L2 Proficiency and L2 Reading: Consolidating the Linguistic Threshold Hypothesis

Yanping Cui, University of Victoria, ycui@uvic.ca

ABSTRACT: This paper presents the issue surrounding the relationship between the first language (L1) and the second language (L2) in second language reading. It makes a claim for the Linguistic Threshold Hypothesis as opposed to the Linguistic Interdependence Hypothesis by introducing the two hypotheses and reviewing relevant literature. It also discusses the pedagogical implications.

KEYWORDS: L2 reading, L1 reading, linguistic threshold

I. Introduction

The issue surrounding the relationship between the first language (L1) and the second language (L2) in second language reading has been hotly debated for decades (Bossers, 1991). Anderson (1984) posed his well-known question “reading in a foreign language: a reading or language problem?” and identified this question as crucial to the understanding of the nature of L2 reading.

There has been no consensus among theorists and researchers regarding the relationship between L1 reading, L2 reading and L2 proficiency (Bossers, 1991). Research studies focused on this relationship have drawn on two hypotheses, namely, the Linguistic Interdependence Hypothesis (LIH), and the Linguistic Threshold Hypothesis (LTH) (Clark, 1979; Cummins, 1979). The former hypothesis proposes that L1 reading ability transfers to L2 reading, whereas the latter posits that L1 reading ability transfers to L2 reading only when learners attain a certain level of L2 proficiency. Various studies have attempted to verify which hypothesis can better explain the relationship between L1 reading and L2 proficiency. Findings from these studies, however, have been inconsistent.
Notwithstanding the inconsistence of the results, I would argue for LTH, and my argument is based on the empirical studies that have provided ample evidence for LTH. The purpose of this paper is thus to introduce the LTH and the LIH, and provide evidence for my argument by reviewing relevant studies.

II. Linguistic Threshold and Interdependence Hypotheses

The Linguistic Threshold Hypothesis was developed by Clark (1979) originally as “short-circuit hypothesis”, and is recently more commonly referred to as the Linguistic Threshold Hypothesis (Bernhardt & Kamil, 1991). According to LTH, L2 learners must first gain a certain amount of control over L2, or in other words, cross a critical linguistic threshold, before applying their L1 reading skills to L2 reading. This “certain amount” is referred to as a “language ceiling” by Clark, or a “threshold level of linguistic competence” by Cummins (1979). Below this level of linguistic competence, it is unlikely for L1 reading strategies to be transferred to L2 reading. As a result, good readers’ L1 reading skills are “short-circuited” in the sense that these readers revert to poor reader strategies when engaged in a challenging task in L2 (Bosser, 1991).

The Linguistic Interdependence Hypothesis argues that L1 linguistic knowledge and skills that a child possesses play an instrumental role in the development of corresponding abilities in L2, with the implication that L1 should be adequately developed prior to the extensive exposure to L2. Once a set of language operations such as reading and writing is acquired, the same operations will be available as needed within L2 contexts. Simply put, as to reading comprehension, L1 reading skills can be transferred to L2 reading process.

Limitations of Both Hypotheses

Both hypotheses have some theoretical and practice limitations, and may operate differently in children and adults. August (2006) has noted that LIH neither identifies the cognitive mechanisms involved for transfer nor elaborates on which L1 skills L2 readers transfer or how they transfer. Nor does LIH address how transfer might differ for learners differing in developmental and academic levels. In addition, the fact that LIH attributes L2 academic difficulties to weak L1 skills suggests that L1 instruction should be increased while instruction in L2 reading is unnecessary (Bernhardt & Kamil, 1995). The approach to increasing L1 instruction, however, is more applicable to children than adults (August, 2006), because the evidence for LIT has been derived from studies primarily on school learners, most of whom are in the developmental stages of both L1 and L2 and literacy skills (Bernhardt & Kamil, 1995). On the other hand, LTH logically involves the LIH in that upon the attainment of the L2 threshold,
Linguistic Threshold Hypothesis

L1 skills can transfer to L2 reading, which is argued to facilitate L2 development. However, LTH does not provide empirical evidence to demonstrate what this critical level of L2 proficiency specifically might be (August, 2006). Moreover, it cannot be applied to individuals with low L1 proficiency and with little L1 knowledge available for transfer (August, 2006).

III. Contribution of Second Language Proficiency to Second Language Reading

The contribution of L2 language proficiency to L2 reading has been documented by numerous studies. Some studies provided tentative evidence for LHT that needs further investigation (Anderson, 1984; Barnett, 1986; Clark, 1979), and some supported both LHT and LIH, however, with more weight placed on LHT (Allen, Bernhardt, Berry, & Demel, 1988; Bernhardt, 1991; Bossers, 1991; Lee & Schallert, 1997).

In a study of the role of L2 proficiency, Clark (1979), using a cloze procedure and a miscue analysis, compared L1 and L2 reading ability of 21 adult low-level Spanish ESL students. In their native language, good readers differed from poor readers in that the former appeared to reply on semantic cues, whereas poor readers depended more on syntactic cues. In English, however, the advantages exhibited by good readers reduced considerably when confronted with difficult blanks. Clark further compared one good and one poor L1 reader of equal ESL proficiency and found a substantial decrease in the good reader’s superiority over the poor reader. Clark concluded that due to deficient knowledge of L2, skilled L1 readers resorted to reading strategies employed by poor L1 readers, thereby becoming poor L2 readers. The findings suggested that a certain amount of L2 control is required before the possible transfer of L1 reading ability to L2 reading.

Anderson (1984) reviewed a number of empirical studies with a view to gathering evidence in support of either of the two hypotheses. In order to verify the hypotheses, he made a number of statements. The first one concerned “poor reading in a foreign language is due to poor reading ability in the first language” (p. 4), and the second pertained to “poor reading in a foreign language is due to inadequate knowledge of the target language.” (p. 4). Anderson found, however, little direct evidence to support either statement. He continued to review studies in order to lend support to the third statement—“poor foreign language reading is due to reading strategies in the first language not being employed in the foreign language, due to inadequate knowledge of the foreign language” (p. 4). The review of empirical studies led him to conclude that L2 reading seemed to be both a language and a reading problem, however, with stronger evidence to show that L2 reading was a language problem for L2 readers with low foreign language proficiency levels. Meanwhile, Anderson highlighted the methodo-
logical limitations in the previous studies he reviewed, and pointed out that it remained unclear as to the nature of the threshold, and whether it varies with different readers carrying out different tasks. In addition, the subjects in the previous studies did not involve learners with varying L1 reading ability and L2 linguistic proficiency, and in most studies, among the three variables, L1 reading, L2 reading and L2 knowledge, only two of them were actually assessed.

For this reason, research into the existence of a linguistic threshold after Anderson (1984) has endeavored to overcome the methodological shortcomings. Several carefully designed studies have been reported to elucidate the relationship between two languages (Bossers, 1991; Carrell, 1991; Bernhardt & Kamil, 1995; Taillefer, 1996; Lee & Schallert, 1997). These studies obtained information on three variables (L1 reading, L2 reading and L2 proficiency) from the same individuals, examined the relationship between the variables, and presented evidence that can support LTH.

Working with native readers of English (college age) reading French, Barnett (1986) conducted a study using reading comprehension as a dependent variable while trying to account for L2 proficiency level and L1 literacy background. This study reported that those readers with more exposure to French obtained higher comprehension scores, hence underscoring the importance of L2 knowledge. Similarly, Allen and colleagues (1988) carried out a study of adolescents with English as their L1 reading four passages in French, German, or Spanish as part of their secondary school instruction (cited in Berthardt & Kamil, 1995). Statistical results revealed a clear increase in comprehension scores based on the language level. The study, therefore, drew a conclusion that the more language one had, the higher their comprehension scores were.

In exploring the relationship between the three variables mentioned above among two groups of Spanish learners of English and English learners of Spanish, Carrell (1991) took into account various factors which comprise reading comprehension and its assessment. For both groups, L1 reading and L2 proficiency were found to contribute significantly to L2 reading. For foreign language learners, L2 language proficiency was a better predictor of reading performance than did L1 reading ability. In contrast, L1 reading ability was a better predictor than L2 proficiency for second language learners. Carrell attributed this difference to different learning environments (foreign vs. second language), and to the small sample size. The difference, as Carrell suggested, may also be attributable to the levels of L2 proficiency because the L2 proficiency of the foreign language sample (English learners of Spanish) was slightly lower than that of the second language group. The last interpretation is in consonance with Anderson (1984)’s conclusion that L2 reading is more a language problem at the low L2 proficiency level.
Using Turkish learners of Dutch as subjects, Bossers (1991) tightly designed his study in the sense that the text structure, the syntactic complexity, length, the number of propositions, and topics in both L1 and L2 texts were carefully controlled. He discovered that both L1 reading and L2 proficiency contributed significantly to L2 reading. L2 knowledge was found to be a more important predictor, accounting for about four times more of the common variance than L1 reading ability. Differences between skilled and less skilled readers indicated that L2 reading ability could be predicted only by a difference in L2 proficiency. L1 reading ability was reported to become more significant once a relatively high level of L2 proficiency has been achieved, thus lending support to LTH.

Bernhardt and Kamil (1995), working with L2 learners of Spanish at three levels of L2 proficiency in their study, further addressed the same issue as Carrell (1991) and Bossers (1991) did. These researchers found that L2 proficiency was about four times more powerful a predictor at beginning level and two times more powerful a predictor at advanced levels. To continue to map the relationship between L1 reading, L2 reading and L2 linguistic knowledge, Lee and Schallert (1997) examined the reading performance of 809 Korean learners of English at two different grade levels. The findings indicated that both L1 reading ability and L2 proficiency contributed significantly to L2 reading ability, and they accounted for 62% of the variance, with L2 proficiency sharing twice as much variance with L2 reading ability as L1 reading ability. Taillefer’s (1996) study added further to our understanding of this relationship. Focusing on the effects of task complexity on this relationship, Taillefer investigated the effect of two tasks: scanning and reading for meaning, a more cognitively demanding task. Both L1 reading ability and L2 proficiency were found to affect significantly foreign language reading comprehension, but to a varying extent in different reading tasks. In the scanning task, L1 ability was more influential than L2 proficiency. In the more challenging task of reading for meaning, however, L2 knowledge is far more significant a factor than L1 reading ability. The researcher analyzed that when L1 reading ability is held constant at a high level, readers with a high level of L2 proficiency scored significantly higher on L2 comprehension tasks than those with a low L2 level. On the basis of these results, Taillefer argued for the existence of a linguistic threshold and concluded that the more difficult the task was, the higher the threshold was. Other researchers such as Cummins (1980) and Anderson (1984) also reached a similar conclusion.

To sum up, various studies have indicated that the variable that correlates best with effectiveness in second language reading is proficiency in this language and LTH has stood the test of time (Eskey, 2005). Clark (1979) claimed that readers whose L2 proficiency falls below this threshold, no matter how proficient they are in their L1 reading, cannot transfer their L1 reading skills to L2 reading until they cross the threshold.
Pedagogical Implications

The research into the existence of a language threshold points to pedagogical implications in a number of ways. First, these studies underscore the importance of second language skills for effective L2 reading. This is important in that the emphasis on language skills can justify the activities organized in the light of the traditional approach, the focus of which is on grammar teaching and vocabulary instruction. Teaching of vocabulary and grammar should not, however, be isolated; rather, it should be embedded in communicative classrooms.

Second, it is advisable for teachers to develop an awareness of students’ potential reading problems in order to improve instructional process, given the complexity of the reading process per se.

Third, the findings necessitate instructional endeavors to integrate reading skills and language development. L2 reading teachers must stress both the psychological and the linguistic factors (Clark, 1980). Teachers should develop a good understanding of the phonological, morphological, syntactic, semantic and discourse cues of the target language before they attempt to teach students to utilize these cues (Clark, 1980). Meanwhile teachers should be aware that some students who know all the words and grammatical structures of a sentence or paragraph cannot comprehend what they read, which reflects the consequence of isolated learning of the language elements without understanding how to apply them to reading in a meaningful way.

IV. Conclusion

Numerous research studies have discovered a linguistic threshold. Nonetheless, this threshold level cannot be identified in absolute terms because there is no consensus among researchers as to the construct of L2 proficiency on the one hand, and the threshold level varies according to readers’ motivation and background knowledge (Anderson, 1984; Eskey, 2005) and the complexity of reading tasks (Anderson, 1984; Taillefer, 1996) on the other.

More studies are required to validate empirically LTH. Some specific issues still remain ambiguous. For instance, L2 proficiency has been operationalized and measured differently by different researchers, and there has been no clear agreement as to how to represent the constructs associated with knowledge of the language (Lee & Schallert, 1996). Hence, further studies should investigate what kind of constructs can best represent L2 proficiency. Future research is also needed to examine how the threshold relates to various reading tasks with readers in specific learning environments, for instance, foreign vs. second language learning contexts.

Findings from these studies reviewed suggest that effective L2 reading consists of sufficient L2 proficiency and good L1 reading skills. This pattern regarding L2 reading explicates merely part of L2 reading performance. Social and psychological factors such as motivation, self-confidence, individual learning style and so forth are
also important variables that can impact L2 reading, and therefore are worthy of examination in future research studies.

References


