

## On the Relationship between L1 Reading Ability, L2 General Proficiency and L2 Reading Ability

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### Abstract

*Reading is perhaps the most important skill both in first and second language acquisition. The majority of the people, in one way or another, have to be able to read in L1 in order to live a normal life. To this end, the acquisition of the reading skill in L1 is compulsory almost everywhere in the world. By the same token, being able to read in L2, especially in English, is the paramount skill in today's world. A lot of people like academics, physicians, graduate students, businessmen, journalists, etc. badly need to be able to read in English with ease in their everyday life. Yet, despite its importance and plenty of instruction, a lot of people fail to acquire a reasonable degree of reading fluency. This paper aims to examine whether poor L2 reading ability is more related to poor reading ability in L1 or it has nothing to do with L1 but rather with low level of general L2 proficiency. It is an attempt to see whether reading skills are transferable across languages, in general, and between L1 and L2, in particular. We look at this phenomenon from three perspectives:*



1) by examining the empirical evidence provided by the relevant studies concerning the relationship between the three variables of L1 reading ability, L2 reading ability, and L2 general proficiency; 2) by presenting an observation-based argument; and 3) by looking at some data driven theory in language testing. We hope that this paper will at least generate some research questions if not answering any.

*Keywords: Reading, Acquisition, Proficiency, Ability*

## **Introduction**

This paper discusses the issue of L2 reading ability in relation to L1 reading ability and L2 general proficiency. It addresses the question of whether language learners' poor L2 reading is in part due to their poor L1 reading ability or low L2 proficiency. After a brief account of the importance of L2 reading skill and its hypothesised relationship to L1 reading ability and L2 proficiency, a number of empirical studies in support of different views will be discussed. In the end, the author's own understanding will be presented.

## **Importance of Reading**

Reading in L1 seems to be the most important skill (Willows, et al., 1983). It might be more important in L2 (Paulston, 1976; Oller and Richard, 1983; Alderson, 1984). Reading in a foreign language, according to Rivers (1981, p. 259) is the paramount skill, "not only as a source of information and pleasurable activity, but also as a means of consolidating and extending one's knowledge of the language."

The priority of reading skill in a foreign language, especially in higher academic situations, can be justified on the ground that in most countries there is very little or no opportunity for real communication in foreign languages. But books, periodicals, academic journals, etc. written in foreign languages particularly in English with few translations would be available. Such sources must comprise a major portion of the compulsory readings of many graduate courses.

For this reason, among others, many countries focus on reading skill in their foreign language education. For example, in Iran, the Supreme Council of Cultural

Revolution has issued that reading in English with fluency must be the ultimate objective of language instruction both at schools and universities. Yet, after years of instruction, many students do not attain this objective. One of the questions which may then arise concerns the nature of L2 reading problem. Two aspects of the problem of insufficient L2 reading ability may be examined in terms of the level of L1 reading ability and general L2 proficiency.

## L2 Reading in Relation to L1 Reading and L2 Knowledge

Despite its importance, many second/foreign language learners fail to read adequately. The issue becomes more complicated when one notices that some readers who know almost all the individual words and structures used in a text do not understand the whole text. This may lead to the conclusion that reading comprehension is not necessarily a combination of the knowledge of words and grammar.

On the one hand, it has been hypothesised that inability to read in L2 might be due to imperfect skill in reading one's mother tongue (Jolly, 1978; Coad, 1979 as cited in Alderson, 1984 and Cummins, 1991). In other words, the problem of L2 reading in this view is considered to be a general reading problem irrespective of the language under consideration. Such an idea often referred to as "reading universal hypothesis" implies that the processes of reading are the same in all languages. This hypothesis may be considered to have its origin in "inter dependence hypothesis" (Cummins, 1991) positing that there is a common underlying language proficiency which can be manifested in any language. Once manifested in one language, it facilitates learning other languages. According to Cummins (1991), the "inter dependence hypothesis", which implies that reading strategies as well as reading ability are transferable from L1 to L2 and vice versa, is accountable in terms of "comprehensible input", meaning that L1 literacy and knowledge of the concepts acquired in L1 help to comprehend L2 input. In Cummins' terms (1991, p. 77), "what is transferred is primarily conceptual knowledge rather than specific linguistic elements."

On the other hand, there is another view suggesting that low L2 reading ability is



a specific language problem which implies that due to insufficient knowledge of L2 in the areas of vocabulary, grammar, orthography and the like, L2 learners face serious problems in L2 reading comprehension. Barnett (1986) and Kruse (1979) argue that knowledge of L2 vocabulary is of prime importance in L2 reading while Yorio (1971) proposes that reading in general involves four factors: (1) knowledge of the language; (2) guessing ability to make the correct choices; (3) ability to remember the previous cues; and (4) ability in making associations between the selected cues. He further suggests that L2 reading is not the same as L1 reading on the ground that the incomplete knowledge of L2 impedes comprehension. Yorio (1971, p. 108) states:

..... (2) the guessing or predicting ability ... is hindered by the imperfect knowledge of the language; (3) the wrong choice of cues or the uncertainty of the choice makes associations more difficult; (4) due to unfamiliarity with the material and the lack of training, the memory span ... is usually shorter than in our native language; recollection of previous cues, then, is more difficult.

The two views mentioned above are the two extreme ends of a continuum. However, as Alderson (1984, p. 4) points out, they can be modified into:

- 1) Poor foreign language reading is due to incorrect strategies for reading that foreign language, strategies which differ from those for reading the native language.
- 2) 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. Good first-language readers will read well in the foreign language once they have passed a threshold of foreign language ability.

### **Threshold Level**

Cummins (1979, cited in Cummins, 1991) puts forward the idea of "threshold level of linguistic competence" which implies that a certain level of language proficiency is needed in order for L2 readers to benefit from their L1 reading strategies. Some studies to be discussed below lend support to this hypothesis. On the other hand, based on some evidence, Diaz and Klingler (1991, cited in Cummins, 1991) propose an "alternative threshold hypothesis" (hereafter ATH compared with TH of

Cummins). The Alternative Threshold Hypothesis (ATH) suggests that before a certain level of L2 proficiency, L1 reading strategies are transferable and facilitative while the original Threshold Hypothesis (TH) quite conversely suggests that only after threshold, L1 reading ability is helpful in L2 reading.

To us, the problem of both versions of threshold is that neither of them has been operationally defined. In other words, it is not clear at what stage of L2 proficiency the threshold starts before or after which the transfer of reading ability can happen. However, according to Cummins (1991), threshold level varies from context to context depending on the degree of the demanding nature of the task, cognitive development of the learner and, as Alderson (1984) adds, on the level of reader's background knowledge of the content of the text. We can add that the degree of similarity between L1 and L2 in terms of orthographic and phonological systems, syntax and vocabulary may also affect the degree of transferability of reading ability across languages and the level of threshold. One might expect that the more similar the two languages are, the more benefit could be taken from L1, hence the lower the threshold (TH) might be. However, there could be situations in which this expectation may not materialise. We will explain this point later.

The next section of the paper discusses some relevant empirical studies. Since the results are quite contradictory even within some of the studies, in the sense that some single studies partly support one view and partly confirm still another opposite view, it was felt inappropriate and somewhat impossible to classify them on the basis of the hypotheses they support.

### **Review of Empirical Studies**

Carrell (1991) investigated the relationship between L1 reading ability, L2 proficiency and L2 reading ability with Spanish and English native speakers. The subjects comprised two groups. There were 45 Spanish native speakers learning English at different levels in the United States. There were also 75 native speakers of English learning Spanish again at different levels. Two Spanish and two English passages followed by ten multiple choice reading comprehension items for each passage were selected. Content and difficulty level of the texts were similar in the



two languages. Both groups took all the tests first in L2 and then in L1.

The comparison of mean scores revealed that in both groups as expected, there were significant differences between performance on native language texts and second language ones to the advantage of the former. No significant differences were found between the mean scores of the two groups on their native language reading comprehension tests. Regression analysis in which L1 reading scores and L2 proficiency levels were independent variables and L2 reading scores comprised the dependent variable showed that both L2 proficiency and L1 reading ability were significant factors in predicting reading ability in second language. However, as to the relative importance of the two independent variables, it was shown that, for the Spanish group, L1 reading ability was a more important predictor while, for the English group, level of L2 proficiency was more significant in predicting L2 reading ability. Due to this somewhat contradictory result, therefore, this study could not find whether L1 reading or L2 proficiency is the primary factor for L2 reading ability. Carrell (1991, P. 168) concludes that, "the relative importance [of each factor] may be due to other factors about the learner and the learning environment."

Verhoeven (1991) hypothesised that L1 literacy skill is strongly related to L2 literacy skill although the surface aspects of linguistic proficiency develop separately. According to him, there is a common underlying proficiency across languages which facilitates the transfer of cognitive-academic abilities such as literacy-related skill, especially reading from one language to another. To test his hypothesis, the author conducted a study with 138 Turkish nationals learning Dutch in Netherlands. The study partly concerned the notion of interdependence in biliteracy and reading comprehension in Dutch (L2) and Turkish (L1). Literacy skills in both languages were measured through word-reading, word-spelling and text-loud-reading. Coherence tasks were also developed to measure reading comprehension. Each task consisted of twenty four-sentence ministories in a scrambled and illogical order. The subjects were asked to reconstruct the stories by identifying the first or last sentence of each story.

Within language group analysis showed a strong relationship between literacy skill and reading comprehension of the subjects in each language. A highly

significant relationship was also found between the scores of each skill in Turkish and the same skill in Dutch. The author concludes that reading abilities are transferable from L1 to L2 even if the two languages do not share an orthographic system. If one can accept that only finding the first or last sentence of a scrambled story is a good indication of reading ability which seems to us not to be a very reliable index by itself, it may be concluded that this study approves that L2 reading is more a reading problem. However, since L2 proficiency level of the subjects were not taken into consideration, this study cannot deny that proficiency is not a significant factor. Neither can it compare the importance of the two.

Hacquebord (1989, cited in Bossers, 1991) studied the relationship between L1 and L2 reading with 50 Turkish secondary school students enrolled in classes of Dutch as a second language. Three tests of L1 reading, L2 reading and L2 knowledge were administered twice within a period of two years. The reading tests in both languages comprised 50 multiple-choice and 24 true-false questions. Knowledge of Dutch was measured by a 50-item vocabulary test which can be argued not to be valid by itself as a measure of language proficiency, though part of it. The correlational analyses showed a highly significant relationship between L1 and L2 reading scores in the first administration. In contrast, no relationship was found between the two variables in the second administration. The latter nonsignificant relation was attributed to "L1 loss" due to no more active use of Turkish by the subjects. The patterns of the relationship between Dutch vocabulary and reading scores were also the same. Initially, a strong relation was revealed while the second time it decreased to a moderate level. It is interesting that the Dutch control group's performance on L1 reading and L1 knowledge showed the same pattern of relation which implies that Turkish subjects were approaching a pattern found in L1 reading in relation to L1 knowledge.

The findings of this study indicate that at initial stages of L2 reading, both L1 reading and L2 knowledge can predict L2 reading ability, though L2 knowledge is more significant in this regard. The results also show that after a certain threshold level of L2 knowledge, L2 knowledge is less related to L2 reading ability while L1 reading ability is not related to it at all. It may, therefore, be concluded that the



alternative threshold hypothesis (ATH) discussed above has received more support in this study.

Bossers (1991) conducted a study with 50 native speakers of Turkish learning Dutch as a second language. The subjects' proficiency in Dutch ranged from intermediate to advanced. Four Dutch reading comprehension passages and their Turkish translations each followed by 16 multiple-choice questions were administered. A standardised test of Dutch vocabulary and grammar was also taken by the subjects. Data were analysed by conducting a multiple regression. The results showed that both L1 reading and L2 knowledge were significant predictors for L2 reading ability. However, it was revealed that L2 knowledge was much more significant in this regard. Concerning the threshold level, it was found that only for advanced L2 readers, L1 reading ability was a significant predictor while for the least skilled readers, L2 knowledge was the most important predictor. It, therefore, confirms threshold hypothesis (TH) after which L1 and L2 reading are related and before which L2 reading is primarily a language problem.

Alderson et al. (1977, reported in Alderson, 1984) conducted a study which lends support to the view that in L2 reading, knowledge of L2 is more important than L1 reading ability. They tested a sample of Mexican university students' English (L2) proficiency, Spanish (L1) and English reading comprehension. It was found that though English and Spanish reading comprehension scores significantly correlated, the best predictor of L2 reading ability was knowledge of L2 rather than L1 reading ability. It was also shown that as the L2 texts become more difficult, the importance of language knowledge increases and that of L1 reading ability decreases.

Carson et al. (1990) devised a study which partly concerned the topic of this paper. Their subjects were 48 Chinese and 57 Japanese students of four American universities enrolled in English courses. Their English proficiency ranged from low-intermediate to advanced (the score range of 400 to 525 on TOEFL). All the subjects took a 51-blank cloze passage in English and a 44-blank cloze in their native language. The texts were similar in terms of rhetorical organisation, content and difficulty level. The correlational analyses revealed a significant but moderate relationship between L1 reading and L2 reading (cloze scores) for both groups. However, whether performance on cloze test can be considered a valid index of only



reading ability remains unanswered.

Regarding the relationship between L2 proficiency and reading ability in L1 and L2, the authors conclude quite hesitantly, due to small sample size in different L2 levels of proficiency, that as L2 proficiency increases, L2 reading ability increases but L1 reading ability decreases. It, therefore, confirms Diaz and Klingler (1991) alternative threshold hypothesis (ATH) indicating that before a certain level of L2 knowledge, L1 and L2 reading abilities are related while after this level, they are not related or even negatively related as is the case in this study. The latter finding may be explained in terms of "L1 loss" due to its non-active use.

Lee and Schallert (1997) did a large scale and carefully designed study with 809 Korean 3rd-year middle school and first-year high school male and female students ranging between 14 to 17 years of age with a wide range of ability both in Korean as the L1 and English as a foreign language. The subjects were given an English proficiency test, an English reading comprehension test and a Korean reading comprehension test. The results indicated that the relative contribution of L2 proficiency in predicting L2 reading ability is more than L1 reading ability. It also confirmed the existence of a threshold of L2 proficiency below which there was little relation between L1 and L2 reading ability, whereas above this threshold level, a positive relationship between L1 and L2 reading ability was revealed. To save the space, a number of other studies are summarised in Table 1.

**Table 1: Summary of L2 Reading Studies in Relation to L1 and L2**

Author	Year	L1	L2	Subjects	Results
Macnamara	1970	English	Irish	62	L2 knowledge problem
Macnamara	1970	English	Irish	341	L2 knowledge problem
Clarke	1979	Spanish	English	21	L2 problem before Threshold
Clarke	1979	Spanish	English	2, case study	Reading problem after Threshold
Segalowitz and Hebert	1982	English	French	not known	Reading problem
Wagner, et al.	1989	Arabic/ Berber	French/ Arabic	166	L2 problem before Threshold and Reading problem after that.
Swain, et al.	1991	French	English	30	L2 problem before Threshold



## **An Intuitive Understanding of the Issue**

The studies discussed above and some others not included here do not show a clear picture of the relationship between L1 reading, L2 reading and L2 knowledge. Therefore, no certain generalisation can be made at this point. Given that the majority of the studies reported here are correlation-based and that such studies alone cannot reveal a comprehensive picture of the complex non-linear or interaction-based relationship between two or more variables (see Kiany, 1997 a, 1997b for a detailed discussion of this point), we find it even harder to present a sound generalisation of the issue. However, disregarding such constraints, we seem to find that the hypothesis claiming L2 reading to be a language problem is more supported particularly at the elementary level of L2 proficiency. This does not mean that the idea of transferability of reading skill is rejected. If the transferability and reading interdependence hypotheses are to be accepted, it could then be argued that, as stated earlier, the degree of similarity between L1 and L2 should be a considerable factor in this regard. One might expect that the more similar the two languages are, the more transfer should happen.

Conversely, however, the author of this paper observed an opposite situation which might potentially question this hypothesis. His observation concerns the relationship between Farsi and Arabic in Iran where Farsi is the native language. Our intuitive understanding, although fully open to question and systematic investigation, is that the two languages almost share an orthographic system with more than perhaps 70 percent similar sounds. Besides, there are a lot of common words with the same meanings. Some syntactic structures are also shared by the two languages. To these, one can add the common religious ideas expressed through the Holy Koran which, though written in Arabic, is widely taught and read in Iran. This, in turn, would entail some cultural commonalities as well.

Yet, despite all the above factors, if one compares the reading ability of Iranian students in Arabic and English, one perhaps will see no real difference in this regard, especially as far as comprehension is concerned. The fact that there is more emphasis on Arabic in the formal educational system as its teaching starts at primary school through teaching the Holy Koran and as it is considered by the

society as a respectable, religious subject while English is taught from secondary school does not apparently give any observed advantage to reading ability in Arabic. The only observed difference might be that people may only read aloud better in Arabic without understanding. The issue becomes clearer in higher academic situations in which students are even better in reading English. This, of course, may be explained in terms of higher motivation in reading English due to the fact that graduate students are required to read in English to achieve academic success.

However, this is our personal observation-based understanding which may not be necessarily correct and is a research question to be systematically investigated. Nevertheless, if such observations are true, they may lead to the following tentative conclusions; the acceptance of one may lead to the rejection of the others.

1. Similarities between L1 and L2 may not always facilitate the transfer of reading ability.
2. Reading in L2 may be more a language problem, which implies that the ability to read in two languages perhaps involves two different constructs developed separately.
3. There is not an independent construct called reading ability in any language; let alone for this construct to be transferable across languages. Reading in L2 is one of the manifestations of L2 language proficiency specific to L2, hence a language problem.

In contrast to the above observation of the relationship between Farsi and Arabic, a counter-observation seems to concern the relationship between English and French as another pair of similar languages. Based on the author's personal experience in his relatively close communication with native speakers of English, there seems to be a general consensus among them that they tend to read French more easily than other languages. If and only if both of these observations can be empirically confirmed, another possible conclusion may be drawn suggesting that transferability of reading skills across languages, if it exists at all, might not be a universal phenomenon, hence a language specific one. To what extent these observations and the entailed generalisations may be true is indeed open to and worthy of systematic investigation.



## Yet Another Confusion: A Test-Based Perspective

Looking at the issue from a different perspective, it seems warranted here to discuss briefly some general findings in the realm of language testing which might lend support to the hypothesis that L2 reading is a language problem.

Oller (1979; 1983) proposed the notion of indivisibility (or unitary hypothesis as opposed to divisibility hypothesis of 1960s of Lado) in second language proficiency. Divisibility hypothesis suggests that there are some different and separate constructs for language ability, e. g., listening, speaking, reading, writing, vocabulary, grammar, etc., each of which can and should be measured by a particular test. Indivisibility-hypothesis, on the other hand, posits that there is a single second language proficiency factor. Taking insights from the findings of intelligence, personality and cognitive ability tests including L1 abilities which suggested the existence of an underlying general (g) factor of intelligence responsible for all sorts of cognitive abilities, Oller extended the issue to second language proficiency. He (1979; 1983) reports a number of studies based on factor analysis (Oller, 1976; Irvin, et al. 1974; Hinofotis, 1976, see Oller, 1979, 1983 for details, Cf Farhady, 1983 for counter arguments) with large samples of second language learners which showed that any sub-parts of standardised English proficiency tests ranging from very discrete-point nature of vocabulary and grammar to integrative tests of reading comprehension and cloze to very pragmatic tests of oral interview loaded heavily on one single factor referred to as general proficiency (g) factor.

Disregarding some of the theoretical and methodological problems of Oller's studies which he accepted later and weakened his strong version of the indivisibility hypothesis (Oller, 1983), almost in all such studies all the sub-tests accounted for at least 65 percent of the total variance of general proficiency factor which the author concludes to be very high and indicative of the confirmation of indivisibility hypothesis. Without going into any details, suffice it to quote Oller (1979, p. 428) who argues that the general proficiency factor, "is either the only factor that exists, or it is the only one that the tests are capable of measuring." The implication of the indivisibility hypothesis to our discussion of L2 reading is that if we accept Oller's original ideas, it would then follow that the construct of reading comprehension

does not exist. To weaken the argument, one may say that L2 reading is a dependent sub-part of L2 general proficiency. This, in turn, implies that L2 reading is very much a language proficiency problem as without the whole (L2 proficiency), the sub-part (L2 reading) may not exist.

## Conclusion

All in all, although a clear picture is yet to emerge from more rigorous and controlled empirical studies, it seems that the answer to the question of L2 reading as a reflection of L1 reading ability or L2 knowledge is not necessarily a matter of either or. Both seem to be significant predictors of L2 reading ability, but so far theoretical discussions and research evidence tend to give relatively more importance to L2 knowledge. However, much more studies are needed in order to shed some more light on the issue. We specifically recommend some interaction-based studies as opposed to solely correlational ones. To get a comprehensive picture, some of the variables which must perhaps be taken into account include the learners' age, language aptitude, parents' educational and socio-economic background, proficiency level in L1, L2 and Ln (e.g. Farsi as L1 versus Arabic and English as L2 and L3) as well as the degree of similarity and differences among these languages. Only then may one get out of the confusion of whether L2 reading ability is a manifestation of L1 reading ability, L2 general knowledge or none of the two. And if neither, what then?



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