Unmasking the Early Language and Literacy Needs of ELLs: What K–3 Practitioners Need to Know and Do

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Abstract
The key underlying developmental concepts and skills requisite for early literacy learning appear to be easily achieved among most young English language learners (ELLs). These strengths, however, may merely mask the need for enhanced vocabulary development, the key variable in successful transitioning from early to academic literacy development in Grades 3–4 and in the longitudinal academic outcomes to Grade 12 that is over-looked by many elementary practitioners. Using illustrative samples of vocabulary profiles generated from children’s early written literacy development, this article highlights the need for elementary practitioners to continue to place a strong instructional focus on developing academic vocabulary, starting in the early grades and sustaining this focus through elementary school. At the same time, young learners need to continue to work on printing and spelling: the keys to unlocking vocabulary knowledge. Ideas for high impact teaching strategies are included.

Introduction
Large urban school boards in British Columbia report a rapidly shifting demographic landscape comprised of students who do not speak English as their first language (Skelton, 2014). The Vancouver School Board (2017), for example, records 60% of its enrolment as English language learners (ELLs). These increases reflect Canada’s immigration patterns and policies in recruiting and selecting its human resource needs for the future. British Columbia currently records Mandarin, Cantonese, and Chinese (not otherwise specified) as among the top languages spoken at home (Statistics Canada, 2017). Many of these young students are the Canadian born children of immigrants who arrive in kindergarten with little developed English language proficiency. These demographic data have profound implications for early language and literacy teaching and learning among young ELLs.

Lesaux and Siegel (2003) report that early literacy achievement is within ready reach of most young ELLs by the end of grade 2. Roessingh and Elgie’s study (2009) in Alberta corroborates these findings, noting that phonemic awareness, phonics understandings, and word recognition—all associated with early decoding skills that underpin the ability to make meaning from text—are areas of distinct strength for ELLs. Early written literacy, which depends heavily on control over the fine motor skills requisite for gripping and pushing a pencil, likewise represent areas of strength for young ELLs. Further, young ELLs can acquire basic interpersonal communication skills (BICS) (Cummins, 1981) through immersion in the classroom, interaction with their native English speaking (NS) peers through play, and from various TV programs geared to young children. These strengths, however, may mask the vocabulary learning needs of young ELLs in the early schooling years. A robust vocabulary knowledge is the decisive factor
in successful transitioning from early to academic literacy in the grade 3–4 years (Biemiller, 2003; Chall & Jacobs, 2003; Senechal, Ouellette, & Rodney, 2006), and in longitudinal academic success through the educational trajectory to Grade 12 (Pavlov, 2015; Roessingh & Douglas, 2012).

The goal of this article is to highlight the strengths and areas of instructional need in young ELLs’ language and literacy learning that will position them to make the transition from learning to read to reading to learn; and from learning to write/print to writing to learn associated with academic literacy. Illustrative samples of ELLs’ writing are provided to shed light on this pivotal point in children’s literacy development, and further, to provide ideas for the high impact teaching strategies that will address the language learning needs of these young students that are currently too easily overlooked. Failure of our educational systems to look beyond the surface features of literacy and the apparent focused, determined work habits and skill development of young learners of Asian-Canadian background perpetuates the myth of the model minority (Costigan, Hua, & Su, 2010; Kobsa, 2014; Yoo, 2010), only exacerbating, over time, their core instructional needs related to academic literacy learning.

**Early Literacy and the Strengths of ELLs**

Early literacy involves the ability to decode print associated with reading, and to represent thoughts and ideas via written mode associated with printing and spelling. Both processes draw on analogous underlying concepts and skills: phonemic awareness, phonics, and word recognition. Written literacy makes additional demands on young learners: they must develop sufficient neuro-motor control required for printing, and they must master the basic patterns and conventions for spelling. There is consensus in the research literature that children can demonstrate control over printing and produce a text on a familiar topic of approximately 115 words, with spelling accuracy of 85% correct by the end of Grade 2 (Medwell, Strand, & Wray, 2006; Olinghouse & Leaird, 2009; Olinghouse & Wilson, 2013; Roessingh, 2013; Roessingh & Elgie, 2015). Topics that lend themselves to marshalling the multiple and maximal demands of early written literacy involve expository discourse (Roessingh, 2012) and include describing objects in space (e.g. a playground, a zoo, the ideal school). Written production is enhanced when young writers are afforded the time and opportunity to draw, sketch and colour prior to writing and given sufficient time: 45–60 minutes. This process approach to the task lessens the cognitive load and provides a concrete touchstone for the task of putting pencil to paper.

Early literacy can be achieved with a limited vocabulary of the 220 high frequency words identified in the Dolch (1948) list that represent 75% coverage of children’s text used to teach early literacy (reading) skills. These 220 words must be encountered hundreds of times for youngsters to notice, understand, segment, and manipulate the sounds to form words, and then to make the systematic connection between phonemes in spoken words and the letters used to represent them in print. With the addition of perhaps another 750 high interest words needed to express their ideas and thoughts in written form (e.g. pterodactyl), the vast majority of children can achieve the expected early literacy benchmarks by the end of Grade 2 with a literate lexical repertoire of perhaps 1,000 word families. Roessingh and Elgie (2015) recognize this pivotal threshold in the vocabulary profiles of Grade 2 children’s writing samples. Access to low frequency, sophisticated vocabulary can be noted as early as Grade 2, however, and practitioners
need to be alert to the signs of young learners who need instructional support in developing their vocabulary knowledge.

Children raised in a bilingual context are thought to have heightened sensitivity to phonemic features of language because of their exposure to different sounds. Within a relatively short period of time, they can acquire native-like pronunciation and fluency in English with a basic vocabulary (Krashen, Long, & Scarcella, 1979). The ability to discriminate sounds and to segment words, phonemic skills, are key to decoding print. The ability to map sounds to their alphabetic representations, phonics, follows readily. Canadian studies (Chiappe & Siegel, 1999; Roessingh & Elgie, 2009) indicate ELLs have closed this early literacy gap by the end of Grade 2, often out-performing their NS peers on these predictive measures of early literacy learning (Lesaux & Siegel, 2003).

Children of Chinese cultural background may also have an advantage in the development of fine motor skills that are key to early literacy learning (Tsang & Hung, 2006). A strong pincer grip and the power and precision to push a pencil are foundational to producing legible print. Using chopsticks as eating utensils is common among these youngsters, beginning at an early age—as early as age 3 or 4. Control and mastery in the use of chopsticks is an important feature of social life and a sign of respect and good manners. The use of chopsticks develops physical literacy or proprioception (Dinehart & Manfra, 2013): the awareness of the body in space, and the use of tools as an extension to the hands to perform everyday tasks.

In addition, many young ELLs attend weekend heritage language programs. In the case of Chinese Canadian youngsters, this might include the expectation of basic written literacy learning, which places enormous demands on working memory and orthographic control in producing the Chinese characters with exacting precision in stroke direction and sequence (Guan, Ye, Wagner, & Meng, 2013). Disciplined practice to perfection and patience are also part of Chinese cultural traditions in child rearing. This, too, will transfer to English written literacy development.

A perusal of the winners in an annual performing arts festival (Performing Arts B.C., 2017) suggests that young Chinese Canadian artists in piano overwhelmingly win this category, beginning at the youngest ages. Surnames of Wang, Li, Yang, Zhang, Yu, Xia, Liu, and Xi, for example, are revealing. Musical performance automatizes the constructs of structure, pattern, rhythm, relationships and sequence in young fingers and hands—all of which underlie foundational numeracy and literacy learning.

The Christmas card produced by my young friend, Ivy¹, at age 6, demonstrates skills and understandings relevant to early literacy mentioned above. Shape, size, positions of objects in space, and the “between the lines” details all reflect exquisite control over the fine motor skills and the mental construction of internalized stable models requisite for printing and spelling (i.e. space, shape, size, slant).

¹ Ivy’s handmade Christmas card is used with her (and her mother’s) permission. She is excited to “be published.”
It becomes clear that young immigrant and Canadian born children of immigrants of Chinese background arrive at school with many skills, predispositions, and understandings relevant to numeracy and literacy learning and are already well prepared for this aspect of their schooling experiences. In the section that follows, language learning among youngsters is reviewed.

**Language Development and Assessment**

Vocabulary development is the key feature of language development over time that can readily be measured and taught. There is consensus in the research community that vocabulary knowledge is the key predictor of reading comprehension and academic achievement over time. The significance of vocabulary knowledge in the early years, however, has been under-estimated perhaps because it is not central to early literacy learning, as the above section makes clear. Only more recently has the scholarly community turned its attention to early language learning, specifically vocabulary learning (August, Carlo, Dressler & Snow, 2005; Biemiller, 2003; Geva & Verhoeven, 2000; Uccelli & Paez, 2007).

Murphy’s (1957) seminal study of young children’s vocabulary knowledge generated from a corpus of over 1 million words of tape recorded speech distilled a list of 5,000 words in the oral repertoire of children aged 5–7. This finding has remained stable over the years, though others have conflated these words into approximately 2,500 word families (i.e. run, runs, running constitutes one word family). Various studies have corroborated this figure (Biemiller & Slonim, 2001; Moe, Hopkins, & Rush, 1982), though there is sizable difference in the vocabulary knowledge of high socio-economic status youngsters and those who are raised in disadvantaged circumstances (Hart & Risley, 2003; Hoff, 2013). Data suggest vocabulary knowledge increases by approximately 1,000 word families a year among average, typically developing children in a strikingly stable sequence over time. It is estimated that a critical mass of 8,000–9,000 word families is needed to make the transition in Grade 4 from learning to read, to reading to learn.
(Chall & Jacobs, 2003); 15,000 word families (50,000 words) in Grade 9 to transition to academic literacy learning that requires more abstract uses of vocabulary such as metaphor, figurative uses of words, technical vocabulary, and specialized uses of common vocabulary (Graves, 2007); and 18,000 word families in Grade 12 to engage with the demands of advanced academic studies in post-secondary settings (Hazenberg & Hulstijn, 1996).

Research has also afforded insights into the contexts and conditions that support the development of first and second language learning, and simultaneous bilingual development. Exposure, salience ("noticing"), explicit instruction, modified input (e.g. repetitions, recasts, simplified vocabulary use, redundancy), opportunities for practice through elaborative and collaborative talk, corrective feedback, and academic challenge, for example, have all been identified as key features of rich language learning environments. Storybook reading, meal time talk, and structured and open ended play provide important contexts for these types of language learning opportunities for children. These features are aligned with a socio-cultural theory of learning (Vygotsky, 1978): the critical need for scaffolds, challenge, i.e. comprehensible input or i+1 (Krashen, 1989), and the support of an adult or more competent peer in orchestrating learning settings that permits negotiation of meaning, and the manipulation, transformation, and practice of language across modalities: hear it, say it, read it, write it → own it.

Elementary school practitioners are increasingly required to address the English language learning needs of the linguistically diverse classroom at the same time they must address curricular mandates. Research tells us that many youngsters of language minority backgrounds fall well behind their NS peers in their English academic language development (Hoff, 2013; Roessingh & Elgie, 2009), and in the longitudinal data to Grade 12, may not fully close the gap (Ontario Ministry of Education, 2013; Pavlov, 2015). It is crucial, therefore, to glean early insights into children’s vocabulary knowledge and use those insights in order to intervene at an early stage for those who demonstrate this need. Various studies reported by Bowne, Yoshikawa, and Snow (2017) suggest that teachers do not implement techniques and strategies, such as leading academic discussions and conversations, or have an explicit focus on vocabulary teaching that can enhance the academic vocabulary knowledge of young students in their classes.

While early vocabulary assessment tools are available to work with pre-literate youngsters, for example the Expressive One Word Picture Vocabulary Test (Academic Therapy Publications, 2000), these instruments are often time consuming, inconvenient, and costly for classroom practitioners to administer in a one-on-one setting. The end of Grade 2, noted above, is an early point where vocabulary knowledge can be assessed through the use of vocabulary profiling tools, available in the public domain at no cost: www.lextutor.ca/vp/kids.

Understanding Vocabulary Profiling: A Look at Children’s Writing Samples

In essence, vocabulary profiling allows for the comparison of a sample of writing to a corpus of vocabulary that would typically be present in the lexical repertoire of a learner of approximately the same age. The vocabulary profiling tool generates data on various indices of vocabulary variability: the total number of words in the sample (TNW), the number of different words in the sample (NDW), and the vocabulary coverage for frequency of vocabulary organized in ten levels of 250 word families: from high frequency to low. Let’s consider various features of
early literacy development as well as vocabulary profiles taken from the writing samples of Grade 2 learners, one a NS learner and the other a second language learner (born in Canada). These samples are taken from a pool of approximately 250 writing samples on an expository prompt designed to elicit a full range of vocabulary. The findings have been published elsewhere (Roessingh & Elgie, 2015).

On the surface, there are many similarities between the two samples: both achieved a rating of “excellent” from their Grade 2 teacher, both demonstrate good control over “language by hand” (i.e. printing), and both show spelling accuracy at over of 99%. There is a bi-directional relationship between spelling and printing in early literacy: that is, good spellers tend to be good printers, and good printers tend to be good spellers (Roessingh & Elgie, 2015). Figures 2 and 3 illustrate this information.

Figure 2. Language by hand. NS. Spring, Grade 2. 2 spelling errors. Controlled printing.

Figure 3. Language by hand. ELL. Spring, Grade 2. 3 spelling errors. Controlled printing.
Note the consistency and control in shape, size, space, and slant in the printing of both students. Further, both students had a lot to say about their ideas for constructing the ideal zoo for their city: 253 and 295 words respectively for the NS and ELL students.

Controlled for the number of words in the sample (i.e. 253 words), let’s consider the indices of vocabulary variability that can provide insights into the lexical repertoire of each student. Figures 4 and 5 display the lexical profiles for the two samples.

**Figure 4.** Vocabulary profile of NS student

**Figure 5.** Vocabulary profile of ELL student
The number of different words in the samples is comparable (118 vs. 113). The cumulative percent coverage of vocabulary at level 4, representing the first 1,000 words of oral vocabulary of young children, is 85.37% (NS) vs. 88.93% (ELL). This is the first indicator of difference worth noting. Even this 3.56% discrepancy signals an over dependence on high frequency words on the part of the ELL student, suggesting that access to low frequency, sophisticated vocabulary may be limited. This warrants further investigation. Level 6 represents the low frequency threshold for the NS student: the level at which there are two successive levels containing either one or no word families represented in the vocabulary profile. This student has realized 88.53% coverage at this point. At level 6 the ELL student has already depleted 94.47% of the total cumulative vocabulary in the sample, even though the low frequency threshold stretches to level 7. Most telling in the profiles is the access to the Off-list words: words that are not present in the reference corpus for children. The NS sample reflects 19 word families vs only 6 in the ELL sample. Table 1 below summarizes these data.

Table 1
Some Comparisons Between NS and ELL Writing at Grade 2 (Spring).

<table>
<thead>
<tr>
<th>Vocabulary Features</th>
<th>NS</th>
<th>ELL</th>
</tr>
</thead>
<tbody>
<tr>
<td>TNW</td>
<td>253</td>
<td>253</td>
</tr>
<tr>
<td>NDW</td>
<td>118</td>
<td>113</td>
</tr>
<tr>
<td>Level 4 Coverage</td>
<td>85.37%</td>
<td>88.93%</td>
</tr>
<tr>
<td>Low Frequency Threshold</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Coverage at Level 6</td>
<td>88.53%</td>
<td>94.47%</td>
</tr>
<tr>
<td>% Off-List Words</td>
<td>9.5%</td>
<td>4%</td>
</tr>
<tr>
<td># OLW Families</td>
<td>19</td>
<td>6</td>
</tr>
<tr>
<td>Examples of OLW</td>
<td>actually, area, barrier, breeds, cans, clicking, climates, entertainment, habitat, improvement, komodo, litter, problems, proper, species, temperature, threaten, types, veterinarian</td>
<td>member, obstacle, pterodactyl, scale, seesaw, suggest</td>
</tr>
</tbody>
</table>

It is access to the Off-list words, particularly those words that are considered high utility generalizable academic words (Roessingh, 2016) that is most striking. Many young NS writers already have control over a sizable and rapidly accelerating pool of these words, which they learned largely at home through interactions with their parents, especially mothers. ELLs must be taught these words in a variety of contexts and ways in order to add them to their lexical knowledge. Canadian studies (Duke, 2000; Scott, Jamieson-Noel, & Asselin, 2003) suggest this instructional need is not being addressed in elementary classrooms. The next section suggests high impact strategies for vocabulary learning that will be useful to a Grade 2 audience.

Making a Difference in Grade 2 Students’ Early Literacy and Language Learning

This section provides details on four high impact strategies for promoting early literacy and language learning among young learners in grades K–4. First and foremost, Graham (2010) reminds us that continued instruction in the lower level developmental skills of printing and
spelling are needed. While the two illustrative samples used for the purposes of this article scored at the standard of excellence for writing quality outcome, the key to this result was the quality of the language by hand (i.e. printing) and accuracy in spelling, that in turn, unlocks vocabulary at the student’s disposal. Most students need continued instruction and opportunities for practice throughout the school day. The development of a fluent “hand” is a gradual, protracted process that takes the duration of the elementary years and into the junior high years to perfect to the level of sufficient fluency to get into “flow” of writing (Csíkszentmihályi, 2008; Graham, 2010). Once automatized to this level, linguistic and cognitive processes may be further unleashed and mobilized by the writer. By the end of Grade 2, the vast majority of typically developing young students can be expected to produce legible to controlled printing, keeping in mind that in a single class setting there is the likelihood of an age difference of as much as 16 months. Further, children’s development across neuro-motor, cognitive, and linguistic domains may be asynchronous, that is, uneven patterns of development are common. Figure 6 below provides a framework that classroom practitioners may find useful in making holistic evaluations of young children’s language by hand.

<table>
<thead>
<tr>
<th>Shape</th>
<th>Size</th>
<th>Spacing</th>
<th>Slant</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Laboured: very difficult to decipher/read</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Legible: readable without effort</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Controlled: uniform and consistent</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Fluent: gives an impression of “push behind the pencil”</td>
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</tr>
</tbody>
</table>

*Figure 6. A holistic framework for assessing children’s language by hand—adapted by the author from Alston (1985)*

Grade 2 or 3 is a good time to help students learn to connect letter combinations that naturally work together such as “th,” “fi,” “ts,” and “tn.” This will promote fluency using a clean, uncluttered italic style described by Graham (2010) as mixed mostly manuscript. Teachers should work together as grade level teams across the K–3 years to choose a printing program that is developmentally progressive and engaging for young learners. It is important to offer instruction consistently for short periods of time, perhaps 20 minutes, daily. Commercially available printing programs such as *Handwriting Without Tears* (Olsen, 2003) or *The Writing Road to Reading* (Spalding, 2003) have been implemented in the Canadian context with positive outcomes (Roberts, Derkach-Ferguson, Siever, & Rose, 2014; Roessingh & Bence, 2017); however, resources available in the public domain such as printing sheets, may be equally beneficial.

Secondly, colouring, sketching, and drawing are some of the most important activities in the writing process. Whether initiated by the students themselves, or sourced online or from commercially prepared materials, colouring and drawing prime a host of thought and neuro-processing mechanisms. Ekuni, Vaz, and Bueno (2011) observe that visual input creates the strongest recall value of all the senses including words, especially when physical details are to be remembered: the picture superiority effect. Paired with colouring, memory traces are developed in the neuro-circuitry for key words involved in the execution of the colouring task such as
camouflage. Such deep processing can offer a concrete touchstone and a scaffold for the writing task to follow, and together enhances the quality of the writing.

Figure 7 displays a colouring sheet that holds rich potential to elicit and teach vocabulary. Depending on the age/grade placement of students, consider the following words as targets for instruction (Marzano & Marzano, 1988):

GRADE 3: protect, enemy, disappear, danger, faraway, distant, fear, enormous, silent
GRADE 4: newborn, still, scent, alert, doze, watchful, cautious, area, territory, position, wilderness, habit, shelter, prowl, roots
GRADE 5: orphan, survive, fawn, risk, neglect, abandon, vision, foothills, threat, injure
GRADE 6: instinct, fragile, dependent, starve, overlook, absent, environment, habitat, locate, victim, undergrowth, vegetation, carcass, shrub
Not Listed: camouflage, prey, predator, vulnerable

Figure 7. Colouring sheet for young learners

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2 Every effort has been made to trace the original copyright of the colouring sheet, which was taken from a children’s colouring book, decades old. However, the original source has been lost.
Third, a cluster approach is recommended (Marzano & Marzano, 1988). Teaching words in semantic fields, or thematically, promotes making connections and remembering, hence the potential for incidental acquisition of new vocabulary. In the example above, words such as protect, danger, enemy, threat, victim, survive might represent a cluster; fawn, orphan, abandon, dependent might represent another; environment, habitat, vegetation, undergrowth, shrub, another. Note that words within the same cluster can be drawn from more or less difficult levels in keeping with the comprehensible input +1 needed for challenging students (Krashen, 1989).

Finally, Biemiller (2001) advocates for a direct, explicit approach to vocabulary teaching. Providing synonyms, antonyms, definitions, explanations, and examples connected to visual information and displaying these new words by way of word webs and word walls, as well as using individualized flash cards for word play and developing word recognition skills in the early years, all promote vocabulary learning. Recycling, revisiting, and regular opportunities for reviewing and using new vocabulary by way of crossword puzzles and games further deepens the lexical knowledge of young learners. They must associate meaning, accurate use of these words in context, and control over spontaneous retrieval when needed in order to “own” the words.

**Conclusion**

Young ELLs have unique early language and literacy learning needs. Teachers must look beyond the surface features of the “presentation effect” visible in early written efforts that may mask a vocabulary learning need. Teachers must also be mindful of the stereotypic image of the young Asian Canadian learner associated with the myth of the model minority. Many of these young learners are not able to bootstrap their way independently by dint of hard work and determined study habits: many will benefit from the types of supports and interventions presented here.

It is important to recognize that these young learners do not fit a particular mold: within this demographic, a wide diversity exists. Pavlov (2015) observes that ELLs are represented at all levels of achievement by the end of Grade 12, as reflected in standardized achievement tests. However, while there are those who excel academically over time and reach the standard of excellence, by and large ELLs demonstrate an ongoing need for support in developing requisite levels of academic literacy to fulfil the demands of post-secondary schooling—a goal that the vast majority of them aspire to in their future (Costigan, Hua, & Su, 2010).

Early identification and early intervention can reset the slope of the educational trajectory if elementary practitioners have the insights, tools, and techniques at their avail. This article has presented the theoretical underpinnings and relevant research, rubrics, and benchmark information, data, lexical profiling tools and teaching strategies that together can make a difference in the literacy outcomes of young ELLs as they transition from early to academic literacy.
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