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The Impact of Inferring Word Meaning:
Context Clues

An Action Research Report
By Aubrey Wilson
The Impact of Inferring Word Meaning: Context Clues

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Abstract

The intent of this action research project was to determine the impact of context clue strategies on the ability to infer meaning from context. The study was conducted in a public Montessori school with 13 students in the 3rd grade with varied ability levels. In order to gather pre-assessment data, children were assessed on their ability to derive meaning directly from clues they found in context. Various context clue strategies were presented and practiced. During this time, data was collected using observations, student journals, and conferring. After the research, children completed a post-assessment to track changes and improvement. The results of the data analysis showed an overall increase of 54% in the ability to derive meaning directly from clues in context. The results have shown that the strategies designed for this study have positively impacted the ability to infer meaning from context in 3rd grade students.
The understanding of words is vital to effectively communicate and understand the world around us. Many children struggle to understand vocabulary in both written and oral forms. This leads to struggles in comprehension of text. Over time, I have listened to many children read the words on the page. Many could discuss their reading with passion and excitement. However, as they chose more difficult books to read they struggled. It is perfectly fine for a student to struggle and overcome text in order to grow in reading. However, when a student struggles to the point of disengagement, intervention must occur. The child has the phonics skills to read. The child is able to make connections to the text. Why are they struggling? They are struggling because they have not been exposed to many of the words that they are reading. This causes a disconnection between the ability to read the words and comprehend the flow of text. Marzano (2013) explains that children who have large oral vocabularies will recognize and understand more words as they are learning to read. A successful reader will continue to acquire words within the context while making connections to background knowledge and the world around them. As Marzano (2013) states, “Knowing what words mean and how they interconnect creates networks of knowledge that allow students to connect new information to previously learned information” (p. 14). Therefore, a child that lacks word knowledge may disengage with reading and struggle to build additional vocabulary skills.

From birth, a child’s exposure to words affects the reader he will become. Dr. Maria Montessori believed that the absorbent mind is likened to a sponge, which actively seeks out and soaks up useful information from the child's environment, and it is limitless (cited in Standing, 1957). Children will absorb the language of their environment. They will derive meaning and understanding based on the world around
them. Children nurtured in a rich language environment have an advantage over those that are not. “In fact, children from professional families have heard 30 million more words than youngsters whose mothers are on welfare while the four year old from a professional family has a bigger vocabulary than the mother who is on welfare” (Kirp, 2008, p. 201). It has been widely researched that a child’s vocabulary is directly connected to their ability to comprehend text. Vocabulary has been connected to reading comprehension since Whipple’s study in 1925 and confirmed time and time again. Many children begin school with vocabulary deficiencies. English language learners face a larger task at building the vocabulary needed to read complex text. The majority of my students face this disadvantage of lack of exposure to a rich language environment from birth. The need for this action research was born out of my strong desire to help my students overcome their struggles with word meaning by exposing them to strategies that will allow them to infer meaning from the text that they do know and in turn help them ascertain the words that they do not. More specifically, I plan to investigate the question, “How do context clue strategies impact the ability to infer meaning from text for 3rd grade students with varied ability levels?” I would like to determine the impact of context clues so that I can gauge both the effectiveness of context clue strategies and the course for future instruction in my classroom.

This research will take place in a public Montessori school in Kankakee, Illinois. Thirteen students in the 3rd grade will participate in this study. Students come from a variety of cultural and socio-economic backgrounds: 77% of the students come from economically disadvantaged homes, 31% of the students have learning disabilities, and
62% of the students are English language learners. All students will receive instructional strategies and data will be collected through observation and conferring techniques.

For children to be successful readers, they must be immersed in a word-rich environment. Samuel Clemens once observed, “the difference between the almost right word and the right word is really a large matter—it’s the difference between the lightning bug and the lightning” (as cited in Rasinski & Padak & Newton & Newton, 2008, p. 11). There is a great need for many strategies and opportunities for children to be exposed to learning new words. Harris and Hodges (1995) defined context clues as a reading strategy used to determine the meaning of an unknown word by getting help from the words, phrases, sentences, or illustration surrounding it that offers direct or indirect suggestions about its meaning (as cited in Rasinski et al., 2008).

In order to bridge the vocabulary divide, we must rely on multiple context clue strategies. Downing & Leong (1982) stated, “Studies of at-risk readers frequently reveal great cognitive confusion about the potential uses of strategies” (as cited in Blachowicz & Fisher, 2002, p. 25). We must meet the child where they are, and follow them. This is the basic premise of the Montessori philosophy and a best practice in teaching today. Through differentiation and intervention methods the one size fits all approach does not work. Therefore, multiple strategies and data collection will be used in this action research. I will use the systematic model, cognates, scaffolding model with gradual release, and cloze procedures.

As readers, we must use our background knowledge and evidence from the text to continually infer. Rasinski et al. (2008) stated, “The help that context provides may be
Semantic clues may be definitions, synonyms, antonyms, examples, contrast, or logic. We may also use morphological analysis to determine meaning through prefixes, suffixes, and roots of words. In fact, 90% of our language is Latin based while 10% is derived from the Greek language (Rasinski & Padak & Newton & Newton, 2008). The context of a sentence is vital in identifying which form to use. The reading strategy of using context clues helps students develop as independent learners and will be used as a systematic model of instruction. The first step of instruction during the action research process will be to expose students to the various types of clues that text has to offer.

Types of context clues will be taught in mini-lessons to whole groups, small groups, or independently. Presentations will be given on clues that can be found with definitions within text, antonyms or contrasting statements within text, synonyms or appositives within text, and examples within a sentence. I will model and expose students to the various types of clues through discussion and read-alouds and encourage students to find examples in their own reading. Next, children will collect various types of context clues. Then students will present and display new words for others to learn. As a class, students will design a list of rules and strategies based on their findings.

Using cognates can be beneficial for English language learners when combined with the systematic model of instruction of using context clues. According to Montelongo, Hernandez, Herter, and Cuello (2011), “Cognates are words that are orthographically, semantically, and syntactically similar in two languages because of shared etymology. There are more than 20,000 English-Spanish cognates, many of which
are among the most frequently used words in English” (p. 429). For example, words such as hospital/hospital are spelled exactly the same. Words such as democracy/democracia have similarities that students can identify with. For English language learners, I will follow the systematic model. However, once a word is identified students will look for clues in their native language as well. Students will be encouraged to use cognates to aid in their understanding.

Following the instruction and awareness phase of this research, Beck’s (2002) scaffolding model with gradual release will be practiced. This approach will encourage and lead the way to developing independence of inferring skills to derive word meaning from context. This model can be used with individuals, small groups, and whole groups. Beck (2002) suggests guiding the child to:

1. Read or paraphrase text.
2. Guide the learner to establish the meaning of the context.
3. Ask questions to the learner: What’s being said? What’s going on? Is there anything else?
4. Guide the learner to give an initial identification/rationale of the meaning.
5. Guide the learner to consider other possible meanings.
6. Guide the learner to summarize the meaning of context in their words.

Once learners develop this strategy they will eventually practice this naturally on their own.

Cloze activities are used to help students learn to use context to infer word meaning. Cloze activities will be completed each week, and data will be collected. Over the years, assessments and practice of this procedure has become widely used. In a cloze
activity, words are omitted strategically. Cloze forces students to anticipate or use the context around the word to decide which word belongs (Kesler, 2010). Kesler (2010) believes that cloze reading exercises develop strategic synthesis of meaning, syntactical, and visual clues of word solving.

“Because they are so transportable, context clues merit careful teaching. Students need to be sensitized to the various clues that are available to them—they need to gradually become aware that authors choose their words carefully” (Greenwood & Flanigan, 2007, p. 249). Context clues are one strategy that many researchers and educators have found to bridge the vocabulary gap. Through mindful practice and a word-rich learning environment, children can become successful readers. This action research will investigate the question, “How do context clue strategies impact the ability to infer meaning from text for 3rd grade students with varied ability levels?”

Description of Research Process

In order to assess the impact of context clue strategies on the ability to infer word meaning from text with 3rd grade students, I used the following data collection sources: (1) baseline assessments, (2) student journals, (3) observation and field notes, and (4) student conferencing data.

I began the action research project by contacting the principal of my school to obtain permission. A parent letter was sent out notifying parents of the action research that would be conducted during the instructional day (see Appendix A). After notification was given, I administered a two-part baseline assessment to all 3rd grade students. This consisted of a context clue pretest (see Appendix B) and the DAZE
assessment. The context clue assessment was analyzed to determine abilities prior to teaching the context clue strategies. In addition, the DAZE assessment was analyzed to gauge the abilities of students prior to this study. During phase one, the concept of context clues was introduced to students. Context clues were defined. Through a read aloud of text, the basic concept of locating context clues to determine meaning was modeled. Cloze activities were presented to all 3rd graders to work on independently each week during independent work time. I conferred with students to discuss baseline data, set the purpose of instruction, and to discuss procedures and goals.

The first context clue strategy, definitions within a sentence, was presented and modeled during a class read aloud. We practiced together. Students worked with partners to describe findings. Data was collected with observation and field notes using the rubric (Appendix C). The following day, the same strategy of definitions within a sentence was modeled. Then students practiced independently, recording words and meaning in their journals. Data was collected using the rubric (Appendix C) to analyze student journals. The following day, I asked students to read a non-fiction text during their independent work time noting any definitions within a sentence that they came across in their student journals. I conferred with each child to analyze and discuss their findings using the rubric (Appendix C). Observation and field notes were taken over the course of three days regarding this strategy.

The next context clue strategy, antonyms or contrasting statements within sentences, was presented and modeled during a class read aloud. We practiced together. Then students worked with partners to record words, meaning, and clues in their journals. Data was collected through observation and field notes using the rubric (Appendix C).
The following day, the same strategy of antonyms or contrasting statements within sentences was modeled. Data was collected using the rubric (Appendix C) to analyze student journals. The following day, I asked students to read a specific text during their independent work time, noting any antonyms or contrasting statements within sentences that they came across in their student journals. I conferred with each child to analyze and discuss their findings using the rubric (Appendix C). Observation and field notes were taken over the course of three days regarding this strategy.

The next context clue strategy, synonyms or appositives within a sentence, was presented and modeled during a class read aloud. We practiced together. Then students worked with partners to record words, meaning, and clues in their journals. Data was collected through observation and field notes using the rubric (Appendix C). The following day, the same strategy of synonyms or appositives within a sentence was modeled. Data was collected using the rubric (Appendix C) to analyze student journals. The following day, I asked students to read a specific text during their independent work time, noting any synonyms or contrasting statements within sentences that they came across in their student journals. I conferred with each child to analyze and discuss their findings using the rubric (Appendix C). Observation and field notes were taken over the course of three days regarding this strategy.

The next context clue strategy, examples within a sentence, was presented and modeled during a class read aloud. We practiced together. Then students worked with partners to record words, meaning, and clues in their journals. Data was collected with observation and field notes using the rubric (Appendix C). The following day, the same strategy of examples within a sentence or contrasting statements within sentences was
modeled. Data was collected using the rubric (Appendix C) to analyze student journals. The following day, I asked students to read a specific text during their independent work time, noting any examples within sentences that they came across in their student journals. I conferred with each child to analyze and discuss their findings using the rubric (Appendix C). Observation and field notes were taken over the course of three days regarding this strategy.

In phase two, data was collected through observation and field notes, student journals, and conferring during this phase. Students located examples of various context clues as they read independently. Then students shared findings with classmates. The class developed a list of strategies that good readers use to infer meaning through context. I collected data based on conferring as students read independently with the rubric (Appendix C). Data was also collected based on student journals using the rubric (Appendix C). Observational data with field notes were collected using the rubric (Appendix C) throughout phase two.

At the end of each week, Cloze activities were collected, analyzed, and recorded to determine trends on the Cloze Data Weekly Collection Sheet (Appendix D). Observation and field notes were taken on this data.

Post-assessment baseline data was collected using the Context Clue Assessment (Appendix B) and the DAZE assessment. All data collection was completed by October 15, 2013. The following section analyzes the data as it relates to the research question regarding the impact, if any, of context clue strategies on the ability to infer meaning from text for 3rd grade students with varied ability levels.
Analysis of Data

I analyzed the data collected from the context clue baseline pre-assessment and the DAZE baseline pre-assessment prior to instruction of context clue strategies. Next, I taught and collected data for the instructional strategies of definitions in context, antonyms or contrasting statements, synonyms or appositives, and examples in context. During this time, observational data, student journal data, and conferring data was collected and analyzed. Data was also collected each week based on Cloze passages. This was analyzed weekly. At the end of the study, data was collected from the context clue baseline post-test assessment and the DAZE post-test assessment.

All 3rd grade students were given the baseline context clue pre-assessment. Data analysis began by analyzing the results. Based on the results of the context clue pre-test assessment the class mean of locating clues in context was 29%. The class mean in determining meaning of words was 32%. However, only 9% of word meaning was derived directly from successfully locating both the corresponding clues and using them to infer meaning. These data suggest that students do not successfully derive clues or meaning from context prior to instruction. Furthermore, the mean drops substantially when analyzing the clues that were directly derived from meaning prior to instruction. Prior to instruction students did not have the skills to tackle meaning from context of unknown words.

The DAZE assessment was also administered as a baseline pre-assessment. The goal of this assessment at the beginning of the year is 8 correct words derived from meaning within 3 minutes. The pie chart in Figure 2 shows all data collected from the
Figure 2. DAZE pre-assessment mean results for class meeting benchmark of 8 words.

The data determine that 77% of students met the goal of 8 words determined in a CLOZE passage within 3 minutes. However, 23% of students fell below benchmark at this time.

Following the baseline pre-assessments, I began to present and teach the context clue strategy of definitions in a sentence. During this time, I collected data using a 4-point rubric (Appendix C) following each of the three instructional periods. This gave 3 overall data scores for this strategy. The bar graph in Figure 3 shows the final data collected for the class based a 4-point rubric for the strategy of definitions in a sentence.
Figure 3. Strategy: Definitions in Sentences: Class percentages of data collected using the 4-point rubric.

This data determines that 8% or 1 student remained far below expectations on the 4-point rubric following instruction and practice using the context clue strategy to determine definitions in a sentence. However, 38% or 5 students fell into the category of approaching expectations. These data also determine that 4 students or 31% met expectations, while 23% or 3 students exceeded expectations following instruction for the context clue strategy of definitions in a sentence.

During the first collection point, I observed 8 students or 62% approaching expectations. These students were observed reading carefully, looking for clues, and analyzing text. I also observed these students re-reading multiple times. Five students or 38% did not attempt or did not successfully determine clues and meaning. Four of these students used avoidance techniques during this process. Avoidance ranged from staring out the window, fidgeting, and getting up to get a drink. One student that did not derive
meaning or clues read carefully. However, during instruction I noticed this student was not paying attention to the lesson.

For the second collection point, I used student journal data to investigate the ability to derive meaning from context clues. Improvement was made by 11 students or 85% at this time. Every student that did not attempt or successfully determine clues following the first day of instruction, attempted and made progress at this time. However, 15% or 2 students struggled using the strategy of definitions in a sentence. In investigating the student journal, I determined that these students were copying down text word-for-word in order to not miss anything. Based on their reading they were able to derive meaning. However, they were not using specific clues to derive meaning.

During the third collection point, I conferred with students to gather data. I listened and discussed techniques and findings with each student. One student commented, “It comes naturally to me when I am reading.” Another student that was reading about competition in the ecosystem made a connection to the text after observing a deer at the park the previous day. This student also discovered that the sentences surrounding the text must be carefully read to determine meaning of the word. I observed students that were successful embraced the text and enjoyed reading. Other students were carefully re-reading the text for clarification. One student stated, “I get this! It is easy now!” During the conferring process, 3 students were struggling with this strategy. One of the students read carefully and determined two clues in context. However, the student remained confused as the reading progressed. The other student that struggled wrote two paragraphs word-for- word. The student read. When asked what was occurring in the text, the student did not know. One particular student stood out during the process of
observation, investigating student journals, and conferring. Each day I noted “lack of confidence” on this student’s rubric. Context and meaning was identified at each collection point. However, there was not a progression of understanding that I noted in other students. During the conferring session, the student reverted to writing down a paragraph word-for-word.

I noticed that successful students re-read the text multiple times, used the strategy, made connections to the text, and thought carefully about the words surrounding the unknown word. Some students understood the process right away, while others needed time to process the technique. Confidence and careful reading at the appropriate level factor into success with this strategy.

Following the strategy of definitions in a sentence, I began to present and teach the context clue strategy of antonyms or contrasting statements. During this time, I collected data using a 4-point rubric (Appendix C) following each of the three instructional periods. This gave 3 overall data scores for this strategy. The bar graph in Figure 4 shows the final data collected for the class based on a 4-point rubric for the strategy of antonyms or contrasting statements.
These data determine that 8% or 1 student remained far below expectations on the 4-point rubric following instruction and practice using the context clue strategy of determining antonyms or contrasting statements. However, 31% or 4 students fell into the category of approaching expectations. These data also determine that 6 students or 46% met expectations, while 15% or 2 students exceeded expectations following instruction for the context clue strategy of antonyms or contrasting statements.

During the first collection point, I observed 15% or 2 students that were already meeting expectations. These students read carefully and investigated the text thoughtfully. In addition, they were students that had exceeded expectations using the last strategy. Eight students or 62% of students that I observed were approaching expectations at the first data collection point. Some context clues were used to infer meaning of words.
I observed students examining text for “clue words” such as but, although, however, unlike, different. Each of these students located clues and derived meaning, but not consistently. Students were observed struggling to determine clues. Unfortunately, 23% or 3 students fell far below expectations at this point of collection. I observed these students confused, using avoidance techniques, and struggling to read text. Students that fell into this category began in this category during the previous strategy.

For the second collection point, I used student journal data to investigate effectiveness. Improvement was made by 23% or 3 students at this time. Two out of three students that did not attempt or successfully determine clues during the first data point attempted and made progress at this time. One student or 8% used avoidance techniques to not complete. In investigating the student journal, I determined that students that 10 students really struggled with determining the clues using this strategy. They found the key words, but could not grasp the significance in determining the antonym based on known words.

During the third collection point, I used conferring data to investigate understanding. I listened and discussed techniques and findings with each student. From this data, 62% or 8 students began to apply this strategy at this time. One student commented, “I am going to do this at home when I read!” Another student was struggling, “I can’t find clues for the word wilt.” I prompted the student to re-read the text. Then I asked the student to talk to me about the text. The student stated, “The flower will wilt on the bus so when he gets to school it will be dead.” The same student read a sentence with the word plunge. Then went on to describe that the character “likes swimming” so he will “get in fast”. A third student that exceeded expectations discussed
how it was necessary to read the whole paragraph to figure out meaning. During the
conferring process, I noticed that 31% or 4 students were trying so hard to find the right
clue words that they were not invested in the real meaning of the text. One student or 7%
greatly struggled with this strategy. The student was at frustration level with the text. I
had the student re-read the text. The student stated, “So the flower wouldn’t wilt the mom
wrapped the flower.” I asked, “Why? What does that mean?” The response was, “She
wrapped it like a brick.” I do not understand how this meaning was derived. I believe
avoidance with humor was used as a coping strategy. Following this, further attempts
were not made.

I noticed that successful students re-read the text multiple times, made
connections, and gathered understanding of how the words were put together within the
text. I believe that the focus on “clue words” such as but, although, and unlike distracted
students from the real meaning that the context provided. Based on the data, students that
were successful in this technique looked to the text for answers, but needed time to
process the overall idea of antonyms or contrasting statements that authors use within the
context.

Following this strategy of antonyms or contrasting statements, I began to present
and teach the context clue strategy of synonyms or appositives in sentences. During this
time, I collected data using a 4-point rubric (Appendix C) following each of the three
instructional periods. This gave 3 overall data scores for this strategy. The bar graph in
Figure 5 shows the final data collected for the class based on a 4-point rubric for the
strategy of synonyms or appositives in sentences.
These data determine that no students remained far below expectations at this time on the 4-point rubric following instruction and practice using the context clue strategy of synonyms or appositives in a sentence. However, 31% or 4 students fell into the category of approaching expectations. These data also determine that 4 students or 31% met expectations, while 38% or 5 students exceeded expectations following instruction for the context clue strategy of definitions in a sentence.

During the first collection point, I observed 7 students or 54% approaching expectations. These students were reading carefully, looking for clues, and analyzing text. I also observed students reading text multiple times. Four students or 31% met expectations by effectively using most context clues to infer the meaning of words. These students read to determine clues and meaning. I noted every one of the four students
jotting down the clues immediately after the first read. Then I noted that 3 of the 4 read again and noted meaning. One of the students immediately wrote the meaning and began reading another passage. Two students or 15% did not effectively use context clues to infer meaning of words. As I observed, one of the students did attempt to located clues and derive meaning. The student had many solid clues written down, then lacked confidence when it was time to determine the meaning. The other struggling student, re-read multiple times with no success.

For the second collection point, I used student journal data to investigate effectiveness. Six students that struggled the previous day had further success. In fact one student that struggled the previous day discovered all clues and meaning. This student wrote the word “elated”. Then noted that the character was so happy she could not keep still. The student defined the word as “really really happy and excited”. Another student that had faced previous struggle, also successfully discovered clues and meaning in the student journal. The student jotted a note in the journal to me, “Mrs. Wilson, I found my clues and meaning by thinking ½ of the time and using clues ½ of the time!” Four students consistently attempted to derive clues form meaning at this point. Some success was noted in using clues to infer meaning of words.

During the third collection point, I conferred with students to gather data. I listened and discussed techniques and finding with each student. From these data, 4 students or 31% of students progressed in this strategy of synonyms or appositives in sentences. Students that fell into this category read carefully, re-read, investigated clues, and were able to discuss how they discovered meaning from the text. In fact 5 students exceeded expectations for this strategy. One student stated, “A bough is a branch of a
tree. My clues are that the bird sits there in the morning. The text says it hops from branch to branch. Bough is a branch and that equals a synonym!” Three students or 23% of students remained steady at “Approaching Expectations” throughout. Some context clues were used to infer meaning of words. In further investigation, students could describe clues or meaning. However, the actual connection between the two did not always reveal an inference made.

I noticed that successful students were gaining confidence and technique using strategies. Students are beginning to develop their own techniques and procedures. Reading text multiple times, making connections within the text and with prior knowledge, and thinking through clues surrounding the word brought success to many students. Each strategy is building upon the other, to allow students to understand how text works. Confidence and careful reading factor into success with this strategy.

Following this strategy of synonyms or appositives in a sentence, I began to present and teach the context clue strategy of examples in context. During this time, I collected data using a 4-point rubric (Appendix C) following each of the three instructional periods. This gave 3 overall data scores for this strategy. The bar graph in Figure 6 shows the final data collected for the class based on a 4-point rubric for the strategy of examples in context.
Figure 6: Strategy: Examples in Context: Class percentages of data collected using the 4-point rubric.

These data determine that no students fell into the category of far below expectations on the 4-point rubric following instruction and practice using the context clue strategy to determine examples in context. However, 15% or 2 students fell into the category of approaching expectations. These data also determine that 9 students or 69% of students met expectations, while 15% or 2 students exceeded expectations following instruction for the context clue strategy of examples in context.

During the first collection point, I observed 11 students or 85% approaching expectations. One student or 7% instantly met expectations, and one student or 7% exceeding expectations from this first collection point. All students were observed reading carefully, re-reading, looking for clues, and analyzing text. They knew the
procedure and technique required for analyzing text for clues and in turn attempted to infer the meaning from context.

For the second collection point, I used student journal data to investigate the ability to derive meaning from context clues. I noted that one student successfully analyzed, found examples in text, and derived meaning from clues for the word projectiles. Next, the student analyzed the word “determination”. The student noted that the character was making tower: took hours to make, tower fell, picked it up, and started again. However, the student noted that determination meant “showed her manners”. Another student came upon the word “eternity” and noted long hours and bored for examples in context. The meaning derived from the clues was “a really long time”. One student became confused when finding clues for the word “sleuth”. An example in the text was Sherlock. They did not have the background knowledge of Sherlock Holmes. However, this student understood the words clues and mystery. This student noted “helpful in solving crimes” as their definition.

During the third collection point, I conferred with students to gather data. I listened and discussed techniques and findings with each student. One student stated that using context clue strategies when reading was fun. This student came upon the word “shreds” and discussed how there was pieces of paper everywhere. The derived meaning of shreds was bits. Another student came upon the word “startled” as the reading progressed. This student located clues such as: car came by, loud noise, deer ran. The student stated, “The deer becomes scared and then runs off fast”. However, another student was reading the same passage. When they came upon “startled” the student located the clue, “the deer ran”. This student instantly stated that startled meant ran.
Another student came upon the word “preserve” and discussed clues. This student derived meaning as “keep food to last”.

I noticed that students re-read text multiple times, used the strategy by locating examples in context, made connections to text, and took the time to think about the how all words interconnect to make meaning. Students used skills and strategies to build upon the next.

The following graph, Figure 7 shows the progression of the mean rubric scores for each data collection point for the entire class. Using the collected data from the 4-point rubric (Appendix C) in all collection methods, I was able to determine an overall mean of growth for each of the four context clue strategies taught.

![Class Average Growth Progression by Strategy](image-url)

Figure 7. Class Average Growth Progression by Strategy
The rubric allows for 4-points for each student. Therefore, there is a possible 52 points as a class for each data collection. The data collected using the definitions in a sentence strategy began with students rating at 21 out of 52 points or 40% mean. However, the class mean grew to 33 out of 52 or 63% at the second data collection point. This data represented a 23% average rate of growth. For the third point of collection, the class mean grew again slightly to 35 out of 52 points or 67%. Overall the progression during this strategy showed a 27% mean of growth for the class.

The data collected using the antonyms or contrasting statements strategy began with students rating at 25 out of 52 points or 48% mean. Growth was noted during the second collection point to 28 out of 52 or 54% class mean. For the third data collection point, the class mean grew again substantially to 35 out of 52 points or 67%. An overall growth was noted of 19% for the class regarding this strategy. However, the class average remained the same at 67% in relation to the first strategy of definitions in a sentence.

The data collected using the synonyms or appositives strategy began with students rating at 28 out of 52 points or 54% mean during the first collection point. During the second collection point, the class mean grew to 35 out of 52 or 67%. For the third of collection, the class mean grew again substantially to 40 out of 52 points or 77%. Student growth was noted at 25% during this strategy of using synonyms or appositives.

The data collected using examples in context began with students rating at 29 out of 52 or 56% mean during the first collection point. During the second collection point, the class mean grew to 35 out of 52 or 67%. For the third point of collection, the class
mean grew again to 41 out of 52 or 79%. Student growth was noted at 23% during this strategy of examples in context.

From the first data collection point with the first strategy to the last data collection point of examples in context, student growth can be observed at 39% mean for the class.

The following line graph Figure 8 displays the class mean, median and range using data collected from CLOZE passages each week.

![CLOZE Passages: Weekly Class Data](image)

Figure 8. CLOZE Passages: Weekly Class Data

In week 1 a CLOZE passage was assessed to determine a class mean of 72%. However, the class median was 100% or 5 words correct. The range of data was 80% for this week with students receiving scores of 100% down to 20%. 
During week 2 the CLOZE passage was assessed to determine a class mean of 66%. However, the class median was also 60% or 3 words correct. The range of data remained at 80% for this week with students receiving scores of 100% down to 20%.

CLOZE data were collected during week 3, and were assessed to determine a class mean of 71%. However, the class median grew to 100% or 5 words correct. The range of data dropped to 60% with students receiving scores of 100% to 40%. Therefore, the achievement gap has decreased.

During week 4, the CLOZE passage was assessed to determine a class mean of 82%. The class median remained at 100% or 5 words out of 5 correct. The range of data remained at 60% with students receiving scores that ranged from 100% to 40%.

According to the data collected regarding CLOZE passages, the mean average of class scores increased from Week 1 to Week 4 by 10%, from 72% to 82%. The median of data began at 100%. However, during Week 2 the median of scores dropped, but rose again and remained steady for Week 3 and Week 4. The range of scores began at 80%. Therefore scores ranged from 100% to 20%. However, by Week 3 and Week 4 the lowest score increased to 40%. Based on these data, CLOZE passage scores improved over time, and the achievement gap decreased.

Following the instructional period, all 3rd grade students were given the context clue post-assessment. Data were analyzed and compared to the pre-assessment data. According to these data, 79% of the time students were able to derive clues from context. The class mean in determining meaning of words was 68%. The mean for the class in deriving meaning directly from correctly determined clues was 63% for the class.
Following the analysis of the post-test, I compared the results of the pre-assessment and post-assessment data. I analyzed three categories: derived clues, derived meaning, and derived meaning directly from clues. The bar graph in Figure 10 shows all data collected from the pre-assessment and post-assessment for context clues.

<table>
<thead>
<tr>
<th>Derived Clues</th>
<th>Derived Meaning</th>
<th>Derived Meaning from Clues</th>
</tr>
</thead>
<tbody>
<tr>
<td>29</td>
<td>32</td>
<td>9</td>
</tr>
<tr>
<td>78</td>
<td>68</td>
<td>63</td>
</tr>
</tbody>
</table>

Figure 10: Comparison of pre-assessment and post-assessment data on the ability to derive clues, derive meaning, and derive meaning directly from clues.

In the derived clue category student growth is represented at 49%. The comparison of pre-assessment and post-assessment data for the category of derived meaning from context exhibited growth at 36%. In the third category, I examined meaning derived directly from correctly derived clues in context. This category showed 54% growth for the class in the ability to derive clues directly from derived meaning.

The DAZE assessment was also administered as a post-assessment. The goal of this assessment in the first quarter of the school year is 8 correct words determined in
context within 3 minutes. The pie chart in Figure 11 shows all data collected from the DAZE assessment class averages.

![DAZE Post-Assessment](image)

Figure 11. DAZE post-assessment mean results for class meeting benchmark of 8 words.

These data determine that 92% of students met the goal of 8 words determined in a CLOZE passage within 3 minutes. However, 8% or 1 student fell below benchmark at this time. Next I compared the results of the pre-assessment and post-assessment of the DAZE assessment. The results show that 15% of students that did not meet benchmark during the pre-assessment, met benchmark during the post-assessment.

After analyzing and reviewing all five data sources, I can conclude that context clue strategies impact the ability of inferring meaning of words. Observation, student journals, and conferring data reflected an increase in confidence and knowledge about
how authors use words to foster understanding of text. Techniques gave the learner tools
to use independently while reading. In general, students showed growth in the ability to
infer meaning and enthusiasm towards tackling difficult vocabulary. These results have
several implications for my teaching practice. In the next section, I will explain how I
plan to use this information going forward with my action plan.

Action Plan

My action research study generated data that indicate that context clues strategies
impact the ability for 3rd grade students of varied ability levels to infer meaning from text.
All strategies taught gave additional understanding to students about words, meaning, and
how text works. At the beginning of instruction, many students struggled through the text
to locate clues and meaning. As instruction and understanding progressed, students
gained confidence and became independent in many ways. Student developed techniques
that were not part of explicit instruction but were observed such as re-reading for
clarification, reading larger sections to get the big ideas, and truly inferring the meaning
of the section of text. My wish is for students to have a plethora of tools to use as
readers. Context clue strategies have now been added to their tools.

The baseline pre-assessment and post-assessment exhibited growth for all
students. Four strategies were taught throughout this study. The first strategy, definitions
in sentences, was a good strategy to introduce context clues. This is due to the fact that
most students have had some practice locating definitions within a non-fiction text. All
students struggled through this first strategy. However, 5 students resisted very strongly.
By the 3rd day of instruction, all students were trying their very best. The main struggle
for students was determining what to note as a clue and what to put aside. Therefore,
some students were writing entire paragraphs. This gave them little to go on when it was
time to derive meaning from the clues. The second strategy of antonyms or contrasting
statements was the most difficult strategy for my 3rd grade students. When I began
modeling this strategy I pointed out clue words such as but, although, however, unlike,
and different. I found that the students were spending much of their time looking for
these words and were missing other important clues. I believe that it is important to point
out the clue words, but stress the necessity of forming meaning from the surrounding text.
During this time, students began to discover this process as a natural part of reading.
Connections to the text were discussed. I noticed that by day 10 of instruction, students
were working very independently. They were struggling through difficult text, but
confident and working. Many students were proud of themselves and excited about their
abilities. I noticed that each strategy built on the other very naturally. I feel that this is a
powerful way to introduce context clues to students.

The data provided insights toward informing my teaching practice and pedagogy.
The results suggest that students that are modeled context clue strategies over a period of
time improve their ability to locate clues in the text. This would also suggest that the
practice of Cloze passages invite new words into the student’s life and can assist in
bridging the achievement gap between the lowest and highest students. My plan is to
develop a progression of skills to be taught at the various grade levels that I teach.
Therefore a progression of learning will be in place in order to provide a foundation with
context clue strategies in the classroom. My plan is to teach context clues every year. My
plan is to support students in this endeavor each day. Furthermore, I appreciated the
different avenues of data collection. For the first time, I truly understand the power of
observation within the classroom in regards to the knowledge gained when done correctly. Additionally, the examination of student journals provided a time to truly focus on the students work. This went beyond checking off for completion, but true investigation occurred. Perhaps the most powerful collection technique that will change my practice was conferring. This allowed for time with the individual. Conferring allowed for connections to be made, learning to solidify, and gave me information on the support the student needs.

This action research has had a large impact on student learning in my classroom. Students with higher reading levels grew faster and gained understanding quickly by showing that the strategies taught added to their abilities. Students that struggle with reading benefited greatly as well. I noticed that these students took additional time, but developed the knowledge that they can use what they know to determine what they do not. Confidence greatly factored into the growth and progression of understanding. It was very rewarding to see “light-bulb” moments with each and every student. We will keep context clues alive in the classroom, by investigating text each day. These are strategies that they will carry with them throughout life because, with practice, making inferences of meaning of words and context happens naturally in our everyday lives.

Based on the action research experience, I noticed a few limitations to my study and a few design changes that I would make the next time around. The largest obstacle was the short time frame for data collection. I would conduct any similar research projects for a longer period of time, allowing for flexibility and additional time spent on collection methods. My plan is to continue this action research independently in my classroom. My next step will be to collect data as students locate examples of various
context clues as they read independently. Then students will share findings with classmates. The class will develop a list of strategies that good readers use to infer meaning through context. Following this step, I will teach students the scaffolding method. Students will practice this method with partners and independently. I believe this will secure a method of understanding in order to allow for independence in reading skills.
References


Dear Parents/Guardians,

I will be conducting an action research study in our classroom to determine how context clue strategies impact the ability to infer meaning from text for 3rd grade students. Data will be collected from your child during this process. Participation in this study involves only regular classroom activities.

Students will be exposed to strategies to determine the meaning of words as they read, and use strategies to understand words and text. During this study, I will collect various forms of data to determine whether the context clue strategies were successful for each learner. I will collect baseline data, student journals, observation/field notes, and notes from conferencing with students.

The benefits of this study include the improvement of word acquisition skills and an increase in vocabulary. I will be the only one with access to the data collected in this study. I look forward to sharing your child’s progress with you. If you have any questions regarding my research, do not hesitate to contact me at 815-933-0709.

Sincerely,

Mrs. Wilson
### Appendix B

Name____________________ Context Clue Assessment: Baseline Artifact

Investigate the capitalized/bold word for meaning.

<table>
<thead>
<tr>
<th>Sentence</th>
<th>Clues for Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jeff's father was <strong>IRATE</strong> because Jeff talked back to him and had a bad attitude all day long.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>“That roller coaster was a <strong>THRILL!</strong>” Chris shouted, eyes wide open and a grin on his face.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instead of having friends among the other animals, the rabbit has many <strong>FOES</strong>.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>When Chris heard the doorbell ring, she <strong>TORE</strong> down the stairs so quickly that she almost tripped.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sydney's dad took her stuffed animal away because Sydney had misbehaved. <strong>Sydney PLEADED</strong> with her dad to give her the stuffed animal back.</td>
<td></td>
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</tr>
<tr>
<td>Molly has so many friends because she is a <strong>GREGARIOUS</strong> person.</td>
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<tr>
<td>Tuesday was Moira's first day in the new school. She was confused by the endless hallways and was often lost. By Friday, however, her <strong>BEWILDERMENT</strong> had ended.</td>
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</tr>
<tr>
<td>Thomas hiked to the <strong>APEX</strong> of the mountain and got a great view of the entire city.</td>
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</tbody>
</table>

Appendix C

Student Name: ___________________  Date: ____________________________

Method of Data Collection:  Student Journal  Observation  Conferring

**Rubric: Context Clues**

Locate unknown words from independent reading. Use context clue strategies to infer meaning from text.

<table>
<thead>
<tr>
<th>Context Clues</th>
<th>1 Far Below Expectations</th>
<th>2 Approaching Expectations</th>
<th>3 Meeting Expectations</th>
<th>4 Exceeding Expectations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of Context Clues to Infer Meaning in Text</td>
<td>Did not effectively use context clues to infer meaning of the words. (Inferred meaning does not reflect use of context for support.)</td>
<td>Some context clues are used to infer meaning of words. (Inferred meaning reflects some connection to the context, but this connection is incomplete or not entirely clear.)</td>
<td>Most context clues are used effectively to infer the meaning of the words.</td>
<td>All context clues are used effectively to infer the meaning of the words.</td>
</tr>
</tbody>
</table>

Notes:
Appendix D

CLOZE Data from Montessori Work plan: Weekly Collection

Date: _____________________________

<table>
<thead>
<tr>
<th>Student</th>
<th>Activity</th>
<th>Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<td></td>
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<tr>
<td>2</td>
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<tr>
<td>13</td>
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</table>