WW Newsletter # 95: Making sense of orthography from the start -- SWI in the early years

This WW Newsletter was inspired by the lead-off article by Claire Wasserman-Rogers. Her piece was originally shared as a classroom blog for parents of children in the pre-school class she co-teaches with Carolee Fucigna at the Nueva School. I worked with Carolee and the rest of the staff at Nueva as a visiting scholar "SWI Coach" for the 2015-2016 school year. They also host my annual "SWI Nueva Summer Institute." As soon as I saw this blog, I contacted Claire and Carolee to see if we could get permission to share this publicly.

This classroom account has landed at a crucial time in the research. Over 2017-2018, I've published a number of articles (including one that came out last month in *Current Directions in Psychological Science*) with my brother Jeff Bowers (a cognitive psychologist in the UK), and also chapters with John Kirby. (References on final page.) These publications show that the best current research evidence is that (a) morphology should be a feature of instruction with younger and less able students, but that (b) we do not yet have instructional research to tell us *how* best to teach morphology. Clearly we need models to explore. Of particular relevance here, Jeff and I have published direct responses to recent claims in the research that morphology instruction should wait until *after* children learn grapheme-phoneme correspondences (see Jeff's blog). Two key points we make in that series of articles include the following:

1) There is no instructional evidence supporting the hypothesis that morphological instruction should be *avoided* until after phonological aspects of orthography are taught (what we call the "phonology-first hypothesis").

2) The evidence from all the meta-analyses of morphological instruction and subsequent instructional studies points in the opposite direction. It shows particular benefits for younger (and less-able) students. Also, the greatest gains of morphological instruction Goodwin & Ahn (2010, 2013) found were for phonological outcomes.

Instructional examples needed: I suspect that a reason for the persistence of the phonology-first hypothesis is simply that few researchers or teachers have experience with what early morphological instruction could look like. One consequence of the endless "phonics vs. whole language debate" is a lack of institutional knowledge of what instruction might look like that is not restricted to these two options. That is why Claire's account -- and the others included afterword -- are so important. They offer teachers and researchers real-world examples of what such instruction can look like, and the joy and engagement it can bring to the earliest experiences with literacy learning.

How can the interrelation of morphology and phonology in English orthography be introduced in Prekindergarten?

Claire Wasserman-Rogers with Carolee Fucigna
The Nueva School, November 2018

Because English is a morphophonemic language, spellings reflect a relationship between morphology (meaning) and phonology (system of sounds). Pre-K students are beginning to develop an understanding of the interrelationship between the morphological and phonological aspects of our language.

A pre-schooler uses hand signals to represent the base and suffix (from his perspective) for the word <clean + er>.

How do we introduce morphology to very young children? (Traditionally, it hasn't been introduced to students until around third grade.)

We begin by explaining that words come in families, just like people do. Words in a family share connections in both **structure/spelling** and **meaning.**

Words in English are made up of a base and affixes. **The base holds the meaning of the word. Affixes enhance that meaning in a particular way.**

We use hand signals to represent the bases and affixes of words. The children now independently use these hand signals when thinking about a word's structure. A fist represents the base of a word and two fingers touching the base shows either a prefix or suffix.[1] Alistair (see previous page) represents the base and prefix in the word <cleaner> with the structure <clean + er> .

A previous PreK student beautifully explained her understanding of word families to her father saying:

"You see daddy, if it's a different base, they are in different families. The base is like a last name. If it's the same base then the words are in the same family."

We use a "Word Bag" game to introduce word families to young children. Teachers find interesting, meaningful, and relevant words to study. After our summer treasure box presentations, we discovered that the children share a love of collecting--rocks, cards, bells, etc. Consequently, one of the first words we studied was <collect>. We write <collect> on a big piece of white paper. (See web on <collect> at right.)

Before creating our word family, we ask the children, "What does the word mean?"

> *"Collect means to get something."*
> *"Collecting means like I have a rock collection."*

Having a gesture or sign to describe the word is a helpful tool in developing an understanding of its meaning. I show the children the American Sign Language for "collect," which we then practice together.

A child picks out the word <collector> from the bag and spells it out loud.

Noticing the base of the word, she explains,

> *"We have <collect>. A <collector>. Someone who collects things."* She considers this word.

> *"It's in the family. Because it starts with the same letters."*

The web of the <collect> word family. Note how many suffixes (in red) were introduced with this base.

She recognizes that it passes the first test: it shares the same structure. The teacher probes further, "But it also has to share the same meaning. Does it share a meaning?

> *"Yes, <collector> means like you're collecting something."* (She shows us her Sign Language for "collector.")

She places the word card near the base word to show its membership.

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[1] See page 4 and 8 for more on this practice of using the fist and fingers to reflect understanding of word structure.

"I think we need to draw a line (to show it's in the family)."

Another child then picks the card <rock> from the bag.

"It's not in the family because it doesn't have the same letters." (The child is noting that the word doesn't share the same structure).

Teacher: "What does <rock> mean?"

"Like you're picking up a rock. You can collect a rock, though, right?" *He pauses and then reconsiders his thought.* *"It doesn't have that base."*

We all conclude that the word <rock> cannot be in the family of <collect>. Notice that there is no line that connects <rock> to the base <collect> in the web.

Teachers never discourage the words children offer that are more "creative." If they can generate a logical definition (based on their understanding of its structure), then we let it be.

We explain it may not be a word *yet*, but words are being invented all the time. For example, with the family of <fill>, we drew a dotted line to words that are logically
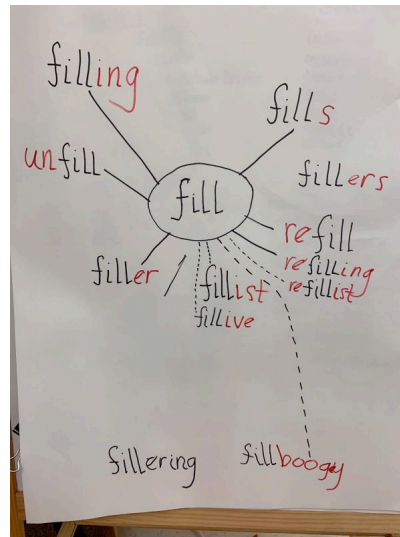
constructed and creative. A <fillist> is someone who fills something. (Think <artist> or <scientist>). Children are now well versed in our Word Bag game and have felt inspired to generate their own word bags[2].


Pre-schoolers in Carolee and Claire's class share their finished word bag with Nueva's current SWI coach, Rebecca Loveless.

[2] See more on this "Word Bag Activity" at Rebecca Loveless's website **HERE**. This activity is based on the work of Lyn Anderson who works with teachers and students around the world. Her website (**Beyond the Word**) had a key influence on the work at Nueva, as did her visit to Nueva during Pete Bowers year as a visiting scholar in 2015-2016. See **this post** on her blog about investigating word families. See **THIS VIDEO** with Nueva Gr. 2 teacher Sam Modest walking the viewer through structures in his classroom for investigating grapheme-phoneme correspondences with structures that grew directly from Lyn's work.
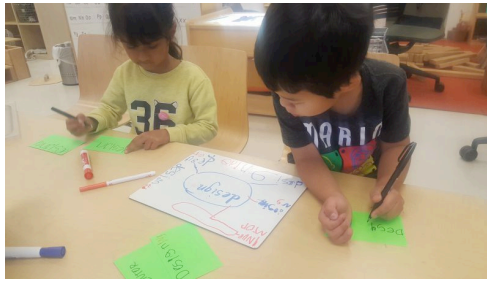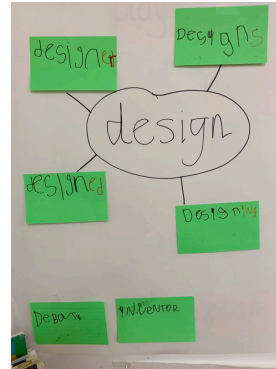
Students are excited to play the role of the teacher and call on friends to play their word family game. Above, Nicholas and Aanya team up to create a Word Bag for "design."

We also created a list of the prefixes and suffixes we've discovered thus far to support the children when they are generating a new word bag.

We encourage you *[Claire is addressing parents directly in the blog here]* to point out bases and affixes in the books you read with your children. You might say something like, "Oh, look! The book says, 'He unlocked the door.' Un-lock-ed. There's a prefix, base, and suffix!" Click HERE for a video for how this word is represented in hand signals.

Claire Wasserman-Rogers

When you watch the video Claire made for parents, pay close attention to how she spells-out not only the morphological structure, but also the graphemic structure in the base. The pause between the prefix <un->, the base <lock> and the suffix <-ed> marks the morphemic boundaries. She spells the base out-loud as "l-o-ck," marking each single-letter grapheme (<l> and <o>) and the digraph <ck>.

Screen shot of Claire's video of hand signals of spelling out spelling structure.

The practice of announcing graphemes (and orthographic markers -- a story for another time) in the base was referenced in the article that introduced the phrase "structured word inquiry" (Bowers & Kirby, 2010). This practice has remained a key feature of SWI ever since. It also reflects recommendations of cognitive load theory (CLT) (Schnotz & Kürschner, 2007) for using multiple memory routes to build well-integrated mental representation of schema. (See a piece on SWI and links to CLT here.)

Every word is either a base or a base with other morphemes, so teachers who understand SWI highlight the graphemic structures of words every time they spell-out word structure -- which is virtually every day. Grapheme-phoneme correspondences are a necessary feature of SWI from the earliest instruction. This is not phonics, but instruction about "orthographic phonology" because it teaches how grapheme-phoneme correspondences work within the constraints of morphology and etymology. Learn more about "spelling-out-loud and writing-out-loud" HERE.

NOTE: Claire's piece emphasizes morphology and phonology. The role of etymology is another necessary feature of SWI, it just isn't addressed in this account. Etymology does feature in their classroom instruction as you will see in the other examples that follow. For more on etymological instruction in the early years, see this post at Anderson's Beyond the Word. Also see this glorious video from that same site.

**Afterword: Wider context of this instructional account**

Please keep in mind that the instruction in this account is not what it looked like when Carolee was first introduction to SWI. Carolee Fucigna has has been working with SWI for 7 years now. Claire was introduced to SWI when she started at Nueva as a co-teacher with Carolee 3 years ago. She has obviously jumped in with both feet!

When does phonology fit in? Right from the start...

On my most recent visit with Carolee and Claire and Rebecca Loveless in October, 2018, they were sharing with me ways that they were re-emphasizing their instruction of orthographic phonology. It just so happens that the account described here doesn't emphasize that part of their instruction as much, although we get signals about it with the the every-day practice of spelling-out graphemes in the base as illustrated in Claire's video.

You can see some examples of grapheme-phoneme instruction in the context of morphological instruction in THIS VIDEO of Carolee leading her class in an investigation of the family of the word "rain" that I've been highlighting for some time now. Notice how Carolee draws attention to the phonology of the <s> grapheme in the <-s> suffix when a child suggests the word <rains> as a word to add to the family.

You can see more discussions about explicit instruction of grapheme-phoneme correspondence within the context of morphological families in THIS VIDEO that I captured on an

SWI in Preschool at The Nueva School
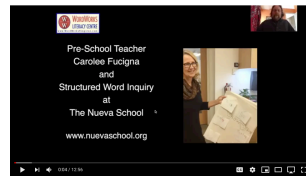
another visit to Nueva. This video also includes examples of etymological influences on grapheme choice.

Notice this how orthographic phonology is highlighted in these screen shots of that second video:
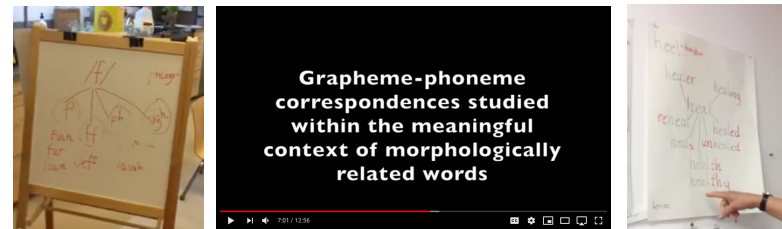
I was delighted that Carolee and Claire were working at emphasizing the phonological aspect of their orthographic instruction more. Years of orthography study through SWI has deepened their understanding of how phonology is represented by orthography. Of course, their instructional practice evolves with their orthographic understanding. See the video above with Carolee from last year at minute 4:30. We learn that they were studying <heal> because a student was recovering from getting their tonsils out. Carolee then adds that Rebecca Loveless, "introduced this very powerful notion that it *[pointing to the word <health>]* can be in the family even though it doesn't sound the same."

A key principle of "Structured Literacy" of the International Dyslexia Association is that instruction should be *systematic* and *cumulative.* It should follow "the logical order of the language" and each orthographic concept learned should inform understanding about other concepts over time. This is exactly what we see in Carolee and Claire's class.

Orthographic Phonology from the start at Nueva

1, 2) Grapheme-phoneme charts building on children's names from Claire and Carolee's class.

3) Rebecca Loveless holds a chart on the <a> grapheme at the last SWI Nueva Summer Institute. The name "Ava" sparked a lot of learning since only the first <a> is pronounced like its name!
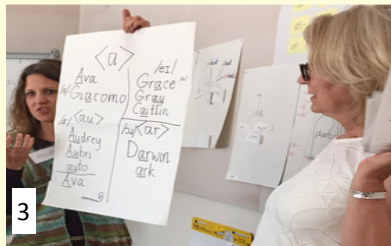
4) Carolee discusses the learning in her class with Dr. Maryanne Wolfe on her visit to Nueva. Note the enlarged image they are discussing. Word structure is embedded everywhere in this classroom.
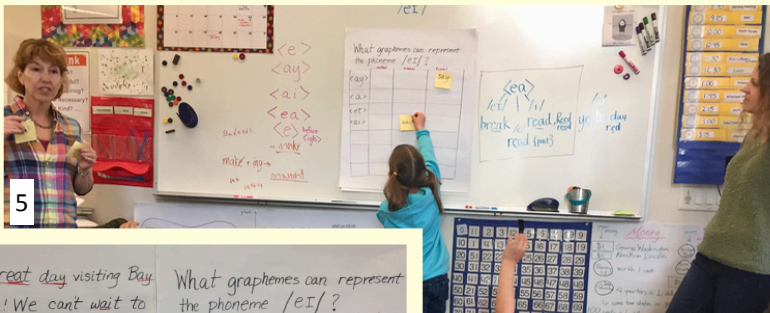
Building on her morning message (5) Gr. 1 teacher at Nueva, Diana Friedman guides students through investigations of graphemes that can spell /eɪ/ (6)

Using morphological families as the launching pad for orthographic inquiry follows the logic of the writing system. In this context, children regularly look for consistent spellings that mark meaning connections between words. The learning of letter-names is facilitated by this meaning-based motivation to inspect spelling structures inside words. The process of naming letters while spelling-out graphemic and morphemic structures reinforces learning about all of these orthographic structures. In Claire's video, spelling-out the <ck> digraph in the base <lock> builds a recognition of that structure that can now be associated with the /k/ phoneme.

Studying the morphological relatives "heal" and "health" reveals the change in pronunciation of this base across related words. These children know to look for consistent spelling of a base across words to mark meaning connections from studying families of <help> or <play>. The <heal> family is interesting *because* of the pronunciation shift. Spelling-out the base as "h-ea-l" highlights the <ea> digraph. It is easier to learn the phonology of this grapheme when it instruction reveals the a meaningful purpose of linking words despite varied pronunciations of the base.

This is systematic and cumulative instruction. It is also instruction that follows the recommendations of Cognitive Load Theory (Schnotz, & Kurschner, 2007). It uses multiple memory routes to target the building well-integrated mental representations of schema of the structures of our orthography system. This schema helps children become "noticers" of orthographic structures they encounter. Grapheme-phoneme correspondences are one of the structures children get better at noticing.

John Kirby and I reference the links between cognitive load theory and Perfetti's (2007) "lexical quality hypothesis" in our theory of the binding agent theory of morphology (Kirby & Bowers, 2017, 2018).

What is the difference between "phonics" and teaching "orthographic phonology" in SWI?

Note that Carolee and Claire did not say that they are in the process of putting more emphasis on *phonics.* They said that they are beginning to put more emphasis on their instruction of *orthographic phonology.*

Explicit instruction about grapheme-phoneme correspondence from the start of formal schooling is essential to *both* phonics and structured word inquiry. A key difference is that the instruction about orthographic phonology explicitly teaches how the grapheme-phoneme correspondences are constrained by morphological and etymological influences. Orthographic phonology is a non-optional topic of instruction in SWI from the start.

Phonics can teach that both <ea> and <ee> can spell the vowel phoneme we need for the pronunciation of the word <heal> for "I want my cut to heal." Only instruction that teaches about the interrelation of morphology and phonology can explain *why* we need the <ea> digraph for this word. We need the grapheme that can spell the vowel phoneme for any members of the family built on the base spelled <heal>. Since that family includes the word <health>, the <ee> digraph can't represent the phonology of the *morphological family.* (heel + th ➔ *heelth cannot work for the orthographic phonology of the family!)

Both phonics and orthographic phonology can address the *"what"* of grapheme-phoneme correspondences. Only orthographic phonology -- which addresses the morphological and etymological influences on grapheme choice -- can teach *why* to pick a specific grapheme for a word when more than one grapheme can represent that phoneme. And most phonemes can be written by more than one grapheme!

Consider the foundation Carolee and Claire provide these young students. Of course there is a wide variety of ability in their class, but everyone is able to engage in these conversations about words and their structures. The Kindergarten classes at Nueva also have exceptional teachers who have worked with SWI for many years.

In the images on the previous page, we see a picture of Diana Friedman during her second year of working with SWI. Many children arrive in her Gr. 1 class with two years of investigating orthography behind them!

After a visit to her class early in Diana's exposure to SWI, she sent me the following email:

> *Hi Pete,*
>
> *That was such an awesome day when you were here with our class in first grade! I was beyond excited - you see the interest in SWI in our class, with students noticing words all the time, whether it's officially SWI class or not!*

Schools that invest in training their teachers in SWI generate a community of teachers *and* students who support each other with on-going learning every year.

Carolee's skeptical start to SWI in the early years

When I first came to visit Nueva, Carolee was incredulous that structured word inquiry would be appropriate with pre-schoolers. But she is a passionate learner and teacher who was willing to consider new evidence.

After she saw her students' response to a 15-minute lesson I taught with a small group of her students during my first visit, she was willing to start exploring. Years later, Carolee continues to deepen her understanding and practice. She has now taken her students further than I would have guessed was possible at the start.

I asked Carolee to share a description of her own journey for this Newsletter. Here is what she wrote:

When first presented to our faculty, Structured Word Inquiry was described as a new way to approach spelling for us and our students. I was immediately suspicious. In my experience, young children are always interested in writing, reading, and words. From a very young age they are building theories about how our writing system works. I saw my job as supporting their efforts and theories, adding in some phonics, and helping them feel that they too have access to this powerful, culturally privileged, mode of personal expression. I did not want them getting waylaid by the "right way" to spell something. Underlying this thinking was my assumption that English spelling is highly irregular and requires activities such as memorization. Any focus on spelling in Pre-K seemed developmentally inappropriate.

A huge paradigm shift occurred when Pete helped us understand that English is not a phonetic language filled with irregularities, best approached via phonics (isolated phonological cues to spelling). It is actually a morphophonemic language where morphology and phonology both share leading roles in spelling. From that point on, I realized I could no longer teach children from an inaccurate, strictly phonological, point of view.

I also learned that SWI embraces the investigation of words, their "stories," (etymology) and their structures.

Inquiry-based study has always been a deep part of my teaching practice so this kind of work could be an enhancement to the rest of the Pre-K program. You can do hands-on work looking at a word's origins, connections to other words, and structure, just like you might approach studying seeds or a creature. Our weekly word studies always include morphology and phonology, but often stories of history or exercises in creativity were present as well. It is now a rich and exciting part of our preschool program that thrills parents too, as we are all co-researchers and co-learners in this endeavor.

Carolee

Think of the quote Claire shared about a previous pre-school student explaining her learning what a base was, and how to know if other words were related to it by inspecting the spelling of that base:

"You see daddy, if it's a different base, they are in different families. The base is like a last name. If it's the same base then the words are in the same family."

Think of the meaningful orthographic understanding revealed in that statement from a preschooler.

This is a child who is just being introduced to her writing system. She is still in the early stages of learning the letter names and how to write them. Inspecting letters inside words to see if they are related is a good motivation to learn those letter names! She is also learning that letters can be used as single letter graphemes or in two- or three-letter teams (called digraphs and trigraphs) to spell pronunciations in words called "phonemes".

A meaningful context to motivate close study of the abstract

Letters, graphemes and phonemes are abstract. The phonology-first hypothesis means *reducing* the meaningful context for learning how these abstract structures work. Why should we expect better literacy gains by *avoiding* the meaning-based cues morphology and etymology offer to learn about abstract grapheme-phoneme correspondences?

Consider the motivation this child will have to look carefully inside words at the spelling structures because she knows those structures can link words she already knows. Children do not need to be readers, or know all their letter names -- let alone most of their grapheme-phoneme correspondences -- in order to actively take part in the class discussion Carolee and Claire facilitate.

When teachers have strong orthographic knowledge, they can build lessons on whatever words come up in topics that interest their students. Every word reflects the order of the orthography system, so orthographic study can follow student interest, not an artificial pre-determined sequence of which grapheme or morpheme to teach. And studying word families means they study related vocabulary words all the time, not lists of isolated words.

• The web on <collect> grew out of an activity about presenting their summer "treasure boxes" in which they discovered they loved *collecting* things.

• A classmate's operation led to a discussion of the words <heal> and <health>. Noticing the different pronunciations of the base <heal> provoked a study of the <ea> digraph for /iː/ and /ɛ/.

• The video on the "rain" web introduced the <s> grapheme for /s/ and /z/ in the context of an <-s> suffix in the word "rains" after the first rain in a long drought.

Children do not need to be able to read the words like <heal> and <health> to spell out the base "h-ea-l" to build a familiarity with the fact that there is a structure in their writing system called an "ea" that links to pronunciations in words. They don't need to be able to read these words or the words in the <heal>, <collect> or <rain> webs discuss the words involved and to inspect the spellings to see that the same letters in the centre of that web are in all of the words.

The meaningful context of morphologically related words about favourite topics motivate children to study and notice the abstract grapheme-phoneme correspondences we want them to learn as early as possible.

In 2016, I published that shared many examples of learning with SWI across the grades at Nueva. Consider this extract that begins with the text from an email of a parent of Carolee's class:
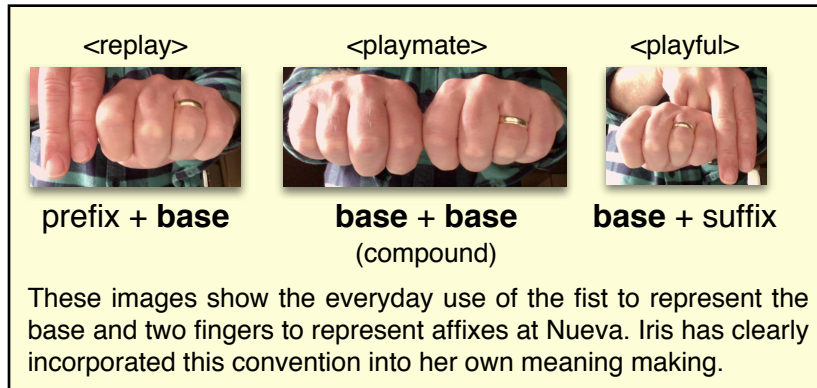
> For the past two weeks, Iris has been seeing the world in compound words, bases and suffixes -- and amazing her grandparents by speaking about those terms.
>
> She's been using the fist/fingers hand motions to show compound words and suffixes any time that she reads a word that can be broken down.
>
> On our trip, she was reading all the signs in the airport aloud. It was the first that I saw her truly immersed and aware of all the printed words around her....
>
> Just this week, she was reading a book with the word wonderful and pointed out with two fists, wonder*ful. Compound word. I told her that <-ful> is actually a suffix,

and without saying a word Iris corrected her hands fist*two fingers. It was very cute.

<replay>	<playmate>	<playful>
prefix + **base**	**base** + **base** (compound)	**base** + suffix

These images show the everyday use of the fist to represent the base and two fingers to represent affixes at Nueva. Iris has clearly incorporated this convention into her own meaning making.

The last I heard, this mother and daughter team were on the hunt for a compound word with three bases. The joy of understanding motivates ever more quests for ever more understanding.

Examples of Early SWI in other schools

This embracing of orthographic inquiry from the beginning is my no means restricted to Nueva. In October I visited the *San Francisco Friends School* where Kim Gitnick, the SWI coach at that school, has been supporting amazing learning orthographic learning and instruction.

I met with groups of grade level teachers to discuss what they've been working on with their students and offer any guidance I could. I met a group of teachers that had developed a deep understanding about orthographic inquiry and their ability to integrate that new knowledge into their everyday instruction. Kim's on-going support

has had a dramatic effect on the teacher learning -- and thus student learning.

Kim's principal, Jennifer Arnest, has not only long supported teacher learning about orthography, she has attended multiple workshops with me over the years herself. She understands the learning her teachers and students are investigating.

Images of early SWI at the San Francisco Friends School

1) Morphological web of the <play> family.
2) Matrix on the base <help> by a young student.
3) Image from a Real Script lesson in kindergarten.
4) Kim Gitnick's office door features: An IPA chart to support instruction of grapheme-phoneme correspondences, a matrix on the bound base <une> and the free base <do>.

During my last visit, I was asked to present to parents. Jennifer and Kim were delighted at the turnout compared to most parent training sessions they have offered. It was such a joy. Parents were excited and curious about what their children have been telling them about spelling.

When was the last time you heard about parents describing the joy their young children -- or children of any age -- are having studying spelling?

Nothing motivates like understanding.

The idea of children expressing this kind of excitement about spelling is surprising because we are not used to instruction that actually results in *understanding* spelling. We may teach common patterns that often seem to work, but then we always encounter those "irregular" spellings that have to be memorized because they don't make sense (also commonly called "sight words"). Children who remember how to spell and read words after a few encounters don't struggle much learning to read and spell common "sight words" like <does>. Dyslexics, however, are not good at memorizing spellings they don't understand. Why avoid using morphology to make sense of the spelling-structure and meaning connection of the base <do> and <does>? A matrix like the one on Kim's door (image #4 on previous page) helps celebrate the way orthographic phonology allows these words to be spelled the same despite pronunciation shifts.

The misleading idea from phonics (not orthographic phonology) that there are many "irregular" words like <does>, <rough>, <one> etc. motivated Gina Cooke's (LEX) "InSight Word Decks". She takes words typically presented as "sight words" that have to be memorized

because they don't make sense, and uses them to give teachers and students *insight* into how our spelling system actually works. Gina draws on the "4 questions of SWI" that guide orthographic study of *any* word.

"Real script" is something The San Francisco Friends School has been emphasizing with the help of Rebecca Loveless. Children learn the letter pathways as they learn the letter names. Real script is used to support learning common graphemes and morphemes too. Kim shared the following about the effect of real script in kindergarten:

I follow the kinders into 1st, so I saw them last year and into this year as first graders. When I went into 1st this fall to help the teachers review script with the rising 1st graders I noticed them write with bold confidence… The kids gave instruction to the novice teachers about how to say the pathways [of the letter formation] correctly as their teachers fumbled over the new language. The teachers loved it! And the kids felt empowered as writers. Most of the kids are saying the pathways as they write and we have heard comments like, "I already knew how to make <w> but I never knew the right pathway. Now I do." (this from a kid who already knew how to write most letters). They are playing with connections without any instruction from us and we are scrambling to learn more about connections to support their eagerness. They are ready for the connectors before we are!

As a school we are about to lay out the plan to support script instruction in 2nd grade and get those teachers trained. The third grade will eventually no longer have to teach cursive, as these 1st graders move through the grades. But at the rate the 1st graders are going, these kids will be writing in connected text long before they enter 3rd grade.

SWI with student and teacher learners at Athena Academy
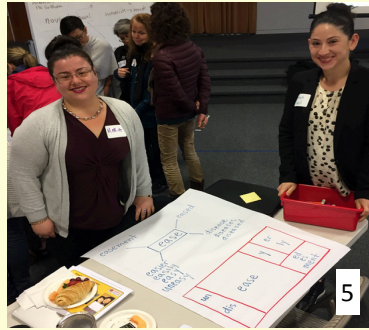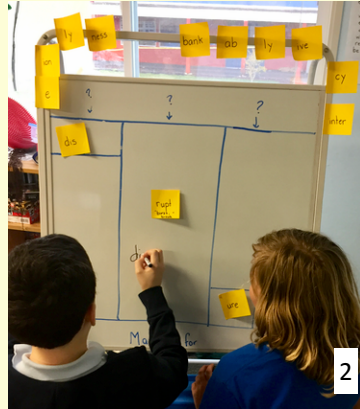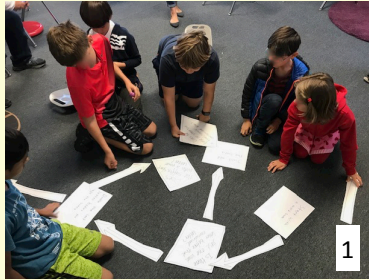
1) Students at Athena Academy work together to construct a flow chart for suffixing conventions during my October visit. See HERE for a playlist from my YouTube channel in which I work with kindergartners in Nashville via video conference in a similar activity. Once again, this activity builds on the work of Lyn Anderson .

2) From a previous visit, Athena Academy students construct a matrix on the base <rupt>.

3,4,5) Teachers at public workshops hosted by Athena Academy dive into the same kind of activities students to in order to make sense of English spelling.

Nick and Noah (the kinder teachers leading the real script instruction with at the Friends School) said after Rebecca's training, "We just placed the order for the Handwriting Without Tears workbooks. Let's call them and cancel the order. There is no way I can teach that way, now that I know this way. I feel like I will be lying to the kids about writing."

What about SWI with struggling readers?

Remember that the research evidence from meta-analyses of morphological instruction (Bowers, Kirby & Deacon, 2010; Goodwin & Ahn, 2010, 2013) has found that younger and *less able* readers gain the most from morphological instruction. Athena Academy is a school for dyslexic students in Palo Alto that has been working with SWI for a number of years now. Their staff and students have found it transformative.

They have regularly hosted public SWI workshops and have worked with myself and Rebecca Loveless to continue progressing in their practice.

Summing up & and Invitation to researchers...
The article that sparked this Newsletter was just another weekly parent blog for pre-school parents at Nueva. Ironically, this everyday instruction at Nueva is of real significance for key questions for current instructional research. As described earlier, research has found that we *should* include morphology from the beginning of schooling. This shouldn't surprise us as it is *necessary* for any instruction that represents how our system works.

I understand the fear some have that addressing morphology at the start. A common argument is that it might reduce the time that can be used to teach

grapheme-phoneme correspondences. But teaching about grapheme-phoneme correspondences in isolation of morphology (or etymology) actually misrepresents the intended topic of instruction. It results in children being mislead into believing their writing system has many exceptions they have to memorize. This has serious implications for children's motivation to study. Anyone who has worked with a struggling students know just how demoralizing those "irregular" words can be.

Also, the fear that including morphology from the start might reduce the opportunities for learning grapheme-phoneme correspondences is contradicted by the research evidence.

In both meta-analyses by Goodwin and Ahn (2010, 2013), the outcomes with the greatest effect sizes were for phonological awareness (d = 0.49, d = 0.48 respectively). The second highest effects were for morphological knowledge outcomes (d = 40, d = 44 respectively). They reasoned, "Similar to Bowers et al. (2010), results suggest that early morphological instruction may be particularly helpful perhaps because of the synergistic relationship between phonology and morphology and the larger repertoire of root [base] and affix meanings available for use. If a reciprocal relationship exists between morphological knowledge and literacy...it makes sense to jump start this knowledge from an early age" (Goodwin & Ahn, 2013, p. 23).

Despite the research evidence and logical argument that instruction reflect how the writing system works, the fact remains that few researchers or teachers have much experience with morphological instruction from the start. I hope Claire's account of SWI in preschool at Nueva, and

the other illustrations I'm pointing to encourage teachers and research to start exploring this understanding that is growing around the world.

I encourage researchers who are curious and/or skeptical about such instruction to contact me to get in touch with schools they can visit to see this work in action. There are many schools around the world excited to share the learning they see going on.

Why not attend the SWI conference in Chicago March 1-2, 2019? This is organized by Language Insights in conjunction with two public school boards.

There are schools in Edmonton, Melbourne and Bangkok, and many in Europe and elsewhere that can offer researchers a chance to see this instruction in action. Why not visit and talk with these teachers and students about their experiences?

There are also ever-growing numbers of people offering resources, on-line courses and on-sight PD. See the next page for some links and references for this work.

Thanks to Claire, Carolee, Kim, and Rebecca for inspiring this Newsletter. They and countless other educators around the world are providing a proof of concept that literacy instruction -- from the very beginning -- can reflect how our English spelling system works.

Researchers, the ball is in your court. Educators around the world will continue to develop orthographic understanding and instructional practice. Come learn with us to help you design more and better instructional studies.

Peter Bowers, Nov. 22, 2018

Some sources to explore about SWI

✦ *Real Spelling* (for deep orthographic study)

✦ *Real Spellers* (rich archive of SWI work)

✦ *Beyond the Word* (Lyn Anderson, a rich website full of orthography and teaching resources -- especially rich for teachers of young students. Also a brilliant person for on-site PD. Based in Australia)

✦ *Word Nerdery* (Ann Whiting: Spectacular middle school SWI blog. Ann has worked with Real Spelling longer than I have!)

✦ *Caught in the Spell of Words* (A new, spectacular consultancy with Lyn Anderson and Ann Whiting. Both have studied orthographic inquiry in schools for about 20 years!)

✦ *LEX* (Gina Cooke: a linguist and educator who had many years of experience with O-G training and tutoring before encountering Real Spelling. Her resources are invaluable and linguistically reliable. Take advantage of her on-line and on-site consultancies.)

✦ *Dyslexia Training Institute* (Dr. Sandman-Hurley and Tracy Block-Zaretsky: This organization offers on-line tutoring and courses in O-G and SWI. They regularly present workshops and at conferences around the US and advocate for the dyslexia community. They also host an *annual virtual conference* with many presentations about SWI)

✦ *Rebecca Loveless* (SWI Coach at Nueva, private tutor, and SWI consultant. Her on-line courses and on-site workshops are exceptional. She has a special role in the community with her work with Real Script.)

✦ *Mary Beth Stevens* (Amazing Gr. 5 blog, excellent on-line courses in SWI and Grammar, also SWI resources. Mary Beth's blog posts are inspiring.

✦ *Language Innerviews* (Scott Mills, Portland: Scott's website and resources are very rich. He tutors and teaches SWI courses on-line and does on-site PD.

✦ *Advantage Math Clinic* (Emily O'Connor, Portland: Emily is an excellent math specialist who has taken on structured word inquiry well. Her *Truer Word* decks are a brilliant resource for studying the morphology, etymology and phonology of words. She also does on-line PD.)

✦ *Language Insights* (Mary McBride & Ellen Meyer, Chicago: These two have supported SWI in public schools in Chicago for years. I highly recommend their workshops. Check out their March *SWI conference*!

✦ *Word Torque* (Fiona Hamilton, Bangkok: Fiona has studied with Real Spelling since 2001 when I started. She has been an administrator at multiple international schools and has fostered spectacular teacher and student learning. I regularly co-present with her and she runs excellent workshops around the world.)

✦ *Learning About Spelling* (Sue Hegland: A long time leader in the Upper Midwest Branch of the IDA. She has a deep orthographic understanding and makes complex concepts particularly clear and accessible.)

✦ *Sound Literacy* (An excellent SWI based iPad app)

✦ *Sound Literacy Blog* (Wonderful SWI blog by Kathy Penn, author of the Sound Literacy App)

✦ *WordWorks on YouTube* (A place to explore SWI instruction in action.)

Some References Related to SWI

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For further research related to SWI go to Jeff Bowers' blog and the About WordWorks page.