

Second Language Learning
and Bilingual Environmental Print

HDP 1286: Foundations of Literacy Development

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1 - Introduction

Only two countries in the entire world have English and French as their only official languages: Cameroon and Canada. For Canadians, this means that packaged products are required by federal law to be labelled in English and French. This regulation was designed to ease commerce between English- and French-speaking populations. But it has had an extraordinarily positive side-effect: every pantry, dining table, and trip to the grocery store is an opportunity for informal language acquisition.

But to what extent can one learn English or French as a second language through product packaging? That was the guiding question for a literature review, which is summarized in the following pages. First, the scope of the research question will be defined. Second, literature on environmental print (EP), which somewhat addresses this research question, will be explored (“environmental print” is the text one encounters on everyday objects); however, EP research focuses on emergent readers and not second language learning. Third, it will be explained that the research question is more fully explored within the field of Linguistic Landscape Studies. Fourth, findings from research on EP, Linguistic Landscape Studies, and other fields will be used to show the benefits and drawbacks of second language learning through product packaging and other EP. Research-informed recommendations for educators wishing to use product packaging or other types of EP as a tool for second language acquisition (SLA) will be mentioned throughout. The paper concludes with considerations for future exploration.

Note: this paper uses the terms “bilingualism”, “second language acquisition”, and “second language learners” (SLLs) because it is concerned mainly with Anglophones learning French

and Francophones learning English; however many people in Canada might use bilingual packaging to learn a third, fourth, or perhaps even a tenth language.

2 - Why Investigating SLA using EP Matters

In Canada, many Anglophones need or want to learn French and *vice versa*. Since bilingual print is ubiquitous, it may have the potential to be an enormously useful literacy tool for SLA. The findings from this research could also apply to other countries that have multilingual EP, a population of second language learners, and where the languages on the EP are linguistically close. For example, in the United States, packaging could potentially help English-speakers learn Spanish, and *vice versa*; while packaging that contains English and Hindi would be much less effective because these languages share little in common.

3 - What is Environmental Print?

The above question (To what extent can one learn English or French through product packaging?) aligns with research on EP. “EP” is defined as “non-continuous print (e.g. words, letters, numerals and symbols) that is encountered in a particular context and fulfils real-life functions” (Neuman 2001, p. 232). As such, EP includes “logos, labels, [and] road signs” (Kirkland in Manning, Szecsi, & Kirkland, 2010, p. 267). EP differs from “continuous print”, which is the sort of print found in poetry or prose in “books, newspapers and magazines” (Neuman 2001, p. 232).

It is important to note that since bilingual EP involves non-continuous text, much of the learning that takes place is lexical (i.e. vocabulary acquisition). Although, as will be explained later, there may be room for developing morphological knowledge by comparing morphemes, and even grammatical knowledge by comparing grammars.

EP is an important resource for emergent readers because it is “free and readily accessible” and therefore it is easily available to integrate into school-based literacy programs (Manning, Szecsi & Kirkland, 2010 p. 269). Furthermore, it is easy to find EP outside of school, which means “teachers could construct bridges between pupils’ contacts with English inside and outside the classroom (Kuppens, 2010 p. 80). Furthermore, EP’s ubiquity means that it could provide a wide range of vocabulary (Cenoz & Gorter, 2008 p. 274). These benefits would certainly extend to SLLs.

While much research has been conducted on how *emergent* readers can learn through EP (which will be explained in the coming pages), there is less research on what role EP can play in SLA. Interestingly, the research that has been conducted on the latter group comes from a field called Linguistic Landscapes Studies.

4 - Linguistic Landscape Studies

Questions regarding EP and SLA are currently discussed in the emerging, multidisciplinary field of Linguistic Landscape Studies. Cenoz & Gorter (2008) defines “the linguistic landscape” as “all the written language in the public space” (Cenoz & Gorter, 2008, p. 267). This may include artifacts with EP such as “road signs, advertising billboards, street names, place names, commercial shop signs, and public signs on government buildings...” (Landry and Bourhis 1997, p. 25). While Linguistic Landscape Studies discusses SLA, it also discusses a wide range of other questions relating to “linguistics, geography, education, sociology, politics, environmental studies, semiotics, communication, architecture, urban planning, literacy, applied linguists, and economics, politics, critical theory, history, among others” (Gorter, 2018, p. 1).

5 - Strengths and Weaknesses of Using EP for SLA

5.1 - EP is Captivating and Interesting

EP has a lot of potential for emergent readers—and, possibly by extension, SLL—because it is “visually attractive and personally meaningful to young children, stimulating their immediate interest and attention” (Neuman 2001, p. 232). In other words, EP can be an effective means for SLA because it catches the learner’s attention (in fact, it is often designed by advertisers to grab and hold the reader’s attention) (Gorter, 2018). EP might also be effective because the learner engages with it in a meaningful context during daily extramural and intramural life (as opposed to a mental exercise on a worksheet).

However, it is important to note that noticing bilingual print is not the same as engaging with it as a source of SLA. Purcell-Gates (1996) shows that emergent readers need to have their attention drawn to EP otherwise they may not learn from it; “exposure to EP does not necessarily lead to conventional reading. Rather, print needs to be pointed out to young children for them to notice it” (from Neumann 2011). Unlike emergent readers, SLLs will likely notice EP, but like emergent readers they may need scaffolding to see that they can learn their second language from bilingual EP.

5.2 - Meaningful Contexts Aid Vocabulary Acquisition

The importance of learning vocabulary in a meaningful context is discussed in Stahl and Fairbanks (1986) who explain that learning “word meanings in context is more effective than no-context instruction” (Biemiller, Boote, & Biemiller, 2006, p. 45). Learning vocabulary from EP is learning vocabulary within context. Stahl and Fairbanks go on to suggest that teaching new words along with “an interesting narrative” will help children form a referent for the new word (Biemiller, Boote, & Biemiller, 2006, p. 45). While Stahl and Fairbanks are talking about

first language acquisition, and not SLA, it seems reasonable that context would function to form a referent for a new word for SLLs as well.

5.3 - Incidental Learning is not as Effective as Intentional Learning

EP provides ample opportunities for incidental learning. “Incidental learning refers to learning without the intent to do so but can also refer to learning one stimulus while paying attention to a different stimulus” (Gorter, 2018 p. 273). Incidental learning is to be contrasted with “intentional learning” which involves a conscious effort on the part of the learner (Hulstijn, 2003 p. 7).

Although EP has the potential to be effective because it can grab the reader’s attention, effective learning does not happen through mere incidental learning. Swanborn & De Glopper (1999) explain that “in general, retention rates under genuine incidental learning conditions are extremely low” (Hulstijn, 2003 p. 11). More effective learning takes place in the case of intentional learning; “Retention rates under intentional learning conditions are, again on average, much higher than under incidental conditions” (Hulstijn, 2003 p. 11).

Educators wishing to use bilingual EP as a means for SLA should therefore make an effort to draw students’ attention to the possibilities of EP and to focus on providing intentional learning opportunities. For example, a teacher might use bilingual EP as words for a spelling test, or the teacher might take students on a neighborhood walk with a focus on EP, or even create bilingual signs in their school (Dressler, 2015).

5.4 - Repeated Exposures Improves Orthographic Knowledge

While incidental learning is not as effective as intentional learning, “frequency of occurrence” can improve retention rates for incidental learning (Hulstijn, 2003 p. 10). And “It is generally agreed that orthographic knowledge, both word specific and general, is acquired through

repeated exposure to print” (Conrad, Harris & Williams, 2013 p. 1226). This means EP could be effective for developing orthographic knowledge because EP often provides a language learner with repeated exposures over time; a language learner might reread a cereal box many times if it is present in the pantry for a week or if it is purchased regularly over a decade.

5.5 - EP and Phonetics

Although EP is ubiquitous, learning from it has a significant drawback; namely, “the linguistic landscape does not provide much input at the phonetic level” (Cenoz & Gorter, 2008 p. 274). To learn the pronunciation of words found in EP, learners need scaffolding in the form of phonetic instruction. “Scaffolding” is “the process of using tools or techniques to allow a child to master a skill that would be beyond their unassisted efforts” (in Neumann, Hood, & Ford, 2012 p. 242).

Teachers can scaffold learning by being present during explorations of EP, or creating readily accessible pre-recorded pronunciations of EP (e.g. museum-like audio guides, or an app that converts EP into audio). The latter suggestion is a direction that might be explored by technology designers.

5.6 - EP and Motivation

Emergent readers (and presumably SLLs) are motivated to engage with EP because engagement results in rewards. For example, a child might be motivated to learn the name of their favourite cereal so they will know how to point/ask for their favourite cereal (Neumann, Hood & Ford, 2012, p. 232). But fewer motivating situations may exist for SLLs because the reader could simply choose to read the version of the EP that is in their first language.

5.7 - Conventional Versus Logographic Reading of EP

If an English-speaking SLL at a grocery store sees a bottle that says “tournesol” (which is French for “sunflower”) and puts it in their cart, it is important to know whether the shopper chose this bottle because they read the French word “tournesol” or because they recognized symbols on the packaging, the contents inside the bottle, or any other contextual cues.

In other words, it is important to know whether a language learners is reading EP in the conventional sense or if they are just reading logographically. “Conventional reading” involves, according to the dual route hypothesis, that the reader either decodes the word or they recognize the orthography of the word and then understand the associated meaning. But “logographic” or “context-based” reading means the reader takes the word as some kind of symbol and then infers its meaning from contextual cues or else they search their mental lexicon for the word that seems to be correct (Neumann, Hood, & Ford, 2012, p. 233).

Neuman (2011) identifies a test for telling whether a person is reading the word conventionally or logographically. Neuman (2011) explains that a reader is able to read conventionally if they are able to “decode the print both in context and in standard black and white print with contextual cues removed” (Neumann, Hood, & Ford, 2011, p. 236).

6 - Areas for Further Investigation

6.1 - Comparing Morphologies

The literature does not appear to mention an important potential strength of using bilingual EP for SLA. EP is a means for developing one’s morphological knowledge in L2 (as well as L1) because English and French are linguistically close and so there is a high degree of morphological transference. In other words, it is easy to spot cognates as well as

morphologically identical or morphologically similar roots, stems, basewords, and affixes. For example, a package of biscuits will have the same word in English and French to describe the product, i.e., “Biscuit”. Or a bottle of vinegar will have two very similar words, i.e., “Vinegar” and “Vinaigre”.

6.2 - Where to Continue this Research

This paper did not review the research on parallel texts and SLA, though such an inquiry might prove fruitful; afterall, bilingual packaging contains both continuous and non-continuous parallel text. This research also did not look at how bilingual packaging could help vocabulary acquisition through pair associations. It would also be interesting to look at case examples of labels and all their print (e.g. product name, ingredient label, product description), to see just how a reader might interact with the two languages. Future research might look at how SLLs can use EP to improve their receptive vocabulary (their ability to recognize words they see) and their expressive vocabulary (their ability to produce words from their memory). It would also be interesting to learn how one’s sense of taste and smell might help them learn vocabulary on the packaging as they eat the food contained in that packaging. An answer to this question might be found within Phenomenology, a philosophical tradition.

7 - Conclusion

This paper intended to see how current research might answer the question, “To what extent can one learn English or French as a second language through product packaging”. A main takeaway is that product packaging, as an example of EP, serves as a potentially rich source for vocabulary acquisition because it is attention-grabbing, ubiquitous, meaningful, and provides repeat exposures. There are, however, limitations, including that it requires scaffolding to draw awareness to EP’s possibilities, to develop phonetic knowledge, and to create intentional learning experiences.

Since EP and SLLs are ubiquitous, it is important for educators to try to incorporate EP into their lessons in ways informed by the research. And, as important as research is, it is also important to reflect on how research-informed lessons play out in the classroom and then adjust them to maximize learning.

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