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In search of the nature of extensive reading in L2: Cognitive, affective, and pedagogical perspectives

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Extensive reading (ER) has been implemented under a wide variety of names, such as *(uninterrupted) sustained silent reading, free voluntary reading*, *pleasure reading*, *book flood*, *independent reading*, and *Drop Everything And Read (DEAR)*; its various names emphasize different aspects of the same/similar kind of reading. Since a series of pioneering publications by Elley and his colleagues demonstrated ER's positive impacts on second language (L2)[1] learning in various countries (e.g., Elley, 1991, 2000; Elley & Mangubhai, 1983), ER has received attention as a possible and promising way of improving L2 abilities.

In recent years, there has been phenomenal growth in the interest in ER amongst L2 researchers and educators. Conferences, professional associations, and journals specifically focusing on the theme of ER have been founded (e.g., the World Congress on Extensive Reading, Japan Extensive Reading Association, JALT ER Special Interest Group, *Extensive Reading in Japan, Journal of Extensive Reading*). In addition, a number of online resources to help promote ER in educational settings are now available (cf. Lynn, 2014). Given this situation, this paper is an attempt to contribute to our understanding of the fundamentals of ER and to clarify its nature.

Critical Features of ER

Since ER has been applied in different sociocultural and educational settings with necessary modifications to meet local needs, Day and Bamford (1998) correctly observe, "it is hard to reduce it to a dictionary-type definition" (p. 7). However, it is still useful in our efforts to identify standard features of ER to consider the dictionary-type definitions found in the influential literature.

> *Extensive reading means reading a large amount in the L2. This is the very essence of the procedure, and all benefits are based on it.* (Day & Bamford, 1998, p. 84)

> *Extensive reading means reading in quantity and in order to gain a general understanding of what is read. It is intended to develop good reading habits, to build up knowledge of vocabulary and structure, and to encourage a liking for reading. Intensive reading is generally at a slower speed, and requires a higher degree of understanding than extensive reading.* (Richards & Schmidt, 2002, pp. 193–194)

> *Extensive reading is an approach to language teaching in which learners read a lot of easy material in the new language.* (Bamford & Day, 2004, p. 1)
>
> *Extensive reading [:] Approach to the teaching and learning of reading in which learners read large quantities of material that are within their linguistic competence.* (Grabe & Stoller, 2011, p. 286)

From these definitions, four common features to characterize ER emerge: a large amount of reading, easy materials, faster reading rate, and pleasure. Among them, it is probably reasonable to take "a large amount of reading" as the essence of ER, as Day and Bamford (1998) state, and see the other three features as a set of interacting factors that contribute to this essence; for example, if the reading material is easy and interesting, appealing to the reader's pleasure, s/he can usually read faster, all of which is conducive to reading a large amount within a given timeframe.

The name *sustained silent reading* suggests two more possible features: reading for a sustained period and silent reading. However, the former can be integrated into the discussion of quantity (to read a large amount readers need to read for some continued period of time). The latter should not be an indispensable feature because, depending on the learners' age and stage of L2 learning, reading aloud helps decoding, and some amount of oral reading is included in the ER implementation both in first language (L1) and L2 contexts (e.g., Cho & Kim, 2014; Greenberg, Rodrigo, Berry, Brinck, & Joseph, 2006; Rodrigo, Greenberg, Burke, Hall, Berry, Brinck, Joseph, & Oby, 2007; Sanacore, 2002). Even if silent reading is dominant in the practice of ER because it is normally faster than oral reading and helps achieve quantities in the given timeframe, silent reading seems a resulting rather than a defining feature of ER. In addition to the aforementioned critical features, the definitions suggest that ER can be seen from different perspectives. This paper takes a closer look at ER from three points of view: cognitive, affective, and pedagogical.

ER as a Cognitive Process

Competent readers use different types of reading by flexibly adjusting their cognitive involvement according to a range of factors such as the purpose of reading, level of materials, tasks to perform, and time limit, if any. The process of reading typically employed in ER is identified among the variety of reading styles. This paper draws on the framework of rauding theory (Carver, 1990, 2000) to examine the cognitive nature of ER, because it can explain the interplay of two of the critical features of ER (easy materials and reading rate).

The theory postulates five basic processes of reading arranged in a hierarchy – *scanning, skimming, rauding, learning,* and *memorizing*. From the first to the last reading processes in this hierarchy, the involvement of cognitive processes increases and reading rate decreases. *Scanning* is typically a process of finding a target word in a text. It is the fastest process of the five because only word recognition is executed. *Skimming* is used when readers want to locate the main idea or understand the gist of the text quickly. In addition to word recognition, proposition encoding is a necessary process. *Rauding*, an original term in the theory, represents "what is often called natural, normal, typical, or ordinary reading" (Carver, 1990 p.16). It involves word recognition,

understanding the full thought in each sentence, and integrating the meaning across the sentences in the whole text. As Carver states, this process is the most frequently utilized in our daily life (e.g., reading newspapers, magazines, manuals, ads, and billboards for information and reading works of fiction and nonfiction for relaxation or leisure). Readers do not experience much difficulty in this process because reading the materials is within their linguistic and cognitive abilities. In other words, the materials are easy and reading is performed fluently. Rauding is slower than scanning and skimming because it involves comprehending the whole text. *Learning* is utilized when readers attempt to comprehend difficult texts or to remember selected information in the text. This type of reading is likely to happen in academic and occupational situations where we read linguistically and conceptually demanding texts. *Learning* is likely to require careful interpretation, synthesis, and evaluation of the thoughts and ideas in the text to arrive at new pieces of linguistic and conceptual learning. Readers slow down their process by concentrating longer on each word or repetitively reading the same phrases or frequently backtracking to previous parts of the text. *Memorizing* is used when readers attempt to remember thoughts and information contained in the text so that they can recall them later as precisely as possible. A typical situation in which this process is used is preparation for memory-based tests. As with many theoretical constructs, the distinctions among these processes are not always clear-cut in real life situations. For example, taking a reading comprehension test can induce *rauding* if the text is simple and the questions are easy and only a few in number, but it can instigate either *learning* if the text and questions are demanding or even *memorizing* if readers have to answer many questions after reading with no reference back to the text. However, the conceptual distinction among the five reading processes offers a useful framework for understanding the nature of the reading process in ER.

The process of ER is closest to *rauding*. It is not *scanning* or *skimming* because we expect readers not to skip a large part of the text but to read the entire text by recognizing every consecutive word in a sentence. Nor is it *learning* or *memorizing* because we expect readers not to read texts far beyond their reading ability nor to remember facts and details found in the texts for later recall. In typical ER, readers are encouraged to read materials around their current reading ability. Because of this, they can read fluently and understand the texts with little difficulty. They are also encouraged to read materials that match their interests, which should not only motivate them but also make their reading smoother than otherwise because they are likely to have more background knowledge. Expected levels of comprehension are also similar across ER and rauding. In the literature of ER, *general comprehension* is the goal. Although this is a vague concept, at least it is clear that we do not expect full understanding of all the details of ER. Similarly, in rauding, understanding in minute detail is not expected. Although we do not have to take these figures as guidelines in L2 ER, 75% (Carver, 1990) and 64% (Carver, 2000) are suggested as the minimum acceptable level of comprehension in rauding.

Other types of reading that are often contrasted with ER can be placed in the same conceptual framework. *Intensive reading* seems most similar to *learning*. In typical L2 classrooms, it is probably not primarily new facts and information but new L2 linguistic knowledge that readers are expected to learn by studying a difficult text that includes a substantial amount of unfamiliar vocabulary and grammar. Intensive reading may additionally activate *memorizing* if a serious test accompanies it. Similarly, *academic reading* also involves *learning* and *memorizing* because of the conceptually loaded reading materials used in academic and professional fields, as well as

the linguistic features at lexical, syntactic, and discoursal levels that are specific to relevant study fields. Although it is true that readers learn various things through ER both linguistically and conceptually, the expectations for cognitive demands and levels of professional specialization are higher in academic reading than in ER.

If every other condition is equal, the difficulty of reading materials is a critical factor that affects the reading process. It is important to bear in mind that "difficulty" is a relative concept determined by the interaction between readers' ability and text difficulty. For instance, an easy text for skilled readers can be a difficult one for less skilled readers. This means that both skilled and less skilled readers can read in the ER mode by choosing material at the appropriate level. Then, what is an appropriate level of materials in ER? Determining this level precisely is not easy; the grade-level equivalency, an index frequently used in L1 research, is not applicable to L2 reading. However, L2 vocabulary research offers a hint. The field has reached a general consensus that over 98% lexical coverage (the rate of familiar vocabulary) is needed for independent fluent reading comprehension (Hu & Nation, 2000; Laufer, 1989, 1992; Laufer & Ravenhorst-Kalovski, 2010; Schmitt, Jiang, & Grabe, 2011). Although comprehension requires much more than lexical knowledge, vocabulary being a critical factor, lexical coverage is very informative in the evaluation of the difficulty levels of reading materials. The 98% coverage generally supported by L2 researchers is close to the estimation of 99% in the L1 literature (Carver, 1994).

As discussed above, the process used in ER mirrors rauding, but the expectation in the achieved reading rate differs between L1 and L2 reading. Amongst educated adult native speakers of English, the rauding rate is said to be around 300 wpm[2] (Carver, 1990), whereas documented reading rates in L2-English ER are much slower, often below 200 wpm or even 100 wpm (cf. a summary by Beglar & Hunt, 2014). As a practical guide, Waring (2000) recommends 150 wpm (with good comprehension) as a reference point for L2 readers to achieve before advancing to the next level of reading materials.

ER as an Affective Process

Research in the affective domain of reading deals with readers' emotions and feelings about reading. The emotional state of mind is conducive to attitude and motivation that encourage continued engagement in reading. The essence of ER is reading for pleasure, in contrast to reading for study. Therefore, understanding affect in reading is necessary for deepening our understanding of ER.

Wolf's (2007) synthesis of and reflections on scientific studies of reading indicate that there is a reciprocal relationship between emotional development and reading. The foundation of the love for reading can start, depending on the home environment, at a very early stage in childhood; reading stories in books (either being read to by a caregiver or reading by oneself) contributes to children's emotional development; they learn a repertoire of emotions by experiencing new feelings through characters in the stories; this in turn prepares them to understand more complex emotions in more complex story lines. Wolf maintains that the ability to emotionally engage in stories and books can divide readers into those who read for pleasure and those who read only as

a means to an end. We see some research results supporting this mutuality. Positive attitudes improved L1 reading behaviors (van Schooten & de Glopper, 2002; van Schooten, de Glopper, & Stoel, 2004), and reading attitudes and intrinsic motivation in L1 and L2 correlated with or contributed to the amount of L2 ER (Ro & Chen, 2014; Takase, 2007; Yamashita, 2004). On the other hand, the more opportunities readers have to read, the more likely they are to maintain positive attitudes toward reading (van Schooten & de Glopper, 2003) and remain engaged in reading (Johns & VanLeirsburg, 1994), although it is fair to add that the relationship is often not as simple as described here, being influenced in complex manners by a range of factors such as gender, home environment, and linguistic ability.

Wolf (2007) suggests that reading is indeed not only a cognitive but also an emotional process. "Any [brain] image of the fluent, comprehending reader shows ... the growing activation of the limbic system – the seat of our emotional life – and its connections to cognition" (p. 140). The limbic system underlies our ability to feel various emotions in reaction to our reading, and thus, its activation can motivate engagement in reading. Not only that, the greater affective involvement stimulates cognitive processes such as focused attention and facilitates comprehension of what we are reading. We see several reports on the activated cognition caused by aroused emotion. For example, both L1 and L2 readers display focused attention for consecutive hours when they are immersed and lost in their favorite stories (Nell, 1994; Nishino, 2007); enjoyment of reading positively influenced L2 incidental vocabulary learning (Elgort & Warren, 2014), and contrarily, anxiety about L2 reading adversely affected recall of stories (Sellers, 2000).

The concept of *flow* has been used in examining the pleasure or optimal experience during reading (e.g., Kirchhoff, 2013; McQuillan & Conde, 1996). Flow refers to "the state in which people are so involved in an activity that nothing else seems to matter; the experience itself is so enjoyable that people will do it even at great cost, for the sheer sake of doing it" (Csikszentmihalyi, 1990, p. 4). Although flow is experienced in diverse activities in daily life, reading is the most widely reported activity that provides the flow experience (McQuillan & Conde, 1996). McQuillan and Conde (1996) found that both L1 and L2 readers experience flow when they read self-selected books for pleasure, when they have an interest in assigned texts, and when they receive personal or intellectual benefits. Kirchhoff (2013) reported that L2 readers in a foreign language context have flow experiences in reading graded readers.

Researchers' endeavors in capturing the role of affect in L2 ER resulted in several independently proposed models (de Burgh-Hirabe & Feryok, 2013; Nuttal, 2005; Rodrigo, Greenberg, & Segal, 2014). Among them, two models by Day and Bamford (1998) are componential and collectively depict the complex interplay among various factors that could formulate attitude toward and motivation for L2 ER. First, *L1 reading attitudes*, *Previous experience with other L2s (if any), Attitudes toward L2 culture and people,* and *L2 classroom environment* compose *L2 reading attitudes*, which subsequently affect *Motivation* together with *Materials*, *L2 reading ability,* and *Sociocultural environment*. In this latter phase of the model, Day and Bamford hypothesize that *Materials* and *L2 reading attitudes* have stronger influences on *Motivation* than *L2 reading ability* and *Sociocultural environment* do. Empirical attempts to thoroughly and systematically test these models have yet to appear, but the models have served as a point of reference against which researchers interpret their findings. Several studies have found support for the models'

elements (e.g., Camiciottoli, 2001; de Burgh-Hirabe & Feryok, 2013; Nishino, 2007; Ro & Chen, 2014; Takase, 2007; Yamashita, 2004, 2013). Simultaneously, other influential variables and more dynamic relationships among the constituent variables than the models appear to suggest have been found (e.g., de Burgh-Hirabe & Feryok, 2011; Nishino, 2007), showing the need for further work in this area.

The relationship in affect between L1 and L2 reading is informative pedagogically as well as theoretically, because if L2 readers have developed a positive reading attitude and motivation throughout their prior L1 literacy experience and carry them over to their L2 reading, L2 teachers can capitalize on them. Indeed, empirical studies identified the connection in attitude and motivation between L1 and L2 reading, but they also showed that L2 reading attitude and motivation are not mere copies of those in L1. On the one hand, there were weak to medium correlations between affective variables in L1 and L2 reading (Takase, 2007; Yamashita, 2007); L1 reading attitudes contributed to L2 attitudes (Yamashita, 2007); both L1 and L2 reading attitudes correlated with the amount of L2 ER (Yamashita, 2004); and L1 intrinsic reading motivation accounted for the amount of L2 ER, together with L2 intrinsic motivation (Takase, 2007). Judge's (2011) qualitative study with nine avid L2 readers found that the majority were positively affected by a love and respect for L1 reading fostered in their childhood by family encouragement. On the other hand, however, reading attitudes were overall more positive in L1 than in L2 (Yamashita, 2007); some discrepancies existed between L1 and L2 reading motivation with some participants being eager readers in L1 but not in L2, or vice versa (Takase, 2007); and unlike Judge's finding, family attitudes toward reading in L1 did not relate to the amount of L2 ER (Takase, 2007). The complex picture emerging from past studies may be a genuine reflection of the complex nature of affect in L2 reading, being formulated and dynamically changing under the influence of various factors like those proposed in the aforementioned models and possibly more.

To reiterate, ER is reading for pleasure. Only when people enjoy reading, do they continue to read for its own reward. Research shows that pleasure not only motivates readers but also has positive effects on their cognitive functioning and conceivably facilitates comprehension and learning. All these things contribute, in turn, to large quantities of reading.

ER as a Pedagogical Approach

Researchers and practitioners are most interested in ER as an instructional option in L2 programs. Expectations for its positive effects include a broad range of linguistic skills and knowledge. Gains in general knowledge through ER are also a valuable benefit, since rich background knowledge enhances comprehension.

Instructional approaches that implement ER represent the position that L2 is acquired through massive input at the right level for individual learners (comprehensible input), via meaning focused implicit learning, under affectively favorable circumstances. All these conditions are explained as necessary elements for L2 acquisition in the Monitor Model (e.g., Krashen, 1982). Therefore, this model offers a strong theoretical basis for advocates of ER. The Reading Hypothesis (Krashen, 1993) also lends conceptual support to ER by directly postulating benefits

from reading. Despite subsequent theories (e.g., Schmidt, 2001; Swain, 1985) and empirical findings (e.g., Norris & Ortega, 2000; Shintani, Li, & Ellis, 2013) that do not necessarily align with some of the Monitor Model's claims, the importance of large quantities of input for L2 acquisition is widely recognized as one of the critical principles for L2 instruction (Ellis, 2005; Long, 2009). Ellis (2005) further states that ER outside the classroom is probably the easiest way of providing an input-rich environment in pedagogical settings. L2 input can be increased through listening as well, but reading may be more effective for facilitating L2 acquisition, at least in the case of lexis (Brown, Waring, & Donkaewbua, 2008; Vidal, 2011), although combining reading and listening may be just as effective (Brown et al., 2008) and beneficial in the long run.

If we take a more pedagogically-oriented perspective and place ER within the distinction between *approach* (underlying teaching principles can be applied in many different ways) and *method* (fixed sets of procedures and techniques must be followed) in L2 teaching (Richards & Rodgers, 2014), we can note that an instructional design that implements ER belongs to the group of approaches. In other words, ER can be flexibly implemented in various educational settings. As part of such flexibility, Robb and Kano (2013) distinguish *replacement* and *additive* options. The former uses ER in regular class hours, replacing other types of instruction, while the latter requires/recommends ER outside class hours. Naturally, the additive option increases L2 input more than the replacement option, but within feasibility in each educational context, teachers can choose either or a combination of both. Instead of rigid procedures and techniques to follow, the oft-cited 10 principles of ER illustrating the features of successful ER classes can serve as a general guideline for ER as a pedagogical approach (Bamford & Day, 2004; Day & Bamford, 1998, 2002).

ER approaches take the learner-centered approach in the sense that learners' individuality, independence, preference, and autonomy are respected as much as possible in each setting through encouragement to choose what they read and, possibly, where and when. This learners' freedom and autonomy is achievable only through teachers' efforts and commitments, which include not only creating an environment where plenty of books are readily available on a wide variety of topics and at various linguistic levels to accommodate learners' diverse interests and L2 proficiencies, but also offering various help and guidance where necessary (cf. Day, 2014). The physical appeal of the book (Rodrigo et al., 2007) and quiet reading environment (Kirchhoff, 2013) are also reported to be significant in facilitating ER, and thus, teachers may also want to consider them.

Given the flexibility of ER approaches, are there any common underlying features for an instructional program to be called an ER approach? Earlier in this paper, we identified four critical features of ER: a large amount of reading, faster reading rate, easy materials, and pleasure reading. Large quantity is the essence and goal of ER approaches, but as it is acknowledged, there is no absolute amount required for reading to be called "extensive" (e.g., Day & Bamford, 1998).[3] What is considered extensive depends on a range of factors like learners' proficiency and time constraints in a given program. A general definition is perhaps "a larger amount than is normally feasible under instruction other than the ER approach (e.g., more traditional intensive reading or form-focused grammar-translation approaches) given a particular context." Among the remaining three features, *pleasure* seems to be the key. To reiterate, ER is

pleasure reading. Therefore, the ER approach is an attempt to include pleasure reading in L2 programs for the longest period of time possible in a given context. Easy and attractive materials are essential prerequisites for pleasure reading, which leads to a faster reading rate. This emphasis on pleasure reading has several pedagogical implications. Since pleasure reading is less demanding than academic reading, readers with various backgrounds, from children to adults and even to adults with only basic literacy skills, can benefit from it. Also, since pleasure reading helps readers acquire a good linguistic and cognitive base, it prepares them for more demanding academic and professional reading (Grabe, 2009). Furthermore, because a love for reading is nurtured through pleasure reading, readers are given valuable opportunities to foster a love for reading and to grow into long-term L2 readers. Finally, since readers who know the pleasure of reading are much more likely to voluntarily continue reading outside school, they have better chances to improve their L2 knowledge and skills.

By highlighting the distinction between pleasure reading and study reading (or academic and professional reading at the university level and above), I would suggest that we should ideally have both types of reading for balanced literacy acquisition. Traditional approaches such as intensive reading neglect the importance of massive input for L2 acquisition, of experiencing much text processing for acquiring automaticity in reading skills, and of the pleasure side of reading. The current enthusiasm for ER approaches is, therefore, a welcoming trend. For learners in foreign language contexts, where the real purpose of using L2 outside the classroom is mostly absent, ER is probably the only chance for experiencing the fulfillment of true reading in everyday life: reading to learn what they want to know and reading for pleasure. However, as a characteristic of meaning-focused implicit learning, ER needs time commitments for its benefits to appear in the acquisition of new linguistic knowledge. Therefore, depending on the time availability and on the specific goals of a given program, ER approaches can be most effectively combined with more explicit types of instruction. Researchers recommend balanced approaches including both form-focused instruction and ER (Anderson, 2014; Nation, 2013).

As ER is pleasure reading, it might sound controversial to make it obligatory in L2 programs by forcing students to read a required amount (e.g., de Burgh-Hirabe & Foryok, 2013; Robb & Kano, 2013; Robb, 2014). However, this should not be a serious concern as long as the pressure and demands are not excessive. Contrarily, making ER part of the program should be beneficial for L2 learners because under such circumstances, ER is not extra work but is counted as their course-work (Ro & Chen, 2014). Moreover, even if it is mandatory at first, all learners will benefit from opportunities for experiencing pleasure reading (for some, this may be quite a new experience) and fostering a love for L2 reading.

Impacts of ER Approaches on the Cognitive and Affective Domains of L2 Reading

Research publications on the effect of ER have been increasing particularly in recent years. This section provides a brief review of the recent research on ER approaches. In addition to broad narrative reviews in this area (Day & Bamford, 1998; Grabe, 2009), meta-analyses have been published, indicating the maturity of this field of enquiry, as there is a substantial number of primary studies available for statistical research synthesis (Krashen, 2007; Nakanishi, 2015). In a recent meta-analysis, Nakanishi integrated 43 effect sizes ($N = 3942$) from 34 studies published

up to July 2012. Two types of comparisons were reported according to the design of the included studies: group contrasts (comparison between an ER group and control group) and pre-post contrasts (comparison between pre- and post-tests within an ER group). The overall mean effect sizes (*d*) and their confidence intervals (CI) were 0.46 (CI = 0.27 – 0.65) in the group contrast and 0.71 (CI = 0.39 – 1.04) in the pre-post contrast. These effect sizes with their CIs not including 0 supported the effectiveness of ER approaches.[4] Although not statistically significant, Nakanishi's further analyses suggested some notable trends: Sustained ER is likely to result in larger gains, and older readers (university students) are likely to benefit more than younger readers (junior and senior high school students), although this result should be received with caution because of the smaller number of effect sizes available from the younger reader population. In addition, this study shows that primary interest areas for outcome measurement have been reading comprehension, reading speed, and vocabulary. Given the reported magnitude of mean effect sizes and CI values across the study's two contrasts, gains in reading comprehension seem most stable with the CIs not surpassing 0, at least in the studies included in the meta-analysis.

With an ever-growing number of research publications on ER approaches, we have obtained more insights. Research on the gain in L2 reading rate suggests that reading easier materials is likely to be more beneficial than reading more difficult materials (Beglar, Hunt, & Kite, 2012; Beglar & Hunt, 2014; He, 2014; Huffman, 2014). The impact may appear more quickly on reading rate than on new linguistic knowledge (Karlin & Romanko, 2010; Yamashita, 2008). Effects in the affective domain have also received an increasing amount of attention. Earlier studies mainly focused on learners' perceptions of ER approaches, but after reasonable support for this type of instruction was established, researchers' interest shifted to the more fundamental question of whether and how ER changes readers' affective reactions to L2 reading. Aside from anecdotal descriptions in earlier studies, recent studies, being more systematic in both qualitative and quantitative designs, have provided firmer evidence for the positive effects of ER. The findings include the following: ER's positive effects on affect may appear more quickly than on linguistic skills and knowledge (Greenberg et al., 2006; Karlin & Romanko, 2010); reading motivation changes dynamically, waxing and waning in response to a wide variety of factors, and thus, the change is not likely to be linear (Cho & Kim, 2014; de Burgh-Hirabe & Feryok, 2013; Nishino, 2007; Ro, 2013); and in spite of this dynamic nature, positive attitudes once established through continued ER may stay with readers for a long time and motivate them in the long run (Rodrigo et al., 2014; Nishino, 2007).

To help advance research in this field, Nakanishi (2015) proposed several methodological recommendations. I would also like to draw attention to a question to be further addressed in future studies. As discussed above, because ER is a form of implicit learning, it needs time commitments. However, it is conceivable that the length of time necessary to see its impacts may differ by outcome domains (i.e., shorter in one domain and longer in another). Examining multiple skills and knowledge areas as well as affect will offer valuable theoretical and pedagogical insights. Theoretically, we may be able to shed light on the effectiveness of implicit learning in different domains of L2 acquisition; pedagogically, we may be able to help plan the implementation of ER in the curriculum to meet individual goals best. For example, Karlin and Romanko (2010) hypothesize that if the goal is "to have students feel better about studying English, then isolated course offerings of ER should be sufficient" (p. 183), but if the goal is to

boost their linguistic abilities, "curriculum-wide commitment to ER, extended over more than just a single semester, may be necessary" (p. 183). This type of study involves simultaneous multiple outcome measurements (e.g., Greenberg et al., 2006; Karlin & Romanko, 2010; Yamashita, 2008) and is relatively demanding to conduct. However, since many educational programs operate within time constraints, it is important to know what we can expect from ER within the time available in given situations.

Conclusion

The recent increase in interest and accompanying research publications on ER is remarkable. The number of publications is larger for foreign language contexts than for second language contexts (Nakanishi, 2015). This may be because people in the former are more strongly aware of the lack of sufficient L2 input. Another reason may be teachers' disappointment and frustration with the low motivation of many of their students taught in traditional intensive reading approaches under circumstances where the actual need to use the L2 is absent, and ER has proved itself to be an ice-breaking motivating approach. However, we also see reports on successful ER applications in ESL (English as a second language) contexts (e.g., Greenberg et al., 2006; Rodrigo et al., 2007, 2014). Thus, ER approaches have merits in various circumstances.

This paper examined ER from cognitive, affective, and pedagogical perspectives in order to understand what kinds of cognitive processes are involved in ER, how internal affective conditions influence and are influenced by ER, and finally, how ER approaches are characterized, by reviewing recent research findings. Although we need to accept time commitments and thus be patient to see ER's impacts on the acquisition of new L2 linguistic knowledge, ER's benefits are much broader in scope involving restructuring and reinforcing existent partial L2 knowledge, building fluency, and fostering positive reading attitude and motivation. Therefore, ER approaches are recommended in balanced L2 literacy programs.

Notes

1. In this paper, *L2* is used referring to "foreign language" and "second language" inclusively. When the distinction is made, either *foreign language* or *second language* is used.

2. More precisely, this is 300 standard words per minute (see Carver, 1990).

3. Recent endeavors to determine the amount of text to read for incidental vocabulary learning using corpus-based estimation (Nation, 2013, 2014) may be a step toward answering this difficult question.

4. These mean effect sizes are interpreted as small and medium according to Cohen's (1988) general criterion, or as small according to Plonsky and Osward's (2014) criterion proposed specific to L2 research.

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