Using Kid Pix to Help ELL Students Respond to Literature

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Keywords
First grade, reading, comprehension, assessment, Kid Pix, reading responses, English Language Learners, Rigby PM Benchmark

Abstract
Classroom based inquiry is used to examine the benefits of integrating the use of instructional technology with reading instruction for English Language Learners in a regular classroom setting. In this study, I investigated the use of Kid Pix in increasing the meaning-based reading strategies of my primary ELL students. This study consists of the case studies of two ELL students in my first grade class in a suburban school setting. The results indicate that both students benefited from the use of technology as a tool for expressing their reading comprehension by enabling them to make a personal connection to the literature. Both students also profited from a combination of the writing and oral process that resulted from the use of Kid Pix.

Table of Contents
Educational Significance of Inquiry ................................................................. 2
Review of Literature ....................................................................................... 2
   Effective Research-Based Instructional Reading Strategies for ELL Students 2
   Using Art and Writing as a Method of Demonstrating Comprehension ........ 3
   Kid Pix as an Additional Tool ........................................................................ 4
Methodology ..................................................................................................... 5
   Participants ..................................................................................................... 5
   Procedures ..................................................................................................... 5
Findings ............................................................................................................. 9
Conclusion ....................................................................................................... 13
References ..................................................................................................... 14
Educational Significance of Inquiry

A cultural shift has occurred within the community surrounding Hilliard City Schools as an increasing number of English Language Learners has moved into the district. In this district and in many others, the need to modify the scope of the programs designed to assist ELL students continues.

While many teachers believe that students benefit from consistent exposure to English, mere exposure is not enough for success (Williams and Williams, 2000). An integrated approach to teaching reading through instruction and technology can significantly increase the ELL students’ reading proficiency (Williams and Williams, 2000). Exposure is not enough—ELL students need some modified and individualized teaching strategies that accompany their regular classroom instruction (Schlecter & Cummins, 2003; Slavin & Cheung, 2004).

For this study, I investigated the results of first grade ELL students using Kid Pix to respond to literature. Drawing, writing and talking were encouraged as means by which my students could respond to books during guided reading.

Review of Literature

Effective Research-Based Instructional Reading Strategies for ELL Students

There is a strong and positive correlation between literacy in a student’s native language and the ability to learn and read English (Clay, 1993; Haager & Windmueller, 2001). The degree of children's native language proficiency is a strong predictor of their English language development: the student establishes a base of knowledge, concepts and skills that transfers from reading in his or her native language to reading in a second language (Freeman & Freeman, 2001; Schlechter & Cummins, 2003). Spoken language is the starting point to successful reading instruction (Gersten & Baker, 2000; Slavin & Cheung, 2004). It is extremely difficult to read a
language that is still incomprehensible to the ear. Although it can be difficult to communicate through oral language to a limited ELL student, art is a universal language through which we can express our thoughts and feelings. (Richardson, Sacks & Ayers, 2003).

**Using Art and Writing as a Method of Demonstrating Comprehension**

The ultimate goal of learning to read is to develop reading comprehension. This can be an easier task when basic reading skills are mastered (Kenne & Zimmerman, 1997). One method of effective communication to help ELL students show their understanding of a concept is through art.

In literacy, art can be used as a tool to communicate or extend the understanding of a child’s knowledge about a book or text. As a student draws a response to a story, the teacher can not only observe their comprehension of the story, but also how and why a response. (Rhodes & Shanklin, 1993). Students are able to make their reading and thinking process visible, and a child’s writing and artwork provide valuable information about his/her level of understanding (Routman, 2003). As young children are still learning to communicate effectively through language, their ability to communicate through art provides an opportunity for a much deeper response and understanding, and this can be applied to ELL students as well (Huck, Helper, Hickman & Kiefer, 1997).
Lynette Fast (2000) used children’s artwork as an observational tool to show stages of reading development in emergent readers. Using a scale of early schematic, schematic, late schematic and dawning realism, Fast found a significant relationship between art and reading.

Writing is another effective tool that aids in comprehension. “Children need to hear, see and use language, so they can understand connections between their thoughts, words, letters in printed words and the way words sound” (Morrow, Gambrell & Pressley, 2003, pp. 175-176). Writing is a way for students to extend their understanding of their reading and to learn more about writing at the same time (Fountas & Pinnell, 2001).

In addition to responding through art and writing, readers think about their thinking while reading. By creating mental images while reading, the children use all five senses to activate background knowledge (Keene & Zimmerman, 1997). Mental images can help students to understand better the story by making a meaningful personal connection to the text (Miller, 2000).

Kid Pix as an Additional Tool

Labbo, McKenna & Reinking (2002) agree that technology can support the literacy learning of students in a mainstream classroom and allow them to feel a sense of pride and motivation. These authors caution against solely relying on technology as a method of teaching reading.

I began to wonder if I could utilize computers as tools for my ELL students. How could I connect this technology with other aspects of my literacy instruction? I thought of Kid Pix, a computer software program designed to provide students with the ability to use computer based graphic tools to produce creative responses (Hickman, 1999). I knew from previous experiences that children can quickly learn to use Kid Pix as a tool for drawing and writing. I decided to explore the power as a mechanism to incorporate art, writing and thinking to support a reader’s understanding of the story.
As I began to map out my study, I hoped that my ELL students could benefit from two aspects—using Kid Pix to strengthen oral and written reading responses and increasing their understanding of computers.

**Methodology**

**Participants**

To examine ways to address this changing population, I investigated the reading responses of two ELL students in a first grade class at J.W. Reason Elementary School using Kid Pix. The first student, Maria, is a student who emigrated from Mexico five years ago and primarily speaks Spanish in her home. The second student, Wardah, was born in the United States, but because her parents came from Pakistan, she primarily speaks Urdu in her home. In the fall, both students spoke limited English, knew some letters in the alphabet and were not able to successfully pass a reading text level Level 1 (Nelly & Smith, 2001).

**Procedures**

I collaborated with the ELL tutor to provide individualized support to my ELL students through inclusion in the regular classroom setting, as well as designed one-on-one intervention programs that reinforce the skills that each individual student needs to improve upon. I used the students’ responses in their Reading Response Journals and Kid Pix responses as students read during our daily Reading Workshop as a resource to monitor their independent and buddy reading. In addition, I used the initial scores that my ELL students attained on the first administration of the Rigby Benchmark Assessment during the first week of school. I continued to administer the Rigby Benchmark Assessment (Nelly & Smith, 2001) on a monthly basis to all of my students, including my ELL students, to assess their progress in the areas of miscue analysis, word identification and reading comprehension. In addition, I recorded and reviewed daily anecdotal notes written by the ELL tutor and myself about the progress of my ELL students. However, most of my data were collected from the guided reading lessons that I used to monitor
students before, during and after reading. After reading a book in guided reading group, I asked
the ELL students to respond using the Kid Pix computer program. The table below describes a
typical lesson which was implemented for all students in the class.

**Table 1. Synopsis of Lesson**

<table>
<thead>
<tr>
<th>The Reading Lesson</th>
<th>Before the Reading Lesson</th>
<th>During the Reading Lesson</th>
<th>After the Reading Lesson</th>
<th>Student Response to Text Using Kid Pix</th>
<th>Oral Response to Kid Pix Response</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Teacher</strong></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>• Select text on child’s instructional level</td>
<td>• Record observations of strategy use</td>
<td>• Discuss good points of the reading</td>
<td>• Invite students to make a response by drawing a picture and/or writing words</td>
<td>• Ask student to tell about his/her initial written and artistic response</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Introduce Book</td>
<td>• Return to the text for 1-2 teaching points</td>
<td>• After initial response, ask for more information</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Use book language to support students as they begin to engage in text</td>
<td>• Provide support as needed to each reader</td>
<td>• Record student oral response</td>
<td></td>
</tr>
<tr>
<td><strong>Student</strong></td>
<td></td>
<td></td>
<td></td>
<td>• Describe written and artistic response</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Listen to introduction</td>
<td>• Use and develop reading strategies while navigating the text</td>
<td>• Respond to teacher-directed lesson</td>
<td>• Answer follow-up questions to elaborate on understanding</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Take a picture walk</td>
<td></td>
<td>• Practice strategies and connections to new words</td>
<td>• Respond to text through Kid Pix using information from the text</td>
<td></td>
</tr>
</tbody>
</table>

After each lesson and the students finished their individual responses using Kid Pix, I used a rubric (see table 2) to assess the students’ demonstration of their comprehension. As I worked with each student, I asked her to tell me orally about her initial written and artistic response on Kid Pix. I used this information to gain knowledge of the student’s initial ability to show understanding of the story. As my ELL students continued to develop their writing ability,
they were asked to demonstrate their understanding of various texts through independent writing or writing with support. Then, I invited the students to tell me more about her response to the story. This extended response provided an opportunity for students to communicate their thinking orally, and it allowed me to see if they are able to add depth to their understanding. As students progressed, I began to implement texts with inferential, rather than explicit, meanings and continued to assess the students’ reading comprehension in the manner above. This implementation of Kid Pix responses took place at least twice a week for eight weeks.

Table 3 provides a rough outline of the introduction of strategy and method of response throughout the year. As I introduced new reading strategies and methods of responding to text, I modeled and taught each new concept in whole group instruction during the reading workshop. Students were encouraged to try and practice new methods of response as I conferenced with them on an individual basis or during small group instruction.
### Table 2. Rubric to Evaluate Written and Oral Response

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Not Met</strong></td>
<td><strong>Uneven</strong></td>
<td><strong>Meets Standard</strong></td>
<td><strong>Exemplary</strong></td>
</tr>
<tr>
<td>Child’s written text about the picture</td>
<td>Does not seem to be related to what has been read.</td>
<td>Retells a portion of what was read.</td>
<td>Makes a personal connection with the text.</td>
</tr>
<tr>
<td></td>
<td>Does not have written text to support picture.</td>
<td>Shows understanding and application of the strategy being practiced.</td>
<td>Shows a deep understanding of the strategy.</td>
</tr>
<tr>
<td>“Tell me more about your response to the story.”</td>
<td>Does not add more oral detail when prompted to explain his/her thinking.</td>
<td>Repeats with very little new input through prompted oral response.</td>
<td>Adds simple elaborations through prompted oral response.</td>
</tr>
<tr>
<td>Child’s oral explanation of the story</td>
<td>Adds rich detail through prompted oral response.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes:

- “Tell me what you wrote.”
  - Does not seem to be related to what has been read.
  - Does not have written text to support picture.

- “Tell me more about your response to the story.”
  - Does not add more oral detail when prompted to explain his/her thinking.
  - Adds rich detail through prompted oral response.

The literacy environment supports a student-centered reading curriculum.
### Table 3. Reading Responses/Strategy Applications Options Introduced Throughout the School Year

(Miller, 2002; Keene & Zimmerman, 1997; Collins, 2004)

<table>
<thead>
<tr>
<th>Written or Artistic Response</th>
<th>Beginning of the Year</th>
<th>Middle of the Year</th>
<th>End of the Year</th>
</tr>
</thead>
</table>
| **Written Response**        | • Self-to-Text Connections  
• Text-to-Text Connections (Venn Diagram)  
• Using Our Schema  
• Beginning, Middle & End (Retelling)  
• Make a Prediction  
• Ask Questions  
• Record How Our Thinking Changes Throughout the Text (using Post-It Notes, chart paper, etc.)  
• Two-Column Notes (used to compare two components of the text)  
• Quick Write | • Time Lines  
• Determining What is Important in the Text  
• Inferring  
• Mental Images  
• Story Maps or Webs (about important ideas, story elements, conclusions, etc.)  
• Monitoring Comprehension | • Coding the Text to Identify the Strategies Used Throughout the Text  
• Inferring  
• Synthesis |
| **Artistic Response**       |                       |                    |                 |
| **Oral Response**           | • Think Aloud  
• Pair Share (Knee-to Knee and Eye-to-Eye with another student) | • Think/Pair/Share (Record thoughts about the text with a partner and then record/share how thinking together helped their understanding) | • Book Clubs  
• Create Visual Aids to Teach Others About a New Strategy |

### Findings

1. As students responded to the text, the written and artistic responses were expanded by the oral responses. In general, students were able to add more detail to their written response through their oral communication.

In Maria’s response to the *Busy Mosquito* (Depree, 1996), Maria initially responded by drawing a picture about a mosquito and wrote “I sr a bikb bfon” (I saw a bisquito before), which provided limited information regarding the context of the story. However, after Maria was prompted to tell more details about her response to the story, she was able to orally communicate
how the mosquito in the story “eats and then goes away into the tree and over the hills,” and used
details and language from the story to communicate a deeper understanding. This type of oral
communication between the ELL student and teacher provided deeper evidence of this child’s
thinking and knowledge.

In another example, Wardah drew a picture and wrote, “This is about a mother and a baby.”
After Wardah was prompted for a deeper oral response, she was able to identify all the names of
the baby animals in the story. She was also able to say that there were different names for the
mothers and the babies such as labeling people as adults and kids. Through her prompted oral
response, Wardah was able to communicate a rich response that supported her deep understanding of the story.

2. When a student had prior experiences or knowledge about a specific topic in the text, her responses showed deeper understanding and comprehension of the reading.

When she read selections that contained unfamiliar concepts, vocabulary or limited background information; she had a much more difficult time making sense of the story.

For example, when Maria read Sally’s Beans (Randall, 1994), she remembered back to when she used to help her grandma plant beans when she lived in Mexico.
Maria was able to communicate this background knowledge through her picture, words and oral response. Prior to reading the story, she knew exactly how beans were planted and why Sally might need to plant beans. This background knowledge helped Maria as she navigated through the text and began to
make meaning of the words in the story. After reading, Maria was very excited to respond to this story. She wanted to draw a picture of herself planting beans at her grandma’s house. After completing her initial response with Kid Pix, Maria was able to communicate rich details from the story with accurate meaning from the text.

Wardah also had many similar experiences in her responses. During one guided reading lesson, I introduced the word daisy as a type of flower. This was a new vocabulary word for Wardah. As she began to respond, I found that she wrote about a time when “ifivce a daisy be fr and I ga gvn too my mom” (I have seen a daisy before and I had given to my mom). After I prompted her to tell me more about the Kid Pix response, Wardah said, “Sally picked the daisy. She looked and looked and looked and found a perfect daisy. She gave it to her mom. She loved it because Sally was nice at her. My mom loved my daisy because I was nice at her too.”

3. The most common strategy used throughout the study was self-to-text connections.

Throughout the year, all of my students practice a variety of strategies to make sense of text (see Table 3). The ELL students were particularly successful when they were able to make a personal connection to the story. There are many examples to support this finding.

In Wardah’s response to Pets Need People (Meadows, 1991), she initially responded by telling about her birds.
through her pictures and sentence. After she was asked to tell more about her response, Wardah’s background information provided key elements that supported her understanding of the story. She was able to relate her own experiences with animals to the book, which discussed how people should care for their pets. Wardah’s self-to-text connection provided her with a solid understanding of the content of the story. If she had not known much about pets, the text may have been too difficult for her to comprehend. However, because of her ability to connect her own experiences to the text, her understanding of the story was exemplary.

When the ELL student had little or no schema about a particular subject, their response and understanding of the story was more limited. Maria read *Where is Hannah* (Smith, 1997) in guided reading group; I provided a book walk to introduce the new vocabulary words. Although Maria knew how to say these words during her reading attempt, I could tell that she was somewhat confused by the story. In her initial response to the book, Maria was able to remember some of the things that Hannah did in gymnastics. “Hannah went to the trampoline. Hannah went to the rope. Hannah went to the ladder.” Yet, she left out many key points in the story. When I prompted Linda to tell me more, she replied, “Hannah loved gymnastics.” I tried to ask specific questions about the story, such as how Hannah’s mom felt, and Maria said that the mom was happy that Hannah liked gymnastics. Although Hannah was happy, it was evident in the story that the mom was nervous about her daughter’s new sport. Since Maria was so focused on learning the new words and trying to understand them, and due to her limited schema about gymnastics, Maria had a much more difficult time processing the text.
4. Both students profited from the combination of writing and oral processing and were able to transfer this knowledge to their daily reading and writing experiences. These experiences, combined with daily literacy instruction including individual, small group and whole group instruction, as well as daily inclusion support from the ELL teacher and classroom teacher, helped to increase the students’ reading level.

The ELL students were able to work in small groups with the ELL teacher on a daily basis to support their language development. This time spent with the ELL teacher in an inclusion setting provided time to integrate the stories and lessons used in the case studies into their daily learning in the classroom. Students began to transfer their understandings and knowledge throughout their daily reading and writing experiences. Both students benefited from this additional support through the use of technology as supplemental instructional time to guide students in using and transferring their knowledge across the curriculum.

At the beginning of the year, Maria was unable to pass successfully a Rigby text level 1, yet with the combined support of Kid Pix and classroom literacy experiences, Maria was able to successfully read and respond to a Rigby text level 12, which is slightly below grade level expectations. Wardah also grew significantly as a reader, as she also began the year reading below Rigby text level 1 and successfully passed a Rigby text level 16, which meets end of the year grade level expectations. Both students have gained many reading strategies and comprehension strategies, while building confidence in reading, writing and oral communication.

**Conclusion**

This research provided valuable information from the reading responses of each student. Overall, the use of Kid Pix enhanced the oral responses by allowing the ELL students to create a response through the use of the computer art program. This process of responding through Kid Pix enabled the students to use their picture to support oral communication to show their understanding of the text. The oral responses were expanded when students were able to plan out
their ideas through pictorial representation and then attempt to communicate their knowledge in English. The ELL students in this study benefited from the concrete demonstration of learning that they were able to create to strengthen their comprehension. *Kid Pix* provided an alternative method of response, and the students grew in language and literacy development as a result of the combination of quality literacy experiences and best practices.

**References**


