12-31-2014

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"DO YOU HAVE A BROTHER? I HAVE TWO!": THE NATURE OF QUESTIONS ASKED AND ANSWERED IN TEXT FOCUSED PEN PAL EXCHANGES

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—————————— **Abstract** ——————————

Authentic learning experiences are those in which students engage with texts as well as the behaviors of reading and writing within contexts of real-world use beyond traditional academic use. This study provides quantitative analysis of how students (n=200) engaged with an adult pen pal in a shared literacy experience. Findings indicate that students actively participated with their adult pen pals asking and answering more personal questions than literature-based questions. Data were disaggregated for reading ability and gender. Students who were considered above-grade level readers asked and answered significantly more questions than students considered below grade level in reading. Girls asked significantly more questions, both personal and literature-based, than boys, however there were no significant differences in the number of questions answered. Implications and need for future research are discussed.

"Do you have a brother? I have two!": The Nature of Questions Asked and Answered in Text Focused Pen Pal Exchanges

Maria, a fourth grader, eagerly opens the letter from her adult pen pal (APP). This is the second letter she has received and she is already getting to know her APP; where she lives, her job, and what books she likes to read. She asked her APP several questions in her last letter and can't wait to find out if her APP answered them. Maria likes having an APP she can write to about the books they are reading. Maria considers her APP a friend who likes her for who she is. Her APP doesn't judge her based on how she looks and doesn't grade her writing.

Students in Maria's class (pseudonym) are participating in a learning experience that is both authentic and purposeful. Maria's teacher can meet grade-level standards by providing students with the opportunity to connect school-based learning to real world experiences. Rather than writing a book report or taking a test, Maria and her peers are involved in a class-wide pen pal project, where students are authentically interacting with quality literature and engaging in written conversations with APPs. Both the literature and conversational aspects of this pen pal experience required students to comprehend texts and use the language necessary to reflect social purposes beyond the brick-and-mortar walls of the school, thus allowing students to engage in meaningful learning experiences.

Conceptualizing Reading Comprehension

The RAND Study Group published a series of reports on education research and development, including literacy (Snow, 2002). They conceptualized reading comprehension as a "process of simultaneously extracting and constructing meaning through interaction and involvement with written language" (p. 11). This notion that meaning is not within the text, but rather in how the reader engages with the text, was described by Rosenblatt (1978) as a *transactional* relationship between a reader and a text - a dynamic give-and-take with the words on the page. Rosenblatt (1995) defined the process of simultaneously bringing meaning to and taking meaning from a text as a poem, where meaning does not reside within the reader nor within the text, but occurs when the two come together, literally, during the context in which the piece is read (Eeds & Wells,

1989). Essentially, transactional theory focuses on the personal meaning the reader takes away from the text, which allows for multiple perspectives and aesthetic interpretations of the text. Rosenblatt (1995) contends that we too often ask students efferent responses only, focusing on extracting facts instead of allowing for creation of personal meaning.

The RAND group (Snow, 2002) further developed the notion of comprehension by identifying three contributing elements: the reader, the text, and the activity or purpose for reading. The interaction of these three elements is nested within a larger sociocultural setting, including race, community and neighborhood discourse, cultural values, income, and language; all which have profound impact on student learning (Vygotsky, 1978).

The Reader

Students bring unique qualities that influence the poem, including motivation or interest, background knowledge and lived experiences, academic skills and cognitive capacity, as well as their gender. These qualities provide variability among readers (e.g., gender) and, at times, within readers (e.g., motivation and interest) based on topic or task.

Self-perceived competence and task value are major determinants of motivation and task engagement (Eccles et al., 1983; Pintrich & DeGroot, 1990; Wigfield, 1994) and motivation is a predicting factor for literacy development (Netten, Droop, & Verhoeven, 2010; Taboada, Tonks, Wigfield, & Guthrie, 2009). Students who believe they are competent readers and appreciate the value of reading are more likely to outperform those who do not hold such beliefs (Chapman & Tunmer, 2003; Eccles et al., 1983; Hughes, Brooker, Gambrell, & Foster, 2011; Paris & Oka, 1986) and task relevance is an important factor that could influence a student's value of what is learned in school (Brophy, 2008). Proficient and less proficient readers alike tend to exhibit increasingly negative attitudes toward in-school reading, where the purposes for reading often lack authenticity and personal value (McKenna, Kear, & Ellsworth,1995). Juxtaposed to this, Chohan (2011) found that children engaged in a pen pal letter-writing project expressed enjoyment in writing and increased self-perceptions as writers.

Research demonstrates that gender is a powerful variable associated with literacy achievement and motivation (Kush & Watkins, 1996; Merisuo-Storm, 2006; Twist, Gnaldi, & Schagen, 2004). Girls tend to be more proficient and motivated readers (Chiu & McBride-Chang, 2006; Lynn & Mikk, 2009; Marinak & Gambrell, 2010), and there is evidence that boys' motivation to read decreases over time

(McKenna et al.,1995; Mohr, 2006; Pecjak & Peklaj, 2006; Smith & Wilhelm, 2002; Wigfield & Guthrie, 1997). For example, McKenna et al. (1995) reported significant erosion in the attitude of fourth-grade boys for both academic and recreational reading. Smith and Wilhelm (2002) also identified gender differences related to motivation and reading achievement in pre-adolescent and adolescent students. Their findings indicate that girls learn to read earlier, comprehend narrative and expository texts better, and have higher estimates of their reading abilities than boys.

The Text

Embedded within texts are a multitude of components, including but not limited to, difficulty level (e.g., vocabulary, sentence complexity), intended audience, purpose of communication (e.g., informative or conversational), and overt and hidden messages (albeit, not meanings, because those do not occur until the interaction with the reader). Parsons and Ward (2011) and Guthrie and Ozgungor (2002) suggest that authentic tasks increase opportunities for students to engage with and practice academic vocabulary through meaningful experiences. Beyond vocabulary development, Teale and Gambrell (2007) documented that elementary students who were engaged in an authentic pen pal experience scored significantly higher on SAT-9 reading measures than peers not participating in the program, while Chohan (2011) reported that students in a pen pal letter writing project improved their writing skills. LeVine (2002) anecdotally shared the benefits of authentic writing for her kindergarten students as they learned to share and express their own thoughts. Similarly, Moore and Seeger (2009) shared the benefits to elementary students' writing when paired with older, more experienced writers who modeled good writing. Therefore, the complexities of texts can be mediated through instruction that connects with students, providing an impetus to both engage with text and persist when the text is difficult.

The Activity

From the educator's perspective, literacy activities often aim to meet required educational goals and standards. We posit that purposeful, well-designed instruction promises to not only meet these required educational goals and standards, but to do so in ways that allow students and educators alike to set and reach personal, social, and academic goals.

Authentic learning experiences are those in which students engage with texts as well as the behaviors of reading and writing within contexts of real-world use beyond traditional academic use (e.g., Duke, Purcell-Gates, Hall, & Tower, 2006;

Purcell-Gates, 2002). Authentic tasks allow students to learn academic skills through real world application. By engaging student learning in authentic ways, students learn to "do life" instead of just learning to "do school" (Pearson, Raphael, Benson, & Madda, 2007, p. 36). Authentic tasks anchor learning to student's lives by providing a relevant and practical application of academic tasks. As Purcell-Gates (2002) points out, it is challenging to provide authentic tasks in the classroom. McKenna et al. (1995) noted that proficient and less proficient readers alike tend to exhibit increased negative attitudes toward in-school reading, where the purposes for reading often lack authenticity and personal value. Chohan (2011) evaluated student engagement in a pen pal letter-writing project and found that children reported that they enjoyed the letter writing process, and their self-perceptions as proficient writers increased. Authentic learning allows students to integrally derive meaning from activities that connect content standards with a real world purpose, rather than being an arbitrary activity for which the sole purpose is to meet a standard.

The Context

The process of making meaning from the text occurs within the reader, but is situated within a larger influential and societal context. Although formal instruction takes place within a school or classroom setting, sociocultural theory asserts that learning does not happen in isolation, but rather is embedded within a social context (Vygotsky, 1978) as children interact with people (e.g., pen pals), objects (e.g., literature), and the environment (e.g., supportive and authentic classroom learning). In this study, the cultural component is an essential element of the instruction as students learn through their interactions that surround the reading of the text, such as teacher-facilitated group discussions in the classroom regarding the text, and their letters with an APP. There is a socially mediated enterprise of understanding the text so that ideas can be communicated with another through the pen pal exchange. Both the student and the adult in the pen pal dyad contribute interpretations of text based on a shared experience (i.e., reading the text), but letters that are exchanged are framed by social context, such as personal experiences and background knowledge. Many of the APPs were professionals from an urban setting, distinctively different from the rural setting where the students lived. By pairing each child with an adult, students were naturally exposed to new information from individuals who resided in a different geographical region, and who had novel perspectives based on distinctive life experiences. During the written conversation, students were required to make

sense of the information shared by the pen pal and thoughtfully respond in written text. The social aspect of the communication exchange is an important aspect of the learning process.

Analyzing the Nature of Dialogue

The current study extends the work of a larger year-long investigation that served to describe the learning and motivational effects of a pen pal project in elementary classrooms. Findings from the larger investigation revealed that the reading motivation of student pen pals increased while participating in the pen pal activity (see Gambrell, Hughes, Calvert, Malloy, & Igo, 2011). Additionally, findings from the larger study suggest students who wrote letters to adult pen pals demonstrated academic accountability to community, content, and critical thinking. These findings piqued our interest, specifically with regard to the content of the letters. In the current study, we sought to capture what students prioritized in their letter exchanges with the adult pen pals. Following this initial analysis, we sought to explore the nature of the dialogue between pen pals during the letter exchange, as well as delve into what students prioritized in the exchange.

We analyzed the content of the student and APP letters, paying special attention to the inquiries posed by the participants, in order to describe the transactional aspects of the exchange. Focusing on the two main types of questions posed as a result of the pen pal task, the questions that guided this investigation are: (1) What was the balance of book and personal questions that were asked and responded to by the student/adult dyads?; (2) Does the question balance differ according to gender?; and (3) Does the question balance differ according to reading ability?

Context of the Exploration and Methods

This study investigated the elements of inquiry present within written interactions between students and their APPs regarding a commonly read text. We elected to focus specifically on the balance of two types of questions and answers, namely book and personal questions and responses, because while book related exchanges share information and interpretations of that purposefully ask the pen pal to engage with the text, personal exchanges demonstrate engagement with the pen pal. The balance of personal and book related exchanges is relevant in that the relationship-building that occurs across the series of pen pal exchanges within dyads may provide a clue to the relevance and quality of the activity for the

participants. This quantitative perspective of the question and answer engagement provides an important view of student choice in his or her initiative to engage with the pen pal in a learning community.

The Readers and Setting

Data from 200 student/adult dyads were analyzed in the study. This number reflects 10% attrition due to students moving out of district, incomplete data sets, and one student who elected not to participate. All participating schools are categorized as Title I and are located in a southeastern state. The student population in this study reflected 65% Caucasian, 26% African-American, 4% Hispanic, and 3% identified as multiracial.

Seven teachers who taught third, fourth, or fifth grade from three school districts participated in the study. The project was implemented class wide, as the principals and teachers agreed that the books to be read and the writing and discussion components complemented the existing reading and language arts curriculum. Participants exchanged letters about the books with APPs and took part in small peer-discussion groups about the content of the books and the content of the letters written by the APPs.

APPs were recruited from businesses, nonprofit organizations, and educational or governmental agencies and were randomly assigned to student pen pals. All APPs passed background checks prior to being paired with a student and, although pen pals only knew each other's first names, the teachers and researchers monitored all letters to ensure that no identity-revealing or inappropriate information was shared. No inappropriate exchanges occurred during the study. APPs received guidance and suggestions to aid in composing the letters to support an educational forum and engagement with the students. For example, APPs were reminded to use age-appropriate language and include content the students might enjoy, such as jokes. APPs were instructed to balance personal and book questions, and encouraged to ask questions that required higher-level thinking skills.

Selected Literature

The selection of texts was important because it needed to be aligned with grade level standards and provide engaging literature for readers. A committee of nationally recognized experts in children's literature selected the books to ensure age appropriateness, compelling stories, and elements of problem solving and resilience. The books the students read were also determined by grade level. Reading ability was considered when multiple books were available in a genre.

Narrative books for Grades 3, 4, and 5 (respectfully) included: *Julian's Glorious Summer?* (Cameron, 1987); *Justin and the Best Biscuits in the World* (Walter, 1986); and *Class President* (Hurwitz, 1990). Informational texts for Grades 3 (one book) Grades 4 (three book options) and 5 (two book options) included: *Washington D.C.- A Scrapbook* (Benson, n.d.); *If You Lived in Colonial Times* (McGovern, 1964); *Colonial Life* (January, 2000); *The New Americans- Colonial Times* (1620-1689) (Maestro, 1998); *If You Traveled West in a Covered Wagon* (Levine, 1986); and *The Oregon Trail* (Landau, 2006).

The Authentic Literacy Activity

Participants interacted in a structured literature pen pal exchange that included three letter cycles: an introductory letter, a letter about a narrative book, and a letter about an informational book. Across the series of letter-writing cycles, students like Maria read the same books as an APP and exchanged letters to (a) get to know each other, (b) share information about the books, and (c) learn more about the other person's perspective of the shared books. In the process of exchanging a series of letters with the same pen pal, a literary relationship was established that provided an authentic reason for reading and writing and for developing literacy skills through these interactions.

Each student had his or her own APP; thus, the relationship between the student and the pen pal was distinctively different than the already existing classroom relationships with peers and the teacher. While the APP and the teacher both serve as more capable and competent models of reading and writing for the student, the APP was not in a position to grade or evaluate the student's writing or interpretation. In the letter exchanges, pen pals wrote about vocations and avocations, likes and dislikes, and interests and ideas.

The letter-writing activities were supported through scaffolded lessons and activities within the classroom. Teachers participated in professional development sessions through an affiliated university program designed to support their use of core books and related read-aloud books, to promote the writing of high-quality pen pal letters, and assist in the classroom use of a range of discussion strategies. During these sessions, the teachers engaged in reflective practices such as group discussions, artifact analysis, and journal writing that focused on the implementation of discussion, authentic literacy tasks, and accountable classroom talk (e.g., Michaels, O'Connor, & Resnick, 2007). Using the pen pal program as a base, the professional development centered on the following principles: improving literacy through the strategic reading of books, writing to a real pen pal

in response to literature, and discussion to foster critical thinking skills. Using a gradual release of responsibility model, teachers provided instruction and modeling for all the discussion strategies. Discussion strategies implemented in the classrooms included the use of Thinkmarks, Pair-share, 4-share, and peer-led discussion. See Figure 1 for details regarding these discussion strategies.
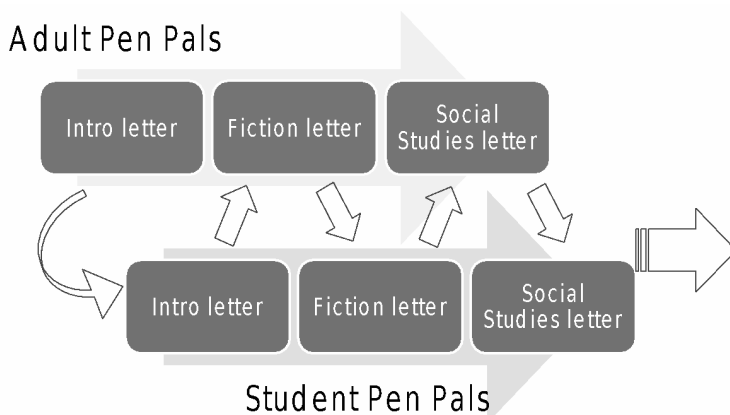
Figure 1: *The discussion strategies focused on writing activities to support discussion (i.e.,Thinkmarks, and three discussion strategies that moved from simple to complex.)*

Activity	Description	Time required
1. Thinkmarks	Students have a bookmark to use while reading that serves as a graphic organizer to write down ideas while reading, including page number for reference.	Less than 5 minutes
2. Pair-share	Students read their books and letters from pen pals and then share ideas and information with a partner.	Approximately 5 minutes
3. 4-Share	Students are organized into groups of four to discuss the book. Also refereed to as Reader Reaction Circles, it is a structured discussion designed to assure that every child participates. Students are given task cards with established roles: Share a bit from your book, Talk about what you liked best, Talk about what you'd like to know more about, and Talk about something this book reminded you of. Students are encouraged to comment on each response and pass their card to the right until all students had an opportunity to share each response.	Approximately 15 minutes
4. Peer-led discussion circles	Students participate in peer-led discussion groups. To support students in participation, they are provided with instruction and guidelines for How to Have a Good Discussion, Discussions Self-evaluation Checklist, Ideas for Entering the Discussion, Fiction: Points to Ponder, Non-Fiction: Points to Ponder. The focus of the peer-led discussion circles is to encourage student ownership of discussions, however teachers are available to serve as coach and support.	Approximately 15 minutes

Students engaged in small group discussions of the books, and the teachers taught mini-lessons, modeled strategies, and held formal and informal conferences with students to scaffold their writing. Students wrote their letters (i.e., introductory, fiction, informational) after they received the letter from their pen pal. By having the adult pen pal initiate the letter exchange sequence, the

proposition was put forth that books are interesting to others outside of the school context, and students were able to benefit from having an authentic mentor text in which good writing was modeled (Gallagher, 2011). Each book reading and letter writing cycle took students approximately two weeks to complete (See Figure 2 for a conceptual flow of the letter-writing series.). Letter analysis focused on the balance of both personal and book-focused questions as these indicated personal choice and inquiry in the conversational nature of the letter exchange. The questions indicated how the students chose to engage with the APP as they inquired about the personal life and perspectives of the pen pal.

Figure 2: *Conceptual flow of pen pal exchange.*

Adult Pen Pals

Intro letter   Fiction letter   Social Studies letter

Intro letter   Fiction letter   Social Studies letter

Student Pen Pals

While the teacher scaffolded the letter writing, the students created the letter content, including what information was shared through inquiry and inquiry responses. Adult and student letters were analyzed to determine the number of personal and book questions each posed and for the type of questions to which participants responded (i.e., personal, book). Three undergraduate research assistants were taught to identify and extract the questions and responses. Questions were then categorized as personal or book related. Ten percent of the letters were used for calculating rater agreement (agreement/ agreement + disagreement), yielding 99% agreement. Rater agreement for book responses was 99%, and for personal responses was 97%. For identification purposes, personal questions were those that inquired about the individual (e.g., looks, pets), while book questions inquired about the shared book (e.g., Do you agree with the main character?) or reading in general (e.g., favorite book). Specific examples of book and personal questions from varying grade levels are provided in Table 1.

Table 1: *Book and Personal Questions*

Book Questions	Personal Questions
Why did Julian want to work all summer long? (3rd grade)	When is your birthday (3rd grade)
Do you like how the story ended? (4th grade)	Do you know where you are going during the summer? (4th grade)
What do you think Julio learned in the new teacher's class? (5th grade)	Did it snow at all in Georgia? (5th grade)

To ensure the accuracy of labeling the types of questions and responses, the undergraduate research team and authors read the books shared between the pen pals and were well-versed in the texts. Figure 3 provides an example of the flow of inquiry in a pen pal letter exchange and indicates questions to which the student and adult selected to respond.

Figure 3: *Questions extracted from a pen pal letter series. Questions that were answered by the pen pal in the following letter are noted (*indicates questions that were answered by the pen pal)*

A LETTER SERIES IN THEIR OWN WORDS

Adult pen pal intro letter:
"Do your have any pets?"*
"What do you enjoy doing when you are out of school?"*
"What kind of books do you like?"
"What are your favorite subjects?"

   Student pen pal intro letter:
   "Do you live with your mom or dad?"*
   "Who is your best friend?"*

Adult pen pal narrative series letter:
"Who is your best friend?"*
"Do you know how to ride a bike?"*
"How did you spend your birthday last year?"*

   Student pen pal narrative series letter:
   "Why did Julian want to work all summer long?"
   "When is your birthday?"
   "Do you have a boyfriend?"

Adult pen pal informational series letter:
"How is the weather where you are?"*
"Did you enjoy reading Washington, D.C.: A Scrapbook?"
"How many of the places have you visited?"*
"Do you have a favorite statue in Washington?"*
"If so, what about it do you like?"*

Quantitative analyses that focused on the measurable aspects of the interactions in the pen pal letter exchanges were conducted. A *t*-test was performed to assess differences between the number of questions and responses. Additionally, a series of ANOVAs were conducted to determine any group differences for the numbers of questions and responses by gender and by reading ability.

Results of the Analysis of the Student and APP Letters

Table 2 displays the average number of questions and responses per letter for both students and APPs. The means and standard deviations provided in the table may appear to go against common logic, as APPs responded to fewer questions than the students; however, it should be noted that students posed fewer questions to the APPs, resulting in fewer opportunities for APPs to respond.

Table 2: *Numbers of Questions and Answers*

		Questions		Answers	
		Personal	Book	Personal	Book
Pen Pals	n	M(SD)	M(SD)	M(SD)	M(SD)
Students	(200)	3.08 (2.70)	1.08 (1.47)	3.08 (2.38)	3.45 (2.55)
Adults	(200)	5.92 (3.36)	7.96 (3.35)	1.97 (1.92)	0.57 (0.93)

Results from a paired-sample *t*-test $t(199) = 10.01$, $p < .000$, determined the students asked significantly more personal questions than book questions. Seventy-four percent of the questions posed by students were personal compared to 43% of those posed by the APPS. Although 53% of student responses to APP questions were related to book questions, this number may be a reflection of the number of opportunities for students to respond to questions, as the adults asked more book questions than personal questions. Students responded to approximately 52% of personal questions and only 43% of book questions posed by the APPs. APPs responded to 64% of the personal questions and 52% of the book questions. Means and standard deviations are provided in Table 3.

Table 3: *Number of Student Questions and Answers by Reading Level*

		Questions		Answers	
		Personal	Book	Personal	Book
Reading level	n	M(SD)	M(SD)	M(SD)	M(SD)
Below	(59)	2.64 (2.99)	0.64 (1.19)	2.68 (2.21)	3.17 (2.72)
On	(76)	3.25 (2.37)	1.17 (1.46)	2.93 (2.18)	3.50 (2.51)
Above	(65)	3.29 (2.76)	1.36 (1.64)	3.62 (2.66)	3.64 (2.47)

Gender

In this study, the sample was comprised of 98 boys and 102 girls. An ANOVA was performed to determine if there were differences in gender for the number of questions and responses. Girls asked an average of 1.33 book and 3.57 personal questions, totaling 4.90 questions across the three letter series. Boys, on the other hand asked a total of .83 book questions and 2.59 personal questions, totaling 3.42 questions across the letter series. At .05 level of significance, there were gender differences in the number of book ($F(1,199) = 5.70$, $p = .018$), personal ($F(1,199) = 6.86$, $p = .010$), and total *questions* asked ($F(1,199) = 10.45$, $p = .001$), with girls asking significantly more questions. Analyses indicate there were no statistical differences by gender for the number of book, personal, or total *responses* given across the letter series.

Reading Ability

Reading levels were determined by academic performance on school assessments (e.g., DIBELS) and teacher judgment, such that the teacher used formal and informal data and professional judgment to determine the most accurate performance grouping of the students. For the purpose of this study, students were designated as reading above grade level, on grade level, or below grade level. Results of an ANOVA indicate there were significant group differences among students in the three reading levels (i.e., above, on, below reading level) pertaining to the number of book questions posed ($F(2,198) = 4.07$, $p = .019$), but not the number of personal questions posed ($F(2,198) = 1.12$, $p = .328$). A post hoc analysis assessing least significant differences (LSD) revealed that at the .05 level of significance, there was a statistically significant difference between the number of book questions posed by students reading below-grade level and

above-grade level (*p* = .017) as well as the total number of questions posed by the students reading at-grade-level and students reading above-grade-level.

An ANOVA, followed by a post-hoc test assessing LSD, determined there were significant differences between the total number of responses, book and personal, provided by the students in the below- and above-grade level (*p* = .025) but not between students below- and at-grade level (*p* = .355) or between students at- and above-grade level (*p* = .149). According to results from the post hoc LSD, at the .05 level of significance, the only statistically significant difference observed between groups was on the number of personal responses by students reading below-grade level and their peers reading above-grade level (*p* = .027). There were no statistically significant differences between reading ability levels with regard to the number of book questions responded to by the students.

Discussion and Implications

This study explored the nature of the written exchange about commonly read books between elementary students and their APPs. For students, the task of responding to letters from an APP required them to read and understand the message, consider the questions posed, and compose an appropriate reply. Students were required to evaluate the formality of the letter's code in order to compose a meaningful and similarly structured written response. The multi-faceted nature of the activity required the student to use multiple strategies for reading and text expression, and it provided a platform through which students could discover and share what they thought about the texts.

We defined an authentic task as one where the purpose of reading and writing occurs within real-world contexts; however, *authenticity* is not always interchangeable with *meaningful,* especially with children (Purcell-Gates, 2002). Herein lies the heart of this descriptive study. By interacting with an authentic audience, students had a real-world purpose for reading and writing about literature (e.g., Brophy, 2008); however, it was the *participants* who determined the meaning in the task by including personal exchanges. The primary purpose of this investigation was to examine the questions and responses exchanged in the pen pal dyads and to determine whether the question and response dialogue differed according to students' reading level or gender, and what that revealed about the conversational aspects of the experience for the students.

This study revealed several interesting insights about the types of questions and responses (i.e., personal and book related) posed by pen pals, and the

question–response dialogue that developed according to students' gender and reading ability. Adults and students were fairly similar with respect to the conversational nature of the letter exchange, as both groups posed and responded to more personal questions than book questions. This finding can be interpreted in a number of ways. Expressed through the choice of what to share in the letters, one of the most meaningful aspects of the pen pal project for the students was getting to know their APP. Aligning with Vygotsky's theory on the social nature of learning, the task afforded opportunities for personal and cultural exchanges that differed from typical school-based tasks.

A number of studies have revealed that girls are more motivated and more proficient readers than boys (e.g., Chiu & McBride-Chang, 2006). In the present study, girls asked significantly more questions than boys (both book and personal), suggesting greater engagement in the social element of the literacy tasks. This finding is consistent with prior research on gender differences in reading and suggests the need for further research on gender differences and authentic learning experiences, particularly focusing on engaging boys in interacting about the books they read.

While there were no differences across reading levels with respect to personal questions, there were differences in the number of book questions asked. As might be expected, above-grade level readers more frequently responded to book questions than at-grade level and below-grade level readers. Students who were identified as reading below-grade level posed fewer book questions and averaged less than one book question across the three letter series. Considering that participants completed two literature cycles (i.e., fictional text, informational text), many of the students who were identified as reading below-grade level asked less than one book question per book read, and several students asked less than one book question across all three letter cycles. Table 4 provides a comparative example of a high-achieving fifth grader's book question exchange with their pen pal with that of a lower-achieving peer. This representative sample of dialogue pertaining to book questions and responses demonstrates the more advanced interactions made by the higher-achieving student.

Above-grade readers averaged approximately two personal questions for every book question asked, providing almost five questions across the three cycles. Students identified as reading at-grade level performed similarly to students reading above-grade level. However, below-grade level readers averaged just over three questions across the three letter cycles asking approximately four times more personal than book questions.

Table 4: *Book Question Exchanges of Higher and Lower Achieving Fifth Graders*

High Achieving 5th Grader	Lower Achieving 5th Grader
Adult: Do you have a favorite book?	Adult: What do you think was the worst part of the election? Have you ever run for class president?
Student: One of my favorite books is "Out of the Dust". Do you like that book?	
	Student: I thought the election was boring because it didn't have that boom. I wouldn't want to be class president because it seems to be too much responsibility.
Adult: I don't believe that I have read "out of the Dust", so I will have to look for it so I can read it. I just finished reading "Class President". I thought that it was a pretty neat story. What did you think?	
	[no book questions for adult]
Student: I thought Class President was a pretty good book. I liked the part when they made the brownies!	
Adult: If you were a pioneer, what do you think you would have enjoyed most?	
Student: I think I would have liked to ride the horses. Did you enjoy Oregon Trail? How do you think the butter would have made itself in the wagon without going over the bumps? What you have liked to do? Which one would you have liked to travel in?	

Findings suggest that responding to the book questions was either more challenging or less desirable for students. In a pen pal exchange between an adult and student, the personal exchange appears to be most salient among all students, especially less-proficient readers. The presence of more personal questions by below-grade level readers may communicate a greater facility or self-efficacy with the social interchange than with the literary one. Perhaps below-grade level learners tended to gravitate toward strengths in making personal connections to compensate for a lack of academic dexterity. Although students who were considered to be below reading level answered on average one book question across the letter exchange, they averaged over three book answers across the exchange. This suggests that students who may have had difficulty initiating discussions about the text, as indicated by the questions posed, were still able to engage in discussion about the text by answering questions from the pen pal.

Perhaps the mentor text and prompting to engage in discussion initiated by the APPs provided both a real-world enticement to engage in text discussion while also scaffolding the discussion through the question/answer modeling provided in the exchange. Additionally, some students may need improved scaffolds to initiate purposeful written interactions with a pen pal. Consequently, the challenge for teachers may be to provide academic scaffolds while simultaneously honoring the authentic nature of the activity, thus allowing for true student expression.

The personal connection of the letter exchange provided opportunity and authenticity, not only in the task of reading a book, but also in the exchange of ideas. As indicated by the types of questions posed, students pursued a personal interaction with an adult and sought to establish that unique relationship. The personal relationship formed between the student and the APP through the letter exchange created an environment where each was willing and able to share unique connections to the book to collaborate in developing a new meaning.

In a standards-driven educational system, it may be easy to focus on the end product and final assessment, thus minimalizing respect to the student and overlooking qualities and interests that influence student learning and classroom performance.

Research supports the use of authentic literacy tasks to motivate and engage students and to ground student learning (e.g., Purcell-Gates et al., 2007) and findings from this research explored how students elected to interact and engage with a pen pal in an authentic task. These results support the idea that students value personal relationships within the authentic learning task. As teachers elect to incorporate a pen pal system in their instruction, it is important to identify how students connect to the activity. These findings indicate that it is through choice and ownership of the writing that students developed a personal relationship that supported them in communicating about commonly read books. These findings focused on the purposeful interactions that were initiated (through questions) and continued (through answers) between the students and their pen pals. The presence of both personal and book-related questions and answers cautiously support that academic standards and skills can be addressed in a way that honors the relationships that students value in a learning community.

Our caution derives from the finding that students were most inclined to respond to the personal dialogue as opposed to the book dialogue and, when given freedom, in written expression. Students more frequently elected to ask and answer questions that supported personal connections with the adult, although many students did ask and answer book-related questions as well. It is also

possible that if the pen pal series was extended to more cycles, the balance of personal and book related exchanges would change. Within a pen pal learning community, we believe there is potential to scaffold and develop students' literacy skills concurrently while students develop a personal relationship with the pen pal; however, more research is needed to explore this delicate balance.

Limitations and Future Research

While analyzing the content of letter writing may often be researched qualitatively, we elected to tell the story primarily quantitatively, and in doing so provided a different perspective of student engagement. Recognizing limitations of quantitative analysis to derive meaning from students' work, we propose the findings from this study complement qualitative research that explores meaningful literacy experiences.

The purpose of this study was not to determine causality, but rather to describe the communicative aspects of the letter exchanges. More research is needed to explore students' meaning-making processes in depth, particularly concerning trends in personal and book questions across a larger number of book cycles. Would the interpersonal 'history' that develops between the student and adult present opportunities for the participants to engage in higher-level discussions of text? With time, would the number of personal questions decrease and the number of book questions increase as students maintained the relationships with their APP? How do teachers support academic growth within an authentic pen pal experience?

Gender differences are also worth exploring in greater depth. Previous research suggests motivation to read for boys and girls increased while participating in an authentic pen pal experience; however, girls demonstrated a significantly higher value of reading and motivation-to-write than boys. This motivation may provide insight to why girls asked more questions to their pen pal. Future research might address potential gender differences regarding the perceptions of authenticity, engaging with an adult reader, and the value and means of building personal relationships.

Conclusion

Maria has potentially much to gain from an APP whose reading and writing skills serve to mentor her and expand her interactions with literacy events. She

also benefits from involvement in an activity that allows her to read in order to share ideas, to write in order to engage in a meaningful interaction with someone in the *real world,* and to practice the skill of getting to know someone during an intellectual exchange of ideas. Having an adult with whom to write about a shared text can be meaningful to students because it embodies real world reasons for writing with the final outcome of a developed relationship rather than a grade.

As educators, we can create the context, but we cannot create the meaning; that has to develop within the learner as they come to see themselves as meaning-makers with others. The results of this study suggest that students pursued a personal relationship with the pen pals, creating a context where authentic and engaging tasks *could* exist. Teachers provided academic scaffolding regarding reading comprehension and overall letter writing, but it was the students who ultimately decided what they wanted to share with and ask their pen pal. It was through this give and take of inquiry and responses that we were able to explore what students elected to share with their pen pals. When children take ownership in their writing within an authentic, yet supported setting, they may choose to engage for personal reasons in a relevant literacy event. It is the personal connection, after all, that makes a pen pal learning experience an authentic one and brings meaning and purpose to learning.

The pen pal exchange has the potential to help students, like Maria, develop the skills necessary to attend to the ideas of others, assume responsibility for understanding others' arguments, ask for clarification, and demonstrate a willingness to explore new ideas. Peterson and Eeds (1990) suggest that rather than relying on comprehension questions or essays, teachers should facilitate students' freedom in choosing how to express their interpretations of texts. When the teacher's role shifts from a didactic approach to a more student-centered, inquiry-based approach, students have the opportunity to transact more fully with the text (Barnes, 1976). Meaningful transactions occur when students are given time and contexts to engage in exploratory talk with teachers, peers, and pen pals.

I look forward to your next letter! From, Maria

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