable of making a positive change in our community in terms of informing others about how to ensure that all students have positive experiences while developing their literacy skills.

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