Reading writing reciprocity: Inquiry in the classroom

Focusing on authentic teaching and learning experiences aids the development of young adolescents’ literary lives.

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Throughout our respective experiences as middle school teachers and teacher educators, we have worked with diverse populations of students with varying beliefs about education—students for whom achievement and success are perceived as foregone conclusions, students for whom school is viewed as a pathway to a better life, and students for whom school is believed to be one more trial to be endured. These latter young adolescents from an urban school, and their experiences with literacy specifically, are the focus of this article.

Educators of young adolescents understand that students in that age group have unique cognitive, social, emotional, and physical needs. Middle school students often disengage from school because the dissonance between their needs and the realities of the context for learning is so extreme (Perlstein, 2003). They crave clear and specific instructions from teachers, knowledge that their teachers care deeply about them as individuals, and the belief that they can do what is asked of them (Daniels, 2010). Instead, what they often experience is a context where too many students compete for the limited time, resources, and patience of too few teachers (Cushman & Rogers, 2008).

Purpose

This article describes a project that emerged from a shared concern that too many middle school students are not learning to think critically about what they read, write, and experience. Nor do they have the opportunity to ask questions about and engage deeply with topics that matter to them. Finally, the most disadvantaged learners are rarely allowed to meaningfully use technology as an integrated learning tool. This project was designed to actively engage middle school students in reading and writing using research-based teaching practices.

Jennifer, a middle school teacher who works with struggling and reluctant learners, believed the unrelenting focus on test performance as a result of No Child Left Behind was actually decreasing student achievement. She wondered what would happen if she focused on what is known about effective teaching and learning instead of preparing students to perform well on standardized tests. Two of the authors (middle school teacher educators) worked with Jennifer to create and implement a unit integrating inquiry learning (Wilhelm & Wilhelm, 2010) with the purposeful uses of technology (Hicks, 2009). We explored how integrating blogging into inquiry-based learning impacted students’ learning of literacy skills and their attitudes toward schooling.

Theoretical foundation

Situated cognition (e.g., Brown, Collins, & Duguid, 1989) acknowledges that learning and knowledge are influenced by both the linguistic and behavioral cues within any given environment because they do not exist in a vacuum. As a result, students who enter school with more home literacy experiences tend to perform better than their peers because their cognitive abilities align
more closely with the learning and knowledge required by traditional schooling, although these effects can be mitigated (Oyserman, Brickman, & Rhodes, 2007).

Too frequently education assumes “a separation between knowing and doing, treating knowledge . . . as theoretically independent of the situations in which it is learned and used” (Gee, 2007, p. 32). As the United States has moved toward a dependence on standardized test results when determining whether educators teach and students learn (Bronson & Merryman, 2010), this separation has become more pronounced. Situated cognition emphasizes that knowing and doing are intimately interwoven and that the success of one depends upon the quality of the other.

Cognitive scientists know that everything people learn is put to immediate use, filed for later retrieval, or forgotten (Willingham, 2009). If learners are to engage in school, they must understand how their learning will be applied or employed. The context in which the learning occurs is inextricable from the learning itself (Daniels, 2011), which drove our efforts to actively engage one particular group of middle school students.

**Students**

The study was conducted in Jennifer’s middle school in a district that had close ties with the university where two of the authors work. The district served a large number of English language learners, students living below the poverty line, and military dependents. Jennifer taught Intervention Language Arts, which meant that her students were at least two years behind grade level in terms of their reading and writing abilities. They knew that they struggled. They knew their literacy skills were well below those of their peers, and many refused to participate in class because of their low levels of self-efficacy.

In spite of these challenges, Jennifer created caring, respectful relationships with students. She was eager to deviate from the district’s main focus on preparation for standardized tests to discover whether she could interrupt the cycle of school failure and disengagement in which these students were mired. Although the university connection smoothed the implementation of this pilot project, its positive outcomes were due to Jennifer’s work as the classroom teacher and were not dependent on the outside support provided. As we discovered once the pilot ended, Jennifer independently continued the inquiry-based learning and experienced similar results.

**Classroom instruction through inquiry**

Cooper, Kiger, and Robinson (2012) claim that, “Throughout the processes of speaking, listening, reading, and writing, children learn to think. As they learn language, they become more adept at expressing themselves, solving problems, and making judgments” (p. 8). The students in Jennifer’s classes viewed reading and writing specifically as skills necessary for performance on standardized tests for which there were definite measures of success and failure. They had little interest in developing their reading and writing skills due to their attitudes of indifference toward test scores. As we worked to help students develop different perspectives and beliefs about reading and writing processes and improve their literacy proficiency, there was also a focus on identifying clear goals for reading and writing that went beyond performance on evaluation measures to real world applications and to providing specific feedback about their progress toward those goals (Csikszentmihalyi, 1990).

People construct meaning by monitoring their understanding, asking questions of the text, and integrating prior knowledge with new learning (Duke, Pearson, Strachan, & Billman, 2011). While all readers apply these and other strategies to all texts, proficient readers do so flexibly and unconsciously. Our goal in this project was to explicitly teach a variety of comprehension and writing strategies to the intervention students and then give them opportunities to apply them.

An inquiry unit was designed, grounded by an essential question, “What do you fear?”. Jennifer’s class read *Stargirl* (Spinelli, 2004), which tells the story of a teenager who marches to the beat of her own drummer. After being homeschooled for most of her life, Stargirl begins attending Mica High School as a tenth grader. While the student body is aghast at Stargirl’s disinterest in being “just like” them, Leo finds something compelling about her. Spinelli explores themes of non-conformity and individuality at a time when adherence to social norms is paramount.

Because the decision whether to follow the crowd can stem from a fear of being perceived as different, using *Stargirl* as the entry point for our inquiry unit grounded more abstract discussions about people’s fears, how they respond to those fears, and positive and negative consequences of those responses. With the story as a backdrop, standards-based learning plans were designed to help students develop the ability to think critically as they read Stargirl and wrote their reactions via class blogs.
The daily routine

To begin the unit, Jennifer posed the question: “What are you afraid of?” to students. Each class period thought about the essential question, talked with partners, and wrote their fears on large pieces of chart paper. The students then categorized their statements about fear. The categories were not initially named, but the students quickly realized that fears such as those of snakes and spiders aligned. Ghosts and monsters were typical entries in a second category, and the fear of not being popular illustrated a third. As discussion continued, the students intuitively began to name the categories. They made comments such as: “Well, snakes and spiders could really hurt you,” or “Dying is a real fear, but ghosts hurting you is not.” After a spirited but thoughtful discussion where students clarified and elaborated on their thinking about the concept of “fear,” the students began to understand that any fear is real to the person who is feeling it and to question why certain people are afraid of certain things. That discussion provided the launching point for the core text, *Stargirl* (Spinelli, 2004). The Understanding by Design approach (Wiggins & McTighe, 2005), grounded in state-adopted standards, was used during the creation of these learning experiences.

Project activities

After reading the first chapter aloud and reminding students to make connections between the text and the class discussion, students were informed they would be responding to the text through ongoing blogs instead of the more traditional literature response summative essay. The classroom was equipped with 18 desktop computers, providing students with easy access to technology. They used the discussion feature on the district’s information management system (School Loop), which insured a secure website that hosted the group discussions and allowed the teacher to feel safe about taking this leap in her own professional practice. They used the discussion feature on the district’s information management system (School Loop), which insured a secure website that hosted the group discussions and allowed the teacher to feel safe about taking this leap in her own professional practice. Initially, students responded to the teacher’s daily posted text questions on the class blog; over time students began to respond to peers’ posts as well. Each class session began with a mini-lesson (Atwell, 2002) on a literacy strategy (e.g., visualizing events in a text, writing a “hook” opening, finding textual evidence to support an opinion, re-reading one’s writing for clarity). These strategies were selected based on the district’s standards-based sequencing guides. After modeling the strategy and discussing how/why/when proficient readers and writers might use it, students were divided into three groups.

The instruction varied from day to day as the discussions sometimes directed the learning and inquiry to debates and insights not originally planned by the teacher, yet the group rotation schedule was adhered to most days. Students remained in this class for a daily two-period block lasting 90 minutes. The classroom was arranged for three rotations: Independent Reading, Reading and Discussion, and Computer Time. The students were divided into three groups that rotated through every center every day. Typically, each rotation lasted 20–25 minutes.

At Independent Reading, the students were expected to read the assigned pages by themselves in preparation for the group reading and discussion. This alleviated much of the anxiety that many struggling readers feel about reading out loud in a group. They were able to “practice” the pages before coming to the reading group. Along these lines, the teacher made sure that the first rotation each day consisted of the more proficient students coming to “Reading and Discussion” since they would be reading with the teacher before having the practice opportunity of Independent Reading.

The first part of Reading and Discussion was spent reading some key passages aloud; thus allowing the teacher to listen to every student read every day. After reading, the teacher facilitated a discussion with questions similar to those students would answer at the computer in the class blog.

Computer Time provided students time to reflect and write responses to the daily guiding questions posted in the class blog. Questions were designed based on skills the state-adopted standards required.

The Sunflower Club

The novel describes a tradition called Sunflower Club begun by Stargirl and consisting of creating anonymous gifts and cards for people. When students finished the novel, they formed their own Sunflower Club to show their appreciation for the adults on their middle school campus. One instructional day was devoted to making the gifts and cards. The students planted marigolds and mums in small flowerpots and wrote thank you notes for each staff member. They made cards for the custodians, workers in the cafeteria, the teachers, campus security, and the front office staff.
The next day students selected a flowerpot and a card to deliver to a specific staff member. Knowing that Stargirl never signed her cards, the students decided to simply say, “This is from the Sunflower Club” when presenting their gifts. As the students returned to the room with stories about how people reacted to their act of kindness, they discussed what it felt like to give a gift while not expecting anything in return.

**Changes in the learning environment**

The core of the instruction focused on teaching the literacy skills identified in the state-adopted English/language arts standards. By the end of the six-week unit, the students began arriving for class asking if they could “just read” all day. They raced for the computers when it was time to blog. They raised their hands to offer insights and ask questions about class content. These anecdotally observed behaviors represented a change from earlier in the year when the students were less eager to participate in learning experiences.

**Improvement in the quality and quantity of the class blogs**

One noteworthy finding was the increase in quality and length of responses over time. In the beginning, the students briefly answered the daily questions. The students wrote that they agreed with each other and gave one to two sentences explaining what they thought about the characters' actions but rarely elaborated beyond a specific answer to a specific question (see Figure 1).

To provide immediate and specific feedback, the teacher asked questions to help students clarify or deepen their thinking. By the end of the project, the students had begun elaborating on responses without additional prompting, and the content of the responses became more complex (see Figure 2).

**Responding to peers.** Early blogs primarily included comments such as, “I agree with you” or, “Yes, you are right.” Later comments included, “Griselda, I agree with you. She just wants to probably get to know them much better. She might think that they are some nice people.” Or “Melanie, I agree with you because Leo wanted to cry, but he didn’t because Archie was there with him.”

When making inferences about characters’ motivations, the students also demonstrated a greater capacity for critical thinking. One early blog stated: “I thought that they liked Stargirl too but I guess not. I think that they left her at the basketball game because she went outside for the last ten seconds. She left because she felt bad for the other team.” This was a slightly above average post. Later posts were represented by the following example:

I think that Stargirl’s office was kind of scary because she had everything what the people do. Those things mean a lot to Stargirl because she likes to keep track of other people. For me that means that even for the people who didn’t like her, she will still have things for those people. I think that Leo feels sad that he saw that Stargirl kept track of the people even if they didn’t like her.

Posts toward the end of the project frequently showed that students were more able to elaborate on their ideas by offering specific examples and making inferences as to the characters’ motivations and feelings.

**Questioning.** Asking good questions is an important skill in inquiry-based learning (Wilhelm, 2007) as well as for proficient readers to make sense of complex texts (Keene, 2007). We found that students began to emulate
the teacher’s interactions with the text as they asked questions both of each other and of Stargirl itself, and they often addressed their questions to classmates’ responses. Giovanni asked, “I wonder why Hillary hates Stargirl. Is it because she is jealous or something? Hmm, I don’t know” while Maria asked, “Everyone, (a) Do you think Stargirl still likes Leo? (b) Do you think Leo is going to take advantage of Stargirl just because she has a house?” Steven wondered, “Do you think Leo still likes her?” Yvonne asked: “What are they afraid of? I really think they shouldn’t be afraid of anything.”

Each of these blog posts is indicative of the students’ ability to think more critically about their class text. Not all of the blog posts focused specifically on the essential question because the teacher was still required to incorporate the skills and strategies in the state-adopted content standards. Some of the prompts focused student thinking on other aspects of the text in order to accomplish this task. Regardless of the prompt focus, however, the teacher wanted the students to think deeply about it, to respond with references to the text, and to engage classmates in the discussion.

Reading class blogs also provided the teacher with a direction for subsequent instruction. Discussions moved from a focus on Stargirl to more complex ideas such as wondering how the fear of not fitting in causes the jealousy that so many adolescents experience.

Making inferences and judgments. The students made inferences and drew conclusions about the characters in Stargirl and their motivations. Susan’s comment: “I think they were just using her because she danced good and played good [sic] too. I think that they did that because she got popular. They are afraid of not winning the basketball games” is reflective of the reality that middle school is fraught with more challenges than merely those of an academic nature.

Nadal’s post, near the end of the project, showed that the students were learning to think deeply about the essential question. He wrote:

**Figure 2** Blog posts toward the end of the project

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<th>Post 1</th>
<th>Post 2</th>
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<td>I loved the book i think it was great. I would recommend it to my friends because it wa a great and sad. I think you sould because it was interson book it was awsome i even loved the ending when he said that on this brithday he resved a pacage and it was a porckipine necklease. I think he was a coward whean he said what was on the pice of papper that Archie barney in side the rock. I think if kids read this story would start to cry on the parts that are really sad. Leo was afraid that he would lose stargirl for ever and never see her again =( . Leo would of done the right thing if he made better disition and he would of never lose Stargirl.</td>
<td>I really enjoyed the book and most of all every time you cried, when there was a sad part in the book!!!=)♥ Yes i would recommend this to a friend because this book is one of the most intresting books i ever read in my lifef==)♥ It would be an exsalent idea so more and more kids could know that LOVE ever stays with you how you expected. And all i hope that no more tears comes out of you when you read the story to the other kids!!!=)♥ He always wanted Stargirl to change the way she was and the way she acted. But Leo never realized how much she loved him and how much she cared for him, because Stargirl LOVED Leo a lot she moved!!!!=)♥ Leo was afraid of loseing Stargirl for ever and never ever seeing her agian !!!==)♥ Yes Leo did do the right thing i think what ever would of happen in the story Leo would stil of done the correct disino!!!==)♥</td>
<td>It was alright. I will recommend this to friends because it a good book and probly they would enjoy it. I think yeah you probly could use it for next year because it’s a great book to read. He was thinking about evening that they use to do toghiter like best friends he also tred Stargirl mean and the will do mad stuf to her some times and theywould be mad at each other first he didn’t want to say the true and then he siad he was a coward and then no on ebelivwed him. That every ine would make fun of him. I think he did the right thing\</td>
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I think her office was all about her. Like she could make it what she wanted it to be, and nobody could tell her “oh wow that’s weird” because it was all about her. It was a place like her where no one could say anything about i. Her office seemed to express herself in many ways. It seemed to express her like, I think it’s just her place, the main place were she can go.

Teacher observations

The teacher witnessed an inspiring phenomenon in the course of this project. As the students wrote in their blogs, they were more absorbed in reading, writing, and communicating with each other. The teacher found that she was able to offer feedback on the blogs instead of reminding students to stay on task. The students wrote (on topic) throughout each blogging session instead of sneaking naps, whispering to each other, or refusing to work.

Students began to take the writing more seriously once they realized that their peers were actually reading their blog posts, were responding to their thinking, and were curious about their opinions. All students were “talking” at once, but everyone was also being heard.

One student remarked, “The blogs were cool because we were all talking to each other, but we didn’t get in trouble because it was what we were supposed to be doing.” It appeared the young adolescents began to feel that their ideas and voices mattered and that they had something important to say.

During preparations for the Sunflower Club, the teacher moved all the tables in the room together to make one large space in which to work on the cards and flowers. As we watched her normally reluctant students work collaboratively for a common goal, we were reminded of the importance of stepping back and getting out of the way of the learning. When they needed help, students asked each other how to spell words or how to phrase a sentiment. This level of trust in each other was due in large part to the communication skills fostered during the blogging. Because the students communicated with others whom they rarely ordinarily would have talked to, they were more willing to help each other.

Improvement in the students’ attitudes and achievement

Student attitudes

The differences in student attitudes, as measured by a pre- and post- survey proved to be statistically significant. Questions on the survey asked students to rank how well they liked reading and writing activities, whether they thought they were “good” students, and how they felt about school in general. Results from the paired t-test showed that the means of pre-test and post-test were 29.0 and 33.2, respectively. The difference of 4.2 was statistically significant (n = 57, p < .01, 2-tailed) and suggested that students demonstrated more positive attitudes toward learning at the end of the project. The effect size (Cohen’s d) was 0.64, showing a moderate to strong effect.

These changes in attitudes were not only evidenced by the students’ survey responses but also by their daily willingness to do work in the classroom. As some students admitted that this was the first book they had ever read for enjoyment, many became more likely to read for understanding and to ask questions as they worked through text. Since all learning is influenced by the context in which it exists (Gee, 2007), it was not surprising that the improvement in student attitude also led to increased academic achievement.

Student achievement

As districts, schools, and teachers are under extraordinary pressure to measurably increase student performance, it was important to also examine the students’ scores on district common assessments.

All Intervention middle school students took five common assessments each year as required by the district. The tests included questions measuring comprehension, grammar, and vocabulary skills. At the start of this inquiry project, the students had already taken three of the five common assessments and demonstrated growth from a mean score of 58% to 63% between tests one and two. The mean score on test three was also 63%, suggesting no growth. The regularly scheduled fourth common assessment occurred shortly after the conclusion of the inquiry project, and the students’ mean score was 73%. Two months after the end of the inquiry project, the 56 students’ mean score on the final assessment was 79%. It should be noted that an experimental research design was not used, and there was not a control group. Many factors, such as the difficulty level of tests and students’ learning outside of this project, could influence the increase in students’ test scores. However, the data did suggest a correlation (not necessarily causality) between students’ participation in the project and their test scores.
This growth in academic achievement also had a noticeable impact on the students’ willingness to engage in learning experiences. Jesse’s reading log illustrates one specific area of improved attitude. There was one entry listed between September 8 and March 10; he had pretended to read one book for seven months. Between March 10 and March 30, he actually read three books and achieved passing scores on the comprehension tests that the school required students to take after each book. For the remainder of the school year, he asked the same question at the beginning of every class period: “Can we just read today?” It appeared that this student, a disengaged middle school student, had begun re-conceptualizing himself as a reader.

We offer this student as a tangible illustration of the students’ changing attitudes. Other reading logs reflected a similar increase in quantity of texts read, and the teacher felt she had to spend less time managing minor behavioral disruptions. When each class was given copies of Love Stargirl (the sequel) as a surprise, each period spontaneously applauded. Students in the period right before lunch asked if they could skip lunch and “just read.”

Insights and revelations
To non-educators or teachers who work only with advanced or proficient readers, the results reported in the previous section may not seem particularly noteworthy. To those who work with struggling or reluctant learners, however, the findings are promising. The inquiry/technology project created a space where students like Jesse found joy in reading.

Although not every student responded like Jesse, his reaction was typical of the majority. Our collective experience suggested that, because Jesse and his classmates experienced literacy success, they will be more likely to continue reading and writing. Because the challenges posed by this project were accompanied by commensurate support and strategy instruction (Gardner, Csikszentmihalyi, & Damon, 2001), students were more willing to take risks with their learning. They were more willing to exert the effort necessary for success and to focus their attention on the task at hand (Csikszentmihalyi, 1990).

We learned that Wilhelm and Wilhelm’s (2010) success with inquiry-based learning is replicable. We discovered that “students learn when they have the opportunity to learn” (Wilhelm & Wilhelm, 2010, p. 46). We learned that students learn when they feel safe and find pleasure in learning.

We found that when technology is used as a mediating tool in learning (Hicks, 2009) as opposed to the activity in and of itself, struggling students develop literacy skills. The primary purpose of integrating blogging technology in the project was not for students to learn the technology per se. When students first used the blogging technology, they had to familiarize themselves with the interface and learn how to use it to perform literacy tasks. At this early stage, technology tended to be external. However, Ihde (1979) posited that tools withdraw when they are fully embodied in humans’ experience of the world. For example, when students immersed themselves in writing, they were wholly focused on expressing their ideas. The computer “disappeared” from the writer’s consciousness.

In this project, the technology stayed in the background while enhancing students’ interactions by means of asynchronous communication. Students were provided time to reflect on the text as well as their peers’ questions and comments. Per situated cognition, learning in this context was cognitively as well as socially and physically mediated (Gee, 2004).

We were also reminded that young adolescents need opportunities to use their hands, to be creative, and to be generous. During the class period where the “Sunflower Club” was potting flowers and making cards, nearly every student was focused, engaged, and respectful. They did not need to be reminded to share supplies; they did not need to be reminded to stay on task.

Even more compelling from an academic perspective was the students’ desire to write the cards using standard conventions of English. They asked questions about spelling and used punctuation devices like ellipses in their cards. Because there was an authentic intended audience for the work and because class discussions about what people feared in Stargirl helped them understand the power of a simple thank you, they cared deeply about doing the project well. In doing so, they also demonstrated their learning and connected with their school community in a unique way.

Finally, we learned that well-educated, intentional educators possess or are able to develop the skills, knowledge, and dispositions to teach effectively. The teacher’s comment in the middle of the project was the most revealing. As we talked about the students’ latest
blog posts, she said, “This is the way I used to teach.” She participated in a traditional teacher education program, which consisted of a year-long series of courses and student teaching (now known as clinical practice). There was nothing out of the ordinary about her teacher education, and she taught in a traditional, public middle school. The only difference here was that she initiated her learning, based on an area of relevance and interest to her, by reading about inquiry-based instruction and collaborating with her colleagues on ways to implement it in her classroom.

Concluding remarks

During this project, the importance of providing students multiple means through which to demonstrate their learning became evident. Through class blogs, lessons on how fear manifests itself, discussions about the consequences of fear, and the re-creation of the Sunflower Club, it was witnessed repeatedly that tests measure some forms of academic achievement, but achievement itself is attained through structured, research-based practices in teaching and learning.

This project also demonstrated that student achievement increases when students realize reasons to engage. Just as Duke, Purcell-Gates, Hall, and Tower, (2006/2007) found that, “Teachers who included more authentic literacy activities more of the time had students who showed higher growth in both comprehension and writing” (p. 345), the students who participated in this project showed growth in comprehension, writing, and attitude.

Students will engage when they develop an understanding of the relevance for their learning and development. Research findings from education hold a wealth of resources for creating learning experiences and classroom environments where students are willing to engage with complex tasks that require difficult work. The power of this project with these students is additional evidence that academic success is within the reach of all young adolescent learners if middle level educators are willing to remember that teaching is more than testing and learning is more than answering questions.

References