More Than ABCs: Letter Knowledge and the Development of a Literacy Processing System

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Editor’s note: All names are pseudonyms.

“We think that learning letters is easy. It is quite easy to learn to sing the alphabet in a song but visual recognition of many letters builds up slowly in young children.”
— Clay, 2005b, p. 38

Introduction
To become strategic readers and writers, young children must learn to efficiently integrate language structure, meaning, and visual sources of information in reading and writing. Particularly challenging for young learners is the processing of visual information, both the conventions of print and the random symbols, or letters, used in the English language. As well, the teaching of alphabet letter names along with young children’s mastery of letters and their links to sounds are remarkably complex (Clay, 2005b; Reutzel, 2015). Teachers need to carefully observe what young children have learned about letters and the speed with which they use letter knowledge to solve words and construct meaning as they read and write continuous text. Teachers also need to be aware of particular instructional approaches that enable children to use letters effectively and avoid those that might confuse or discourage letter discrimination for a particular child. In Reading Recovery this is especially important, as the aim is to optimally support children’s learning beginning with where they are currently, what they know well, and what they need to learn how to do next in their literacy learning journey.

To that end, in this article we present a range of issues related to letter learning beginning first with a brief review of the literature as it relates to learning the symbol system of letters including visual discrimination and the role of fast visual processing. Second, we discuss examples of children’s letter knowledge as revealed in their Observation Survey tasks and the ways they make links and increase their control over letter knowledge. Third, we explore Clay’s teaching procedures for letter learning and letter work, with examples from several children’s Reading Recovery lessons including isolated letter work at the whiteboard, the use of the child’s alphabet book, and support for letter formation. Fourth, we discuss one child’s idiosyncratic letter knowledge and how it may inform planning for her learning. Fifth, we invite colleagues to reflect on what can be learned through careful observation as we work with any child’s patterns of strength and create opportunities for the child to extend his or her control over letter knowledge, its use in continuous texts, and its role in the child’s development of an effective literacy processing system for reading and writing.

Learning the Symbol System of Letters, Visual Discrimination, and Rapid Visual Processing
The development of visual perception begins at birth, yet formal reading and writing instruction must take into account each child’s acquired ways of attending to the visual information in print (Clay, 2013). Children must first learn to perceive the symbols that represent print; knowing what to look for, where to look, and which way to look. Although visual information in the form of pictures, objects, and colors may be easily recognized, letters are not as easily perceived and must be learned. This learning involves the visual sense and the ways to recognize and distinguish each symbol one from another at the rapid speeds required to interpret and construct messages fluently in reading and writing. In order to learn to read and write, young children must learn to distinguish between numbers and letters (zero versus the letter O), use print signposts (comma versus quotation marks), and determine what is “to notice” in terms of letter
sequences (for example g paired with n in sign is silent; but not in signal). At the same time, children learn that recorded messages must correspond to the letters they see with respect to the serial order of print. What is initially a slow and sometimes hap-hazard process involving ‘wandering eye’ (or hand) movements comes under the child’s increasing control as he learns to integrate all levels of language at the letter, sound, word, and sentence levels— with each one as important as the other—in order to read and write successfully. (See Clay, 2001, chapter 2 and chapter 4; and Clay, 2014, chapter 3 for detailed discussions of visual perception and visual attention to print.)

Although letter learning can be difficult for some children? First the learner needs to know where to look, what to look for, and the orientation of letters while also noticing the differences among letters and the fine detail within letters. For example, only the placement of the straight line first, at the left, distinguishes b from d. Likewise, c is quite similar to o, a resembles o with only the addition of a small line at the lower right of the circle, and r is a version of an incompletely formed n. Once a letter is learned it becomes much easier to distinguish it from another letter based on a subset of distinct visual features: dots, partially open and completely closed circles, straight and curved lines, diagonal and horizontal lines, and the position of each of these marks in proximity to others. At times, a teacher may become dismayed because a child misidentifies b as d or p, however rather than an error of perception, it is quite possible that the child has merely misidentified or forgotten the letter because its name rhymes with or sounds like another letter’s name (Vellutino, 1979). To illustrate, some letter names may sound similar (J/G), rhyme (U/Q, C/Z) or signify a word...

Although young children learn to pick up visual information quickly, perceiving letters is gradual, can take up to a year of instruction, and is best accomplished through reading and writing continuous texts.
Children must learn to shift their attention to and fro from language and meaning to print even at the letter and subletter levels to problem solve flexibly and comprehend. And, very importantly, teachers must be aware of the potential for children’s confusion in letter learning and letter naming in order to effectively support their journey toward becoming proficient readers and writers.

Children’s Ways of Knowing Letters

“Efficient school programs allow children to expand their awareness of letters from whatever its level is when they walk in the school door” (Clay, 2014, p. 47). Letter learning is sensitive to classroom instruction and we can often see its impact in our students’ responses (Clay, 2013). A teacher’s careful observation might reveal how children work to retrieve their letter knowledge. In the following illustrations, each of the four students scored between 20 and 40 on the Letter Identification task (U.S. Stanine 1); however, notice how differently they respond when confronted with a letter for which they cannot give the name. Consider the unique ways they use what they know from their kindergarten experiences to make sense of the task.

Bradley

In Bradley’s kindergarten classroom the teacher planned frequent, meaningful activities with children’s names that supported letter learning. Whether part of the daily routine, such as taking attendance and lunch count, or presented as center activities during which children worked in pairs to match students’ names with their photos or “sort” children into various groups such as favorite recess activity, these cleverly planned opportunities sparked children’s interest and supported their letter learning much more than the “letter of the week” approach. While engaged in these activities, it was common to see and hear children thinking through their decisions as they worked together:

Student 1: (pointing to a card with the name Carl) This can’t be Cassandra; it’s too short.

Student 2: No, that’s Carl. His name ends with l. Here’s Cassandra (selecting the Cassandra card).

Fortunately, Bradley could draw on his rich classroom experience when given the Letter Identification task. He knew several letters by name and identified 12 additional letters by naming a family member or classmate whose name began with that letter. Bradley’s knowledge about letters and names was useful during writing as well. Several weeks into his lesson series he wanted to write about a Batman costume he saw at the store. As he worked through the writing of his story with a bit of help from his Reading Recovery teacher, he paused at the word costume, turned to his teacher and said, “Costume. Does it start like Katy or Cameron?” It seems he was thinking “I know there are two different ways this sound can be represented; which is it?” His repeated experiences with children’s names supported his discovery about the idiosyncrasies of letter-sound links and the complexity of our spelling system.

Logan

Logan identified many letters by name and several others by characters’ names he learned in a kindergarten program, along with the initial sound of those names. For example, Logan said, “Hattie Hedgehog /h/” for the letter H and “Leo Lion /l/” for the letter L. It appears that the colorful characters and related stories of their escapades had captured his attention in the classroom, and he associated their names and initial sounds with the corresponding letters. Logan retrieved this particular knowledge about letters more easily than the letter’s name in several instances, thanks to a classroom teacher who designed learning experiences that captured his interest and brought meaning to abstract letter forms.

Zoe

Zoe came from a classroom in which students wrote, read, and discussed continuous text for a large portion of the language arts block. Her responses on the Letter Identification task reflected these experiences. She frequently responded to the task with high-frequency words such as like for the letter l, come for the letter c, and go for the letter g. In terms of letter knowledge, Zoe had an advantage over students in some other classrooms because she was immersed in meaningful reading and writing activities, and as a result, was able to relate letters to words she read and wrote.
**Mason**

Mason spent a good deal of time separated from his kindergarten classroom for what his school characterized as problem behavior, therefore it is difficult to know what kindergarten practices, if any, contributed to his singularly unique approach to letter identification. In the fall Observation Survey assessment, Mason identified 23 letters, naming a few of them quickly. However, often he quietly recited the alphabet and stopped at the letter he wanted to name, “A, B, C, D, E, F, G, H, I, J—that’s J” and “A, B, C, D, E—that’s E.” It is important to note that he was not looking at an alphabet chart at the time and no printed alphabet decorations adorned the room. It appeared that his route to recalling letter names was simply to recite the alphabet and stop at the letter that he associated with the printed symbol. Obviously, this letter naming retrieval strategy is extraordinarily inefficient, but clearly it was Mason’s “way in” at the time.

Although letter names provide the most-expedient way to refer to letters, evidence suggests that Zoe, Logan, and Bradley “know” letters in a variety of other ways as well. We can make inferences about their letter knowledge from their responses supported by our knowledge of the literacy practices in their classrooms, and we see many strengths to build upon in lessons. In contrast, Mason’s approach to letter naming is clearly much less efficient, yet, it is unwise to establish expectations for his literacy learning based only on this initial assessment. Mason’s teacher will need to discover his strengths and start from there to increase his ways of knowing and help him find more-efficient ways of working with letters. Because each of these children displayed distinctive ways of knowing and using letters, their teachers will need to build on each child’s current letter knowledge and expand its use as a source of information in text reading and writing.

**Becoming aware of detail and learning to differentiate letters**

We can sometimes “see” children learning to differentiate letters, one from another, as illustrated by Adam who began Reading Recovery able to identify six letters. In the course of reading and writing during Roaming Around the Known, he learned to write the word I, which also appeared in his little books in two different forms: I and í. In an early lesson he wrote T on a scrap of paper, presented it to his teacher and asked “Does I sometimes look like that?” His teacher responded “No, that’s a T. The I usually has a top line and a bottom line, like this.” It was interesting to see how Adam was sorting out his new learning, and it is easy to forget the complexity involved in differentiating letters based on the smallest details. Interestingly, while typing the uppercase T for this manuscript, we noticed that the font puts serifs on the lines at the top and bottom of the letter. Although that is not the version of T that Adam had asked about; nevertheless, he would soon need to learn T in all its variant forms, including the typeface with serifs. Several examples of the variability in fonts that might challenge a young learner are displayed here:

![Figure 1. Alec’s Writing Before Attention to n and h](#)

![Figure 2. Alec’s Error for wish](#)

![Figure 3. Alec’s Self-Correction of wish](#)

Sometimes children correctly identify most or all letters on the Letter Identification task—even those that are quite similar—but have not yet learned to write those letters correctly in every detail. Alec correctly identified all letters on the Letter Identification task, yet he often interchanged n and b in his writing. It seemed that he did not realize he should attend to the length of the vertical line as a distinguishing feature. Figure 1 shows Alec’s writing before his teacher...
taught him to attend to the difference. Notice how he has formed the letters n and h.

The teacher gave Alec a magnetic letter for n and h and drew his attention to the difference between the two letters. He also looked at these letters in two known words (no and have) in a familiar book, confirming the difference. Then the teacher guided his attention as he wrote the two letters, asking Alec to check to see that the line was in proper proportion for each letter: a short line for the n and a tall line for the h. For the next week, when the letters n or h came up in Alec’s writing, his teacher prompted him to think about how the letter should look before writing it. Soon Alec began monitoring the formation himself. Figures 2 and 3 show an example of Alec monitoring his letter formation while writing the story “I wish he was on my team or I was on his team.” Figure 2 shows Alec’s initial error on the working page of his writing book, when he wrote wish as wisn. He quickly self-monitored, asked for correction tape, and fixed his error by shortening the s and lengthening the line on the h. Figure 3 shows the corrected version.

As the examples of Adam and Alec illustrate, learning to distinguish each letter from all the others requires close attention to fine detail. Yet, the proficient young reader must learn to make these distinctions quickly and flawlessly. The observant teacher will note students’ hesitations and confusions, considering the children’s work with letters in isolation and on-the-run during reading and writing. Only then will she be prepared to efficiently address the intricacies of letter learning.

Exploring letter knowledge using the six tasks of the Observation Survey

When gathering information about children’s letter knowledge and considering their useful strategic activity with letters, it is helpful to look across all six tasks of the Observation Survey. Clay asks us to consider children’s movements in forming letters, their visual awareness of letters (e.g., which letters are identified and attended to, which are difficult), and how they use the sounds of letters while writing (See Clay, 2013, p. 135). Children’s writing gives a good indication of what they are attending to in print (Clay, 2013). The fall Observation Survey tasks for Lexi, below, provide an opportunity to consider the kinds of knowledge she has about letters and how she uses that knowledge. Lexi’s scores for the Observation Survey tasks all fell into Stanines 1–3. Additional details follow, along with a reproduction of three of the tasks.

Letter Identification. When asked what the letters were called Lexi said, “ABCs.” She correctly identified 14 uppercase and 16 lowercase letters by name, had five confusions, and offered no response for the remaining letters (see Figure 4).

Writing Vocabulary. Lexi wrote six words: her name, like, I, see, me, and look (see Figure 5).
Hearing and Recording Sounds in Words. Lexi wrote some high-frequency words and was able to record several dominant consonants and some vowels correctly (see Figure 6).

First let’s consider what Lexi knows from the Letter Identification task. It appears that she has a preference for identifying letters by their names and she refers to them as “ABCs.” Several of her confusions occur with letters that look similar: p/q and d/b are mirror images of each other. The attempt v/z might occur because the letters look similar, produced with angled lines, or because the names of the letters sound similar. Likewise, j/g look somewhat similar with a curved tail, have names that sound similar, and sometimes represent the same sound (jump, giraffe). The letter names for U and Q sound similar as well. It is interesting to note that some of the uppercase letters for which she gave no response look identical to the lowercase letters she identified correctly or vice versa (e.g., Zz, Ss, Xx, Vv).

Analyzing the two writing tasks, we learn more about Lexi’s letter knowledge and strategic activity with letters. She seems to have good control over letter formation and can write many letters easily without a copy, including several that she does not yet identify by name. When writing, she is able to slowly articulate words and record some consonant and vowel sounds correctly. We also note some confusion with the orientation of letters. It appears that she tried to write a g at the beginning of go and at the end of big and dog; however, the g is backwards and resembles an e. Lexi seems to have a preference for using mostly lowercase letters, which is what we normally see in printed texts and is also an expectation for children’s writing in first grade. One wonders if she chose to make a capital B (big) and a capital D (dog) because she is unsure of the orientation of the lowercase letters. She misidentified b as d on the Letter Identification task but correctly identified the d. Lexi identified the B correctly and gave no response for the D; however, when writing dog (Doe), she actually told the teacher, “This is a D” while showing the teacher the D. It is reasonable to assume that her letter knowledge is still tentative and varies by context.

Concepts About Print. Now let’s consider what we can learn about Lexi’s letter knowledge from the Concepts About Print task. Three items are particularly relevant to this discussion:

1. On item 19, the tester points to a capital letter and asks the child to “find a little letter like this.” When asked to find the lowercase form of I, she correctly indicated the i. It is interesting that she demonstrated her understanding of the relationship of I to i, yet she had not identified I on the Letter Identification task.
despite writing I as a word on both writing tasks. When Lexi was asked to find the lower case form of M, she identified n. Lexi identified M and n correctly on the Letter Identification task and was able to produce both lowercase m and n on the writing tasks.

2. On item 21 of Concepts About Print, Lexi was able to demonstrate her understanding of the term letter by correctly showing one letter and two letters.

3. Item 24 asks the child to “Show me a capital letter.” In response Lexi pointed to a lowercase e in the text, indicating she probably has not yet sorted out the categories of capital and lowercase.

Text Reading. It is important to consider texts read with at least 90% accuracy when determining students’ useful strategic activities. Lexi read the Level 1 text A Bird Can Fly (Scott Foresman & Co., 1979) with 93% accuracy. She made one error, omitting the word fly on the last page. She was able to read the book Dad (Randell, Giles, & Smith, 1996) with 100% accuracy after the teacher first read it to her. Lexi gave no indication of attending to letters while reading either text. On the hard text, Hats (Scott Foresman & Co., 1979), Lexi omitted has on the first two pages then substituted have for has on the next three pages. Although these words both begin with h, the tester noted that she could not be sure that Lexi was looking at the print. See Figure 7 for a summary of Lexi’s reading of easy, instructional, and hard texts.

In addition to the discussion above, what else do you notice about Lexi’s letter knowledge, formation, and use as you look across each of her Observation Survey tasks? We suggest that readers consider the questions Clay (2013) asks us to address when thinking about useful strategic activity with letters on page 135 of An Observation Survey of Early Literacy Achievement. Consolidating an analysis of this information on the Observation Survey Summary (side 2) is a helpful starting point when planning for children’s learning opportunities.

Making links and learning more about letters

As children progress through their series of lessons, they learn more letters and learn more about letters, consequently teachers must continually revise their understanding of students’ letter knowledge and its application in reading and writing texts. Mason, discussed earlier in this article (see page 8) began Reading Recovery trying to recall letters by reciting the alphabet, yet he soon started linking letter forms to the words and sounds he knew well. For example, he recognized the word
LEGO from the movie and the toy of the same name, so the word and its picture became the reference for L in his alphabet book. The excerpts below illustrate how Mason was able to use the L-Lego link to problem solve on continuous texts and also show how his actions become more-efficient over time.

1. Mason substituted farm for Look, the first word on the second line of the page. (The error made sense because he ignored the period at the end of line one.) Then he stopped, said “Lego,” and finally self-corrected saying, “Look.” It appears that the item Lego in his alphabet book helped him monitor and correct his error.

2. Mason was writing a story about a game he wanted to play. The teacher drew boxes for play on the working page of his writing book, and Mason slowly articulated the word as he pointed to the boxes and wrote a p in the first box. He then articulated the word again saying, “p-l-Lego! It’s L,” and wrote the l in the second box. Again, Mason used the association from his alphabet book to match the sound he heard with the letter he needed to write.

3. Mason was reading a book about a lizard, which he had thought was a gecko during the previous day’s first reading. During his running record, he came to the word lizard and said, “lizard, /l/, yep!” and quickly continued reading. Rather than making three moves (lizard-Lego-/l/) to confirm his attempt, he was able to quickly confirm using just the first letter — a more-economical move and an indication that he was increasing his strategic control over letters.

The teacher aims to support letter learning by providing optimum support with minimum confusion. In one early lesson, the teacher was working with a child who was now able to identify both the upper- and lowercase k and it was time to solicit from the child his choice for a link to that letter to use in his alphabet book. He smiled broadly and offered “cake.” With this contribution from the child, the teacher must make a swift decision: Accept the child’s link which sounds like k at the beginning but doesn’t correspond to the correct first letter of the word, probe for another more desirable link from the child, or perhaps offer some alternatives that might be familiar to the child (kite, key, Kansas, etc.) from which he might choose. Clearly, cake is not an ideal choice and Clay (2005b, p. 37) cautions: “Far too often early literacy teaching misrepresents letter-sound relationships to children.” It is important to select a link that matches both letter and sound, so as not to further confuse a young literacy learner. A similar confusion may result when the picture is not well known by the child, such as a picture of an alligator for a which the child consistently calls a crocodile, or when lion is confused with tiger.

Attending to letter sequences
Jasmine entered Reading Recovery with strong oral language skills and a good sense of how stories work. She had been making rapid progress in both reading and writing and had begun to integrate all sources of information while also reading fluently. In recent lessons, her teacher noticed that Jasmine’s reading errors were often a very close approximation of the words in texts. Even though her substitutions were meaningful, it seemed that Jasmine had developed a haphazard approach to print, had become satisfied with her initial attempts, and neglected to look precisely at the sequence of letters within visually similar words, as evidenced on some recent running records...
(e.g., stopped/stayed, pulled/played, last/fast, left/felt, and sitting/standing). While reading yesterday’s new book, *The Lion and the Rabbit*, Jasmine substituted *after* for *fast* and although the substitution fit, neglected to attend carefully to the detail of letters within words and take the initiative to correct the error.

Jasmine: The deer ran *after*… and it got away.

Text: The deer ran *fast*… and it got away.

Jasmine’s teacher resolved to intercept this inefficient responding by demonstrating how to look carefully at the arrangement of letters within words. At the end of the story, after asking her to monitor (Were you right?), Jasmine quickly responded “yes,” then looked at her teacher and stated, “it’s *fast*” while neglecting to even glance at the text and seemingly unsure of how to confirm her response. Determined to help Jasmine use visual information more efficiently, her teacher capitalized on the opportunity to demonstrate precisely how to look carefully at the sequence of letters in words in continuous text and check on herself using the procedure found at the bottom of page 108 in *Literacy Lessons Designed for Individuals Part Two: Teaching Procedures* (Clay, 2005b).

Teacher: Yes, and what letter would you expect to see at the beginning of *fast*?

Jasmine: *f*

Teacher: And what letter after that?

Jasmine: *a*, then *s, t*.

Teacher: And are those the letters you see (sliding a white card across the letters to reveal them one at a time)?

Jasmine: Yes, that looks right now (initiating a slow check beneath the word using her finger to look closely).

Teacher: That’s it. So, next time as you say the word, be sure you’re checking for all the letters.

**Teaching Procedures and Rationales: Working with Lexi**

We now invite you to consider how to build on one child’s idiosyncratic knowledge of letters and consider how Clay’s teaching procedures for letter identification, attending to letter formation, use of the alphabet book, and learning a new letter, are used to support and extend Lexi’s control over letters. As you read about the teaching decisions, you might find it helpful to review Lexi’s Observation Survey tasks, presented earlier.

**Working with letter identification**

Children need to learn to attend to features of letters so that each can be “rapidly distinguished from all similar letters” (Clay, 2005b, p. 25). Manipulating or sorting letters in the very brief segment of the Reading Recovery lesson affords the child an opportunity to attend to, discriminate, and recognize letters, gaining control over them with increasing speed and without the distraction of their arrangement in words or lines of continuous text. As Clay advises, “Always do a little letter work after taking the Running Record in the lesson” (Clay, 2005b, p. 29). Not an optional extra, the letter identification activity should not be omitted from a child’s daily lessons. Therefore, Clay cautions, help with letter learning “should always be a part of early intervention lessons but should take little time. The child cannot afford to waste time on letter-learning activities or games when he could be reading well-chosen books” (Clay, 2005b, p. 31).

For Lexi, one of the first letter identification activities at the upright whiteboard immediately following Roaming Around the Known lessons includes an arrangement of one or two of each of the following magnet letters: uppercase C, O, Y, A and lowercase letters c, o, y, i (see Figure 8). Notice that the letters chosen by the teacher for this activity were correctly identified by name on the Letter Identification task on entry to her program and had not been used to identify another letter as in U/Q, v/z, p/q, j/g. The teacher also minimizes the potential for Lexi to confuse letters in this activity by deliberately not choosing letters for which one of the identical uppercase or lowercase pairs (K/k, P/p, S/s, Xx, Z/z) were unknown or used to identify a visually similar letter (v/z and p/q).

Notice also that the colors and types of the letters chosen (foam, smooth plastic, Quercetti) are random. Lexi...
stands facing the whiteboard while her teacher invites her to place the letters into two groups (upper- and lowercase) which she does easily and quickly. When finished, she spontaneously names the letters and notices that each has a mate, except A and i. In each subsequent lesson, Lexi’s teacher arranges additional opportunities to identify and sort letters at the whiteboard, taking care not to place visually similar letters side by side until they are easily distinguished. As Clay cautions: “If children have confused any two letters repeatedly then relearning those letters will not be easy for them” (Clay, 2005b, p. 29). The teacher adds letters that are becoming known to the array and removes some that are well under control, inviting Lexi to categorize them. This can include a variety of options: sorting by color (an easy task, reserved only for a few children in early lessons), similarities, differences, and arbitrary categories such as upper- and lowercase pairs (Clay, 2005b, p. 28). One of these activities from a later lesson in which Lexi has added significantly to her repertoire of known letters is illustrated in the transcript of the interaction with her teacher below. Clearly, Lexi has become quite flexible in working with letters in isolation (see Figure 9).

Teacher: Find every t as fast as you can.
Lexi: (quickly moves the letters to the side) Done!
Teacher: Okay, now you tell me to find a letter.
Lexi: (while looking at the letter arrangement on the board) Okay, find every h.
Teacher: Hmm… (moves two of the h magnet letters and hesitates over the n, but does not move it). Yep! Now you find every u.
Lexi: (quickly moves the one u and smiling turns n upside down) This is a u, too!
Teacher: (noticing Lexi’s flexible use of letters) No it isn’t! That’s n!
Lexi: Well, now it’s a u! And this is really n (smiling playfully and covering the top of the h with her finger).
Teacher: Very clever!
Lexi: Yep! (proceeds to rapidly identify the remaining letters as she touches them one by one)

Attending to letter formation
On her Observation Survey, Lexi demonstrated an awareness that the sound /g/ is represented by the letter g; however, she consistently recorded that sound with a backwards g that resembled an @. During writing activities in Roaming Around the Known, Lexi’s teacher encouraged her to write the sounds she could hear, but she did not want to further habituate Lexi’s letter reversal. After reading the book The Go-Carts (Randell & Giles, 1996), Lexi wanted to write about a time she and her brother rode go-carts. When Lexi got to the part of her story containing the word go-carts, she said, “I know how it starts, it’s G.” The teacher exclaimed, “It sure is!” and put a magnetic letter g in front of Lexi then wrote it clearly in her story, while saying “around, up–down, up” as she matched the rising and falling pitch of her voice to the up and down movements. On the next page of her go-cart story, Lexi wanted to write the go of go-cart so the teacher put the magnetic letter g in view and said, “I’ll help you get started.” The teacher guided Lexi’s hand as she wrote the g. Each time Lexi heard /g/ during writing during the next several sessions, the teacher pulled out the magnetic letter and Lexi correctly formed the g.

Several weeks into her lesson series, the teacher noticed Lexi was consistent with her formation of g when writing go, but still demonstrated some lapses in formation when g appeared in other words. Clay (2005b) provides a useful framework for understanding what it means to “know” a letter or a word that helps us understand these lapses:

We can think of a new response coming into a child’s repertoire of literacy behaviours as being

- new
- only just known
- successfully problem solved
Lexi’s teacher knew it was important for g to be well known and consistently written with the proper orientation, so she addressed its formation when it came up in the context of writing, using some of the procedures found on pages 23–32 in Literacy Lessons Part Two. She modeled the formation of G on the whiteboard in large print, matching her movements with her talk: “around, up–doowwn, up.” Then she had Lexi write the letter several times guided by verbal directions and using one or two of the following media before writing it on the working page of her writing book: chalkboard (with chalk or water on a paintbrush), whiteboard, sand tray, or in the air. Bringing the behavior under verbal direction for a short time helped develop the desired pattern of movement, and Lexi’s use of different media and the horizontal and vertical surfaces helped her become more flexible with her knowledge.

In subsequent lessons, the teacher took care to intervene to prevent the unwanted response from occurring by directing Lexi to the working page and saying, “Remember you’re going to start writing that g by going around—” or “Try the g up here first.” Most of the letter formation practice took place on the working page of the writing book by this time and verbal direction were phased out. With continued practice in writing continuous texts, Lexi’s letter production speed increased, thus taking what Clay describes as the second journey in letter learning:

- moving from very slow,
- to very fast production or very fast recognition measured in thousandths of a second (or milliseconds). (Clay, 2001, p. 20)

Using an alphabet book
Beginning in lesson 11, Lexi’s teacher introduced her to an alphabet book. They began working together to enter Lexi’s known letters and a key picture that she associated with each letter. During Roaming Around the Known, Lexi had consistently demonstrated that she knew the sound /g/ was associated with the symbol g and the word go-cart. She surprised her teacher by referring to the symbol with the correct letter name as well, knowledge she had not shown on her Observation Survey. Lexi’s alphabet book had a page with the letters Gg accompanied by a simple drawing of a go-cart (see Figure 10). The typeset g was not entered because she did not yet know that form.

A few weeks later, Lexi paused during the first reading of the new book, unsure whether she was correct. The interaction below describes the use of the alphabet book to support Lexi’s self-monitoring.

**Figure 10. Lexi’s Alphabet Book**

| Text: Dog food! Dog food! All I get to eat is dog food! |
| Lexi: Dog food! Dog food! All I... (hesitates) get (stops) |
| Teacher: Why did you stop? |
| Lexi: I’m not sure if it says get. |
| Teacher: (pleased) You’re checking on yourself! (opens Lexi’s alphabet book to the Gg page) Would get start like that? |
| Lexi: (deliberately articulates the initial /g/ sounds) get, go-cart. Yes! |
| Teacher: Now read it again and see if get makes sense. |
| Lexi: Dog food! Dog food! All I get to eat is dog food! It makes sense. He’s tired of always eating dog food. |
| Teacher: (smiles) You checked to make sure it made sense and looked right. |

In this teaching interaction, Lexi correctly read “All I get,” but she was unsure whether she was right and did not seem to know how to check on herself. The teacher let Lexi know that checking on herself was a good
thing to do and quickly provided the alphabet book to help Lexi monitor with visual information. Her question “Would get start like that?” prompted Lexi to think about the initial sound of get, represented by the letter g, and check it against go-cart which Lexi already associates with g. After confirming the letter-sound association, the teacher shifts Lexi’s attention to meaning. She asks Lexi to consider whether get makes sense in the context of the text on this page of the book, and Lexi rereads the page, continuing on to the end of the sentence to confirm that get does indeed make sense. The teacher made several astute moves to support Lexi’s development of strategic activity in this interaction. She made it easy for Lexi to learn by helping her use what she already knows (g associated with go-cart); she gave Lexi two ways to check on herself (through meaning and letter-sound relationships), and she kept the focus on strategic activity (self-monitoring) rather than making Lexi think reading is about remembering words or being right. Throughout the exchange, the teacher kept the interactions brief and supportive.

Learning a new letter
Clay (2005b) reminds us that the “child can only make use of what he can recognize as familiar in some way” (p. 25). Similarly, “children who know only a few letters will learn words slowly” and “fast recognition of letters allows the reader to make faster decisions about words” (p. 24). Therefore, learning letters and learning about letters enables children to proceed with confidence in reading continuous text, integrating all sources of information—meaning, structure, and visual—to read fluently and problem solve on the run.

Because Lexi has learned to write lowercase g fluently and it is becoming well known and recognized in several contexts, her teacher has determined that now is an appropriate time for learning a new letter to be learned. Lowercase a was chosen because evidence from the Observation Survey tasks and later in Roaming Around the Known lessons suggests that a is coming under Lexi’s control. First, Lexi knows something about the letter since it was written correctly in the words at, and in her attempt to write take (written as tac) in the Hearing and Recording Sounds in Words task. She correctly identified am on the Ohio Word Test, and she was able to identify its uppercase form. Second, the lowercase a is in her last name and it is a letter that appears frequently in words (unlike her unknown letters x and q). And third, writing the lowercase a involves the same movement as in the formation of the top half of the lowercase g that she is now able to write fluently.

Lexi’s teacher begins by introducing the letter with one magnet letter at the whiteboard stating, “This is the letter a,” to which Lexi adds, “it’s in my last name.” Her teacher replies, “Yes, and it goes with this uppercase letter that you know” (producing the magnet letter A and placing it on the whiteboard). “That’s A!” observes Lexi. “Yes,” replies her teacher who then invites Lexi to notice the shape and feel of the magnet letter a and asks her to trace it with her finger. Lexi’s teacher also invites her to write the letter on the upright whiteboard, guiding her hand only if necessary, while she describes the formation using the words “around, up, down.” Lessons that follow include additional opportunities as needed to produce the a by forming it in the air, on sandpaper, and in a sand tray, and writing it on a small individual whiteboard or chalkboard. Over subsequent lessons, several other letter learning activities will include identification of a in an array of magnet letters at the whiteboard along with some of Lexi’s well-known but visually dissimilar letters (e.g., t, i, x) and later in the more-challenging task of its identification among known and visually similar letters (e.g., Ω, o, 9). Additional opportunities arranged by her teacher include identifying a in the first letter position in a familiar book or in one read to Lexi by her teacher or learning one or two new words (and, at) that start with a (Clay, 2005b, p. 29). As well, both the uppercase- and lowercase letter a will be added to the alphabet book with an object chosen or a picture drawn by Lexi that serves as her link to the initial sound (e.g., ant, apple, antlers) of the letter. Very importantly, work with letters on the work page and in writing stories should link to work with letters in reading. As Clay states, “Work to ensure that what is learned in one place is transportable to another place” (p. 47). The aim in all of these activities is to work first with what Lexi knows and arrange opportunities to extend her learning ensuring that the letter will become well known in its variant forms (p. 46) in the service of fluent reading and writing of continuous texts.
Analyzing Letter Knowledge and Planning Learning Opportunities for Elijah

It is important to consider children’s letter knowledge from several angles, looking across the Observation Survey tasks. We invite you to join with a colleague to analyze and discuss the following Observation Survey data for Elijah on this and the following page as we did earlier for Lexi. Listening to others’ ideas helps us remain open to possibilities, giving us the opportunity to entertain alternative perspectives. As you work together, consult the “Useful strategic activity with letters” section of An Observation Survey (Clay, 2013, p.135) to think about his letter knowledge as related to movement, visual awareness, and sounds.

The following questions provide additional guidance for your discussion. We will share a few of our observations following your analysis.

Looking across tasks…

What evidence do you have of letter knowledge that is well controlled? …that is tentative, or known with lapses?

Do you see any patterns among his confusions? What might be contributing to this difficulty?

How would you summarize Elijah’s “useful strategic activity” and “problem strategic activity with letters”?

How will you help Elijah become fluent and flexible with letters during Roaming Around the Known? Consult chapter 4 in Literacy Lessons Part One (Clay, 2005a) as you have your discussion.

What behavior(s) will you plan to intercept, so as to avoid habituating patterns of error?

In terms of ‘moving into instruction,’ what priorities would you set for the following and why?

• letter identification
• attending to letter formation
• using an alphabet book
• learning new letters
In thinking about letter knowledge that was well controlled, we wonder if you noticed that Elijah knew A and L in several contexts. He identified all three forms of A (A, a, a), heard and recorded A several times (in his attempts to write A, at, am, and take), and recorded lowercase a when he wrote his name. Similarly, he identified L and l, wrote L and l (the latter in his name), and read little for like on the Ohio Word Test, both words beginning with l.

Given his ability to hear and record sounds, do you think writing appears to be a relative strength for Elijah? When you thought about opportunities for him to become fluent and flexible, perhaps you discussed the importance of providing many opportunities for writing during Roaming Around the Known. Writing will give him a chance to share his ideas, compose a message, and record many sounds independently. As he writes, perhaps he will become even stronger at hearing and recording sounds in words and engage more easily with writing and reading activities. He might also enjoy rereading his messages either independently if he is able to, or with his teacher’s help, thus fostering the reciprocity of reading and writing.

Undoubtedly you also discussed letter formation concerns, as with the letter h, and symbol confusions such as b/d, p/q, and q/g that would need to be sorted out once instruction began. Thus it is likely you also set some priorities for letter learning that you gleaned from Elijah’s comments on the writing tasks in which he asked the tester how to write m, g, and k. Likewise, quite possibly you have considered which letters to place in his alphabet book and how to find out what links he has already made to particular letters.

We invite you to further engage in reflection, analysis, and collegial discussions of letter learning opportunities that you will create for the children you teach. The possibilities are limitless and dependent on your astute observation of children’s strengths, professional knowledge, and powerful insight.
Conclusion
Clearly, letter learning is foundational to becoming a successful strategic reader and writer. Evidence demonstrates that high-progress literacy learners gain control over letters easily and by the beginning of their first year of formal reading and writing instruction, while low-progress learners encounter difficulty with this challenging task. Yet, as we have illustrated, teachers can help children learn letters and their associated sounds to become fluent readers and writers of complex texts. Teachers of the most-challenged learners can have an extraordinary influence on letter learning. Valuing children's current letter knowledge and designing appropriate reading and writing tasks using Clay’s teaching procedures support children in becoming strategic readers and writers and make a positive impact on children’s continued learning and literacy achievement.

Authors’ note
In addition to the 2005 Clay text, Literacy Lessons Designed for Individuals Part Two: Teaching Procedures, more information about letter learning and visual perception may be found in the following Clay texts:

Change Over Time in Children’s Literacy Development (2001)
• Chapter 1 – Extra Power from Writing in Early Literacy Interventions
• Chapter 4 – Adjusting the Visual Working System for Literacy: Learning to Look at Print

Becoming Literate: The Construction of Inner Control (1991)
• Chapter 5 – Introducing Children to Print at School
• Chapter 12 – Visual Perception Strategies: One Kind of Inner Control

References

Children’s books cited