# On Reading－Writing Relationships in First and Foreign Languages 

Ahmad Abu－Akel<br>University of California，Los Angeles


#### Abstract

Reading and writing are related．Inasmuch as reading and writing are both language processes，we can assume relationships between them．More specifically， since both involve the visual processing of language（as compared，for example， with oral／aural processing of language）we may even postulate certain medium－ dependent relationships．However the exact nature of these relationships，as well as the implications of these relationships for teaching methods and materials， remain unclear．Research in the last decade has begun to yield insights into various aspects of the nature of the relationships．This paper first characterizes ways one might conceptualize reading－writing relationships，then discusses general findings from first，second，and foreign language research on the nature of reading－writing relationships，and finally，reports the results of a foreign－ language reading－writing relationships study conducted for college Arabic and Hebrew native speakers studying English as a foreign language in Israel． 認みと音きには関係がある。両方とも合語にまつわるプロセスであるという意味で，わ れわれは，両者に関係があることを前提にできる。具体的にいえば，両方とも言語の視觉的処理を必罗とするのだから，何らかのメティア固有の関係があることを疑うこともでき る。しかしなから，これらの関係が正確にどんな性格のものであるか，これらの関係が教投法と数材に関してどのような示嗲をもつのかは明らかではない。過去10年間の研究に よって，この関係の性格のさまざまな側面がわかってきた。この跲文は，まず，梳みと昔 きの関俰の概念化の方法を眍し，次に第一言䍷，第二䇾語，外国語の說みと费きの関係に ついて先行研究の研究結果を踰じ，最後にイスラエルで英哣を学かアラビア語またはヘプ ライ語を第一言喡とする大学生を対象に行なわれた外国語による珫みと聿きの関係に関す る研究の結果を報告する。


Many different ways for conceptualizing a relationship between reading and writing exist．For example，one might be primarily interested in writing，and wonder about the correlations of reading to writing，or the influence of the processes and products of reading on writing．That is，one might be interested in reading to write． Or，one might be primarily interested in reading and wonder about the
correlations of writing to reading, or the influence of the process and products of writing to reading. That is, one might be interested in writing to read. One might assume that reading and writing are two sides of the same coin and focus on their similarities and differences in terms of mental processing, or one might focus on the asymmetric relationship of reading to writing-namely that writers must read, but readers do not necessarily have to write. One might be interested in reading the outcomes or products of writing, and from this perspective, one could be interested in a writer reading his or her own product, and the effects of such reading on revision or subsequent writing. Or, one might be interested in the reading done by others of the written products of writers and of the writing process; in other words, one might be interested in reading as the interpretation of writing. One might be interested in either the cognitive aspects of the relationship between reading-writing as mental processes, or one might be more interested in the social aspects of reading and writing and the role of literacy in culture. Or one might conceptualize the relationship between reading and writing from either a dynamic or static perspective. From a dynamic perspective, one would be interested in how the nature of the relationship changes over time, developmentally, or how it may vary over different situations, purposes, goals, and even over different languages (first or second, or third and fourth languages). Finally, and this list is not meant to be exhaustive but merely suggestive, one might be merely interested in the reading-writing relationship as it applies to what we might characterize as "ordinary" texts (simple narrative or expository texts), or in literary or aesthetic texts. Thus, there are many ways to think about reading-writing relationships, and extant research has indeed taken various orientations to the relationship.

Giving all the different ways of conceptualizing the relationship between reading and writing, one can understand that there are about as many different models of the reading-writing relationship. Each model presents those aspects of the relationship as reflected by the respective conceptualizations. Thus, there is no one model of the reading-writing relationship. Each model presents those aspects of the relationship of specific interest or focus to the researcher who developed it. Every researcher necessarily works within a paradigm, and every model has its own dominant focus.

Regardless of the model(s) to follow, adult learners have two primary sources from which to construct a second language system: knowledge of their first language and input from the second language (Carson, Carrell, Silberst, Kroll \& Kuehn, 1990). There is evidence that second
learners utilize both of these sources in acquiring second language literacy skills.

According to Stotsky (1984) and Tierney and Leys (1986), readingwriting research in English as a first or native language has shown from correlational evidence that "better writers tend to be better readers (of their own writing as well as of other reading material), that better writers tend to read more than poorer readers" (Stotsky, 1984, p. 16). Krashen similarly reports that "a variety of studies indicate that voluntary pleasure reading contributes to the development of writing ability" (1984, p. 4), and that "several studies report statistically significant correlations between reading ability and writing ability" (1984, p. 5). With respect to experimental studies, extant research suggests that while writing instruction, exercises and practice may improve writing, they may not have significant effects on reading. On the other hand, studies that sought to improve writing by providing reading experiences in place of grammar study or additional writing practice found that these experiences were as beneficial as, or more beneficial than, grammar study or extra writing practice (Weaver, 1994; Zamel, 1992). Thus, while additional writing instruction and practice may improve writing, it may not improve reading. Additional reading, however, improves both reading and writing (Stotsky, 1984; Krashen, 1984). Stotsky concludes "it is possible that reading experience may be as critical a factor in developing writing ability as writing instruction itself" (1984, p. 17).

Several researchers have explored the issues of interlingual and intralingual transfer of literacy skills in the development of second and foreign language proficiency. Interlingual refers to the transfer from L1 to L2 reading, and from L1 writing to L2 writing. Intralingual refers to the transfer within L1 or L2 of reading skills to writing skills and vice versa. Cummins (1981) made a strong case for interlingual transfer of literacy skills. He claimed that there is a cognitive/academic proficiency that is common to all languages and that this common language proficiency allows for the transfer of literacy-related skills across languages. Some empirical studies have supported Cummins' claim (Canale, Frenette, \& Belanger, 1988; Edelsky, 1982; Goldman, Reyes, \& Verhagen, 1984; Mace-Matluck, Dominguez, Holtzman, \& Hoover, 1983). For example, the Mace-Matluck et al. (1983) study examined English literacy among students of Cantonese language background and found a significant correlation between literacy acquired in English and literacy level achieved in Cantonese prior to English instruction. In another study, Hirose and Sasaki (1994) investigated the relationship between Japanese students' English L2 expository writing and L1 writing ability and their L2 profi-
ciency. Their findings were that L1 writing was highly correlated with L2 writing ability and that L2 proficiency contributed to L2 writing quality. However, the transfer of literacy-related skills suggested here is limited by Clarke's (1978) threshold hypothesis (see also Alderson, 1984; Cziko, 1978). McLaughlin's (1987) data also suggest that transfer of literacy skills may not be as automatic as Cummins claims. Thus, the picture of interlingual transfer of literacy-related skills is complicated by the notion of a language proficiency threshold suggested by Cummins (1981), Clarke (1978), and Cziko (1978), and by the possibility that this threshold may be a necessary yet not a sufficient condition for transfer to occur, as McLaughlin (1987) suggested.

Intralingual transfer, that is, the mutual influence of reading and writing in the second language, occurs as a result of literacy events in the second language which provide the learner with information about the forms, function, and processes used in literacy activities in the developing language system. Whatever form this second language literacy input may take, it is almost certainly not the case that second language learners acquire reading skills only from writing. Thus, in addition to whatever interlingual transfer effects there are in the L2 from the L1, there are also intralingual effects within the L2 from the influence of L2 reading upon L2 writing and vice versa.

Sarig (1988), Sarig and Folman (1988), and Folman's (1991a, 1991b) works provide insight into the reading-writing relationships in a second or foreign language. They have investigated several aspects of how academic literacy skills relate to L2. Sarig (1988) presented a case study of writing an L1 (i.e., Hebrew) study-summary for both L1 and L2 (i.e., English) texts as an example of what she called a reading-writing "encounter." Her analysis of mentalistic data protocols with a text processing model showed summarization to be a complex mental process involving a number of "cognitive" moves, and further showed that, in terms of the quality of resulting product, summarization from texts in L1 was closely related to summarization from texts in L2, suggesting a transfer of summarization skills from L1 to L2 reading. Moreover, Sarig and Folman (1988) proposed an Academic Literacy Test (ALT) based on the notion of reading and writing as "one integrative meaning construction process" (1988, p. 2). Folman (1991a) presented empirical evidence not only of the effectiveness of explicit training in academic literacy tasks, but also of the transfer of training in academic literacy, and of specifically explicit training in tackling the ALT tasks, from L1 (Hebrew) to L2 (English).

At any rate, while most reading-writing researchers are immersed in generating a model that encompasses the "enigmatic" relationship be-
tween reading and writing, little work is done that deals with readingwriting classrooms. This area of study is of extreme importance especially as we try to integrate not only reading and writing, but all language skills, and language skills across content and curriculum areas-and not have to identify the classroom as either writing or reading. The study reported below will try to shed some light on some of the aspects pertaining to reading-writing classrooms.

## The Study

Through examining the first language and foreign language reading and writing abilities of college students studying English as a foreign language, te study attempted to determine the relationships across languages [Arabic or Hebrew (L1) and English (FL)], and across modalities (reading and writing) in the acquisition of English literacy skills on an academic level.

Although some research studies (e.g., Canale, Frenette, \& Belanger, 1988; Clarke, 1978; Cziko, 1978; McLaughlin, 1987) have looked at the transfer of literacy skills across languages, and a few studies (Flahive \& Bailey, 1988; Janopoulous, 1986) have examined reading-writing relationships in L2, there are virtually no studies that attempted to describe how these two strands are related for the same individual engaged in developing literacy skills in his foreign language. By looking at relationships between reading and writing abilities in both first and foreign language, we can begin to describe the contributions of first language literacy skills and the contributions of foreign language reading and writing experiences to the development of literacy in foreign language. Underlying these issues is the question of the role that language proficiency plays.

In this paper, five basic questions are of interest:
a) Is there a relationship between first and foreign language reading abilities?
b) Is there a relationship between first and foreign language writing abilities?
c) Is there a relationship between reading and writing in the learner's first language?
d) Is there a relationship between reading and writing in the learner's foreign language?
e) Does foreign language proficiency affect interlingual or intralingual transfer?

## Method

Subjects: A total of 55 native speakers of Arabic and 45 native speakers of Hebrew participated in the study. All the subjects were second year English students in a teacher training college. All subjects had received formal education in English for at least 10 years; and none was a native speaker of English. The level of education achieved in the first language was nearly equivalent for both groups (high school level). The assessment of the subjects' proficiency in English was based on their grades in the writing course, their grades on the reading course, their grades on the Israeli national English matriculation exam, and a placement test adapted from the English psychometric exam for admissions to universities in Israel. On this basis the students' language proficiency varied from lowintermediate (those who had an average of 50-60 from a maximum of 100 ) to advanced (over 85). The subjects were each assigned to one of three language proficiency levels: low-intermediate (level 1), with 8 subjects; high-intermediate (level 2), with 61; and advanced (level 3), with 31. Table 1 shows the respective groups according to their FL proficiency and native language.

Table 1: Estimated FL Proficiency for Arabic and Hebrew Native Speakers

Arabic Speakers ( $n=55$ ) Hebrew Speakers ( $n=45$ )

| FL Proficiency | $n$ | $\%$ | $n$ | $\%$ |
| :--- | ---: | ---: | ---: | ---: |
| Level 1 $(50-60)$ | 4 | 7 | 4 | 9 |
| Level $2(60-85)$ | 43 | 78 | 18 | 40 |
| Level 3 $3(85+$ ) | 8 | 15 | 23 | 51 |

Materials: Materials consisted of writing prompts and cloze passages in both the first and the foreign language. The writing prompts were designed to elicit comparison/contrast rhetorical organization, a common pattern of academic discourse and one that presents a clearly discernible set of tasks. (The comparison/contrast type is organized on the basis of opposing viewpoints, either alternative views giving equal weight to two sides, or a pair of views both clearly favoring one side.) The L1 prompt was administered in Arabic or Hebrew. Subjects were instructed to discuss choices in career selection based on the relative availability of job options. The FL prompt-designed to be addressed in English by an

EFL population-asked subjects to write about the importance of belonging to a group or of being an individual in order to achieve one's goals.

The native language reading passages to be turned into cloze readings were selected by three teachers of each language; three Hebrew teachers and three Arabic teachers. The passages selected followed the following criteria: (a) The topic of the passage must be of general interest; (b) the passage must be authentic text aimed at readers with high school level reading skills; (c) the passage must exhibit comparison and contrast rhetorical organization; and (d) the length of the passage must be between 300 and 400 words. The Arabic article was about differences between Jewish and Arab schools in Israel, and the Hebrew article was about rural versus urban life styles. The English text, selected by English native speakers, discussed the effect of environment on dress codes.

After the passages were selected, the teachers of each language used cloze procedures on the passages, following a 7th word deletion rate and maintaining the first sentence of each passage intact. The English passage contained 52 blanks; the Arabic 44 blanks; and the Hebrew, 44 blanks. Instructions included sample sentences with words written in the blanks. All passages were then typed, and the space allotted for each cloze item was standardized across languages.

Procedures: All writing tasks preceded all reading tasks so the reading passages would not provide models for writing and thereby affect writing performance. L1 and FL tasks were counterbalanced.

Subjects were given between 30 and 45 minutes to complete each of the four tasks. Tasks were administered over a two-week period to ensure that language learning between task administration would not significantly affect results. No dictionaries were allowed, and students were not given additional instructions apart from those appearing with the essay prompts and cloze passages.

Scoring: Both the first language essays (Arabic and Hebrew) and the English essays were evaluated by native speakers of those languages using 6-point scales. Each essay was scored by two raters; essays with scores that differed by two or more points were read by a third rater and the extreme score was dropped. The score for each essay was the average of two raters.

The English essays were scored using a 6-point scale developed to score the Test of Written English (TWE) portion of the TOEFL (Appendix A). All three raters had been trained by the researcher and assistants as to how to score based on the TWE criteria.

Since no guidelines existed for Arabic or Hebrew essay scoring, the raters of these essays developed a scoring guideline by following a twostep process. First they were asked to sort the essays into six piles, with each pile corresponding to a degree of proficiency: Essays ranked 6 were the best, and 1 the worst. Then the raters were asked to write a set of descriptors characterizing the features of each of the six groups of essays, resulting in a written 6-point scale for Arabic (Appendix B) and Hebrew (Appendix C) essays. Though some intrinsic language-specific differences are expected, the three languages' criteria for essay evaluation focusing on coherence, topic development, and language usage were all similar.

The English, Arabic and Hebrew raters were all experienced (minimum five years of experience) in teaching writing classes at the college and university levels. Estimates of interrater reliability (coefficient alpha) for the two primary raters in each essay category are reported in Table 2, along with percent of rater agreement, rater means, and standard deviation. Although a third rater was used to provide as accurate an average holistic rating as possible for use in analyses, coefficient alpha and percent agreement are reported to provide information about the functioning of the three 6 -point holistic scoring scales. Rater agreement was operationally defined as ratings within one scale point. Coefficient alphas ranged from .78 (FL essay) to .92 (Arabic essays). The alpha reported for the FL essay raters is low, in part due to the relatively restricted variability of the second rater's ratings ( $S D=.76$ ). The agree-

## Table 2: Essay Rater Means, Standard Deviations, Percent Agreement, \& Coefficient Alphas

| Essay Language | Rater |  | Percent Agreement | Coefficient Alphas |
| :--- | :--- | :--- | :---: | :---: |
|  | $\mathbf{1}$ | 2 |  |  |
| Arabic $(n=55)$ |  |  |  | 0.92 |
| $\quad M$ | 3.00 | 3.2 | 0.98 |  |
| $\quad S D$ | 1.6 | 0.5 |  | 0.87 |
| Hebrew $(n=45)$ |  |  |  |  |
| $\quad M$ | 3.1 | 2.9 | 0.67 | 0.78 |
| $\quad S D$ | 1.7 | 1.3 |  |  |
| English $(n=100)$ |  |  | 0.91 |  |
| $\quad M$ | 3.5 | 3.3 |  |  |
| $S D$ | 1.00 | 0.76 |  |  |

ment rate between the two FL essay raters of $91 \%$ and the reported alpha are evidence of rating system reliability. Either one or both of the raters assigned ratings of 3 to $71 \%$ of the FL essays and 4 to $84 \%$.

Because the sample was initially distributed into six categories by raters, the method used for constructing the L1 essay rating scales yielded greater rating variability compared to the FL scales. Coefficient alpha for the Hebrew essays was .87 , although the rater agreement was only $67 \%$. The first Hebrew rater consistently rated essays higher than did the second rater. The Arabic essay ratings had both higher interrater reliability (.92) and higher rater agreement ( $98 \%$ ). Cloze passages were scored using exact-word scoring, since Oller's (1979) review of cloze research indicated that although percentage scores may be lower with exactword scoring, rank order should remain the same with exact-word or acceptable substitute scoring.

## Results

Mean scores by task are reported in Table 3. The mean for the Hebrew cloze test was 29.9 , and for the Arabic the mean was 32.8, out of a total 44 blanks on each test. The differences in means was not significant, as revealed by the $t$ test at .05 level of significance, suggesting that the subjects are equally competent in this language skill. The mean score of the Hebrew subjects on the English cloze was 24.5; the Arabic was 21 ( 52 blanks total), reflecting the different FL language proficiencies of the two groups.

The L1 essay scores (Table 3) were comparable for the two groups: The Hebrew mean was 3.2, the Arabic, 3.3. The English essay scores again reflected the difference in FL language proficiency: the Hebrew subjects' mean rating was 3.6, and the Arabic subjects', 3.1. This difference in FL proficiency between the two subject groups should be kept

Table 3: Task Means \& Standard Deviations

| Task | Maximum score | Hebrew $(n=45)$ |  | Arabic $(n=55)$ |  |
| :--- | :---: | :---: | :---: | :--- | :--- |
|  |  | $M$ | $S D$ | $M$ | $S D$ |
| L1 cloze | 44 | 29.9 | 4.1 | 32.8 | 3.1 |
| FL cloze | 52 | 24.5 | 6.1 | 21 | 5.2 |
| L1 essay | 6 | 3.2 | 1.56 | 3.3 | 1.5 |
| FL essay | 6 | 3.6 | 0.75 | 3.1 | 0.70 |

in mind as a possible source of influence on the analysis relating to L1 and FL language skills.

The relationships between L1 and FL reading and writing were investigated initially by examining the correlation coefficients. Weak to moderate correlations are reported in Table 4. Correlations magnitudes for the reading-writing relationship may be considered in terms of Shanahan and Lomax's (1986) proposed model of the reading-writing relationship, which argues for the existence of multiple relations (i.e., interactions among language skills such as word analysis, spelling knowledge, and word recognition may differ within and across discourse levels), as well as the possibility that the nature of the reading-writing relationship might change with development and thus not be linearly related. In this case, the Pearson correlation thus may underestimate the actual relationship between these two language skills.

Table 4: Correlations by Language Groups for L1 and FL Reading and Writing Tasks

|  | Hebrew $(n=45)$ | Arabic $(n=55)$ |
| :--- | :--- | :--- |
| L1 reading x FL reading | $r=0.37^{*}$ | $r=0.51^{* *}$ |
| L1 writing x FL writing | $r=0.02$ | $r=0.23^{*}$ |
| L1 reading x L1 writing | $r=0.30^{*}$ | $r=0.50^{* *}$ |
| FL reading x FL writing | $r=0.54^{* *}$ | $r=0.27^{* *}$ |
|  |  | ${ }^{*} p<.05$ |
| . |  |  |
|  |  |  |

The correlations in Table 4 show the following relationships: (1) L1 and FL reading scores had weak to moderate correlations for both the Hebrew and Arabic subjects; (2) L1 and FL writing scores showed weak positive correlations for the Arabic but not for the Hebrew subjects; (3) L1 reading and writing showed weak to moderate correlations for both groups, as did FL reading and writing. For both groups, there are stronger relationships between reading abilities across languages than between writing abilities across languages. The L1-FL writing relationships for Arabic is weak, and for the Hebrew subjects it is not significant. The correlations in Table 4 also show that for the Hebrew subjects the relationship between reading and writing is strongest in FL, but for the Arabic subjects the reading-writing relationship is strongest in L1.

Reading and writing are related, but the strength and nature of the relationship differs for each of these groups, either due to language or other background variable differences. In this respect, one should probably mention that the difference between the Arabic and Hebrew groups could lie in the fact that though English, is by definition, a foreign language for both groups, for the Arab students English is taught as a third language after the Arabic and Hebrew languages, and for the Hebrew subjects it is only the "second language," after Hebrew. Or it could be attributed to some idiosyncratic writing styles different languages have. That is, superb writing in Arabic is dependent on the use of highly elaborative and descriptive vocabulary. Moreover, Arabic writing is not direct, and is rather manipulative. The ability to manipulate language is measured against writing quality. Thus, and as can be noticed from the evaluative criteria on the use of vocabulary (Appendices A-C), good English writing resembles to some extent that of Hebrew, and both are different from Arabic. Therefore, the differences in results between Arabic and Hebrew subjects may in part be attributed to these sets of circumstances.

The means and correlations by FL proficiency levels showed pattern differences by language groups and by levels. However, because of the $n$-sizes for Level 1 ( 4 each for Hebrew and Arabic) and for the level 3 Arabic group (8), it is difficult to draw conclusions about the role that language proficiency plays in these reading-writing relationships. At any rate, two trends, although not statistically significant, did appear that are worth noting. First, FL reading and writing scores tended to increase as FL proficiency increased. This trend is confirmed by Hirose and Sasaki (1994) who report that Japanese EFL students' general L2 proficiency contributed significantly to the quality of the their L2 writing. Similar results were also reported by Cumming (1989) and Pennington and So (1993).

Second, however, L1 reading and writing scores tended to decrease as FL proficiency increased. This was particularly noticeable for L1 writing, where means for both groups decreased from an average of 3.4 at level 2 proficiency, to 2.8 at level 3 . It appears that L1 writing skills are rated weaker as L2 proficiency increases. Potentially, there could be a number of explanations for this trend. It is possible that this is a reflection of the fact that students in an FL academic environment (obtaining a degree in the English language) are not engaged in L1 academic writing activities of the type we are measuring (comparison/contrast). In fact, Abu-Akel (1996) has reported a correlation between the rhetorical organization of the text and one's reading and/or writing ability. The
resulting attrition may be similar, then, to the phenomenon of language loss that occurs when language is no longer used sufficiently to maintain proficiency. This seems particularly true for the Arabic subjects, whose writing and speaking modes are completely different (i.e. diglossia). Still, these results by language proficiency must be interpreted cautiously, given the low numbers of subjects on these levels.

## Discussion

The data suggest that interlingual transfer can occur, but that the pattern and the strength of this pattern varies according to first language background and other aspects of educational background. For reading, the transfer from L1 to FL was similar for both Hebrew and Arabic subjects, but for writing, the transfer from L1 to FL was different. These differences may be a function of FL language proficiency. Another possibility, though it is not investigated here, is that cultural differences are reflected in the literacy practices and abilities of the two groups. There is more "cultural overlap" between Hebrew and English than for Arabic and English (Abu-Rabia, 1995). Abu-Rabia (1995) has found that cultural background and social contexts contribute either negatively or positively to L2 learning: the greater the "cultural overlap" the more positive the contribution to one's L2 learning. Altarriba and Forsythe (1993) also contend that cultural schemata has bearing on one's ability to read and write in L2. Lack of knowledge of cultural schemata may obscure one's understanding of the writer's message, or result in an inability to express oneself in a manner that is appropriate for that culture. In more general terms, anybody who has tried to learn a second language to any considerable depth, particularly where there is little "cultural overlap," say English-Arabic or English-Japanese rather than Italian-French, will recognize that learning and using idioms, for example, involves attaining a deep understanding of the social practices which underlie the use of any particular expression in a specific context. More insight into this area indeed calls for further research.

Beyond cultural and proficiency variables, some of the differences between Arabic and Hebrew students could be related to the functional nature of these languages. Arabic is a classic diglossic language, where the spoken mode (the Low variety) is not written, and Classic Arabic (the High variety), is learned as a second language and used as the writing mode (Ferguson, 1991). In a study conducted by Abu-Asbi (1995), Arabic diglossia emerged as a significant factor effecting Arabic speakers' proficiency in English. An Arabic student not only has to transfer
listening and speaking skills from first to second language, as is the case for the Hebrew speaker, but in fact as a reader/writer has to transfer second language skills to a third language. In this respect, and as argued by Geva and Ryan (1993) the number of languages learned could interfere with one's extent of proficiency in any one language.

The results also suggest that reading ability transfers more easily from L1 to FL than does writing ability. In fact, a weak relationship for L1-FL writing is indicated by the correlations for both groups. The results pertaining to the contribution of L1 writing to L 2 writing in this study fail to confirm the results reported by Hirose and Sasaki (1994). They report that L1 writing ability significantly contributes to L2 writing ability. The difference between the present study and theirs remains obscure for there could be a variability in the definition employed for whether or not language proficiency evaluations are comparable in both studies.

At any rate, further research is needed to determine whether the different variables that predict Hebrew and Arabic writing scores are the result of FL proficiency, cultural differences, or the diglossic situation in writing skills. It seems that L1 and FL educational levels interact in various complex ways.

## Conclusions and Pedagogical Implications

Given the exploratory nature of this study, any teaching implications based on these preliminary findings should be treated with caution. Still, the results suggest some general implications for the classroom.

As other studies have suggested (e.g., Carson et al., 1990), there are significant correlations between L1 and FL reading for both Arabic and Hebrew groups. That is, there is a positive relationship between reading in the first and reading in the foreign language. Although other factors may be important, the relationship could and should be exploited in FL reading pedagogy. L 1 reading skills can and should be used in FL reading pedagogy, but the instructor should not depend on automatic transfer of L 1 reading abilities/skills to FL reading. Similar implications are suggested by Carson et al. (1990), however, for ESL Japanese and Chinese adult learners

The weak correlation between L1 and FL writing for the Arabic subjects, and the lack of correlation of L1 and FL writing for the Hebrew subjects (whose proficiency was higher), suggest that the extent to which L1 may be exploited or used in FL writing pedagogy may be limited to lower FL proficiency levels and/or certain L1 language groups. This implication is supported by Kobayashi and Rinnert (1992). In their study,
among other things, they investigated the effect of Japanese EFL proficiency on writing quality. Their findings suggest that while lower-proficiency students may benefit from L1 (in the form of translation from L1), higher-proficiency students generally do not benefit very much from it. Hence the writing teacher may rely even less than the reading teacher on the transfer of L1 writing skills to L2 writing.

The differences in the reading-writing relationships between the Arabic and Hebrew groups suggest that if the nature of the L1 and FL readingwriting relationship changes as FL proficiency develops, then the extent to which L1 may be relied on in pedagogy also changes with FL literacy development. That is, whereas teachers may be able to exploit L1 literacy relationships in the transfer of FL literacy practices at lower proficiency levels, they cannot do so reliably at more advanced FL levels. Here, teachers need to rely more on the developing FL literacy. In other words, at lower proficiency levels, interlingual transfer may be more important, where as at higher proficiency levels, intralingual input may be the more significant source for developing FL literacy skills.

Finally, the results reported here can be further enhanced by adding raters and/or adding a wider range of reading and writing topics that would help unravel the effect of different topics on the nature of the reading-writing relationship. Further research should address the issues of L1 and FL scale equivalency and rating variability raised in this exploratory study. Moreover, we need to learn more about the ways in which FL writing skills are affected by interlingual transfer and intralingual input; and to investigate further those literacy practices of these two groups that may relate to different patterns of FL literacy acquisition.

Abmad Abu-Akel, of Bar-Ilan University, Israel, is currently at the University of California, Los Angeles, Department of TESL/Applied Linguistics.

## References

Abu-Akel, A. (1996). The role of schemata in ESL reading comprehension. The Language Teacher, 20(9), 6-11.
Abu-Asbi, K. (1995). [The Arabic education system in Israel: From an existing situation towards determining policy and education planningl. Jerusalem: The School for Educational Leadership.
Abu-Rabia, S. (1995). Multi-cultural and problematic social contexts and their contribution to L.2 learning. Language, Culture and Curriculum, 8(2), 183198.

Alderson, J.C. (1984). Reading in a foreign language: A reading problem or a language problem? In J.C. Alderson, \& A.H. Urquhart (Eds.), Reading in a
foreign language (pp. 1-27). New York: Longman.
Altarriba, J. and Forsythe, W. J. (1993). The role of cultural schemata in reading comprehension. In J. Altarriba (Ed.), Cognition and culture: A cross cultural approach to psychology (pp. 145-155). Amsterdam: Elsevier Science Publishers.
Canale, M., Frenette, N., \& Belanger, M. (1988). Evaluation of minority student writing in first and second language. In J. Fine (Ed.), Second language discourse: A textbook of current research (pp. 147-165). Norwood, NJ: Ablex.
Carson, J.E., Carrell, P.L., Silberst, S., Kroll, B., \& Kuehn, P.A. (1990). Reading and writing relationships in 1st and 2nd language. TESOL Quarterly, 24, 245266.

Clarke, M.A. (1978). Reading in Spanish and English: Evidence from adult ESL students. Language Learning, 29, 121-150.
Cumming, A.H. (1989). Writing expertise and second language proficiency. Language Learning, 39, 81-141.
Cummins, J. (1981). The role of primary language development in promoting educational success for language minority students. In The California State Department of Education (Ed.), Schooling and language minority students: A theoretical framework (pp. 3-49). Los Angeles: Evaluation, Dissemination and Assessment Center, California State University.
Cziko, G. (1978). Differences in first and second language reading: The use of syntactic, semantic and discourse constraints. Canadian Modern Language Review, 34, 473-489.
Edelsky, C. (1982). Writing in bilingual program: The relation of L1 and L2 texts. TESOL Quarterly, 16, 211-228.
Ferguson, C.A. (1991). Diglossia revisited. Southeast Journal of Linguistics: Studies in Diglossia, 10(1), 214-234.
Flahive, D., \& Bailey, N. (1988). Exploring reading/writing relationships in adult second language learning. Unpublished manuscript.
Folman, S. (1991a). Attenuated transfer of academic literacy from the $L 1$ to the L2: Some empirical evidence. [Paper presented at the 1991 TESOL Conventionl. New York.
Folman, S. (1991b). Towards an EFL/ESL reading-writing model of academic learning. In J. Carson, \& I. Leki (Eds.), Reading in the composition classroom: Second language perspectives (pp. 81-93). Rowley, MA: Newbury House.
Geva, E., \& Ryan, E. (1993). Linguistic and cognitive correlates of academic skills in first and second languages. Language Learning, 43(1), 5-42.
Goldman, S.R. , Reyes, M., \& Verhagen, C. K. (1984). Understanding fables in first and second languages. NABE Journal, 8(2), 35-66.
Hirose, K., \& Sasaki, M. (1994). Explanatory variables for Japanese students' expository writing in English: An exploratory study. Journal of Second Language Writing, 3, 203-229.
Janopoulous, M. (1986). The relationship of pleasure reading and second language proficiency. TESOL Quarterly, 20(4), 764-768.
Kobayashi, H., \& Rinnert, C. (1992). Effect of first language on second language
writing: Translation versus direct composition. Language Learning, 42(2),183215.

Krashen, S.D. (1984). Writing: Research, theory, and applications. Oxford: Pergamon.
Mace-Matluck, B.J., Dominguez, D., Holtzman, W., \& Hoover, W. (1983). Language and literacy in bilingual instruction. Austin, TX: Southeast Educational Laboratory.
McLaughlin, B. (1987). Reading in a second language: Studies with adult and child learners. In S.R. Goldman \& H.T. Trueba (Eds.), Becoming literate in English as a second language (pp. 57-70). Norwood, NJ: Ablex.
Oller, J.W., Jr. (1979). Language tests at school. London: Longman.
Pennington, M.C., \& So, S. (1993). Comparing writing process and product across two languages: A study of 6 Singaporean university student writers. Journal of Second Language Writing, 2, 41-63.
Sarig, G. (1988). Composing a study-summary: A reading-writing encounter [Unpublished manuscriptl.
Sarig, G., \& Folman, S. (1988). Issues in testing academic literacy: An integrattive approach [Unpublished manuscript]. Tel-Aviv.
Shanahan, T., \& Lomax, R. G. (1986). An analysis and comparison of theoretical models of the reading-writing relationship. Journal of Educational Psychology, 78, 116-123.
Stotsky, S. (1984). Research on reading/writing relationships: A synthesis and suggested directions. In J. M. Jensen (Ed.), Composing and comprehending (pp. 7-22). Urbana, IL: NCTE.
Tierney, R.J., \& Leys, M. (1986). What is the value of connecting reading and writing? In B.T. Petersen (Ed.), Convergences: Transactions in reading and writing (pp. 15-29). Urbana, IL: NCTE.
Weaver, C. (1994). Reading process and practice: From socio-psycholinguistics to whole language. Portsmouth, NH: Heinemann.
Zamel, V. (1992). Writing one's way into reading. TESOL Quarterly, 26(3), 463485.
(Received January 12, 1997; revised May 10, 1997)

## Appendix A:Test of Written English (TWE) Scoring Guidelines*

6 Clearly demonstrates competence in writing on both the rhetorical and syntactic levels, though it may have occasional errors.

A paper in this category

- is well organized and well developed
- effectively addresses the writing task
- uses appropriate details to a support thesis or illustrate ideas
- shows unity, coherence, and progression
- displays consistent facility in the use of language
- demonstrates syntactic variety and appropriate word choice

5 Demonstrates competence in writing on both the rhetorical and syntactic levels, though it will have occasional errors.

A paper in this category

- is generally well organized and well developed, though it may have fewer details than does a level 6 paper
- may address some parts of the task more effectively than others
- shows unity, coherence, and progression
- demonstrates some syntactic variety and range of vocabulary
- displays facility in language, though it may have more errors than does a level 6 paper
4 Demonstrates minimal competence in writing in both the rhetorical and syntactic levels.

A paper in this category

- is adequately organized
- addresses the writing topic adequately but may slight parts of the task
- uses some details to support a thesis or illustrate ideas
- demonstrates adequate but undistinguished or inconsistent facility with syntax and usage
- may contain some serious errors that occasionally obscure meaning

3 Demonstrates some developing competence in writing, but remains flawed on either the rhetorical or syntactic level or both.

A paper in this category shows:

- inadequate organization or development
- failure to support or illustrate generalization with appropriate or sufficient detail
- an accumulation of errors in sentence structure and/or usage
- a noticeably inappropriate choice of words or word forms

2 Suggests incompetence in writing.
A paper in this category is seriously flawed by one or more of the following weaknesses:

- failure to organize or develop
- little or no detail, or irrelevant specifics
- serious and frequent errors in usage or sentence structure
- serious problems with focus

1 Demonstrates incompetence in writing.
A paper in this category will contain serious and persistent writing errors, may be illogical or incoherent, or may reveal the writer's inability to comprehend the question. A paper that is severely underdeveloped also falls into this category.
-Reprinted by permission of Educational Testing Service, the copyright owner

## Appendix B: Evaluation Scale Descriptors:Arabic Essay

6 The argument presented is very clear.
The sequencing of words and sentences is consistent and smooth.
The topic is addressed well.
The overall presentation is well organized.
The vocabulary is abundant.
5 The argument is clear.
The persuasion is a little weaker than Level 6.
The fluency of the language is good.
The vocabulary used is not as elaborate as that in Level 6 papers.
4 The overall control of the language is more than the average, but not completely satisfactory.

The argument mostly follows the topic.
The variety and the type of sentence construction used need more consideration.
3 The argumentation, sequencing of the sentences, expression and vocabulary are acceptable.

The level is average.
2 The logical dèvelopment is missing.
The argument is not clear.
The vocabulary used is limited.
The paper is not fully developed.
1 The topic is not addressed well.
The statements are irrelevant.
The question is misunderstood.
The paper lacks the clear arguments about the topic.

## Appendix C: Evaluation Scale Descriptors: Hebrew Essay

6 The essay is well written, characterized by thoughtful and coherent reasoning.

The essay plan is clearly signaled by transitions.
The overall presentation of argument is convincing, with varied sentence constructions and persuading evidence.
The main idea is identified.
Superior control over language.
5 A clear understanding of the topic is demonstrated.
The argument is unified and coherent with the subject.
Opening and closing statements are related to each other.
Ideas are sufficiently developed.
There may be some minor errors in usage and sentence structure.
4 The subject is clear.
Some sequence of ideas.
The essay gives directions to subsequent reasoning.
The essay complete the basic task of the assignment.
Not enough convincing evidence to support the main point.
Some irrelevant sentences.
3 - The subject is identified.
The main idea is stated.
Reasoning is not adequate or convincing.
No exhaustive argument.
2 Little development of ideas.
The main point is not clear.
No evidence to support the main idea.
Some errors in reasoning.
The topic is limited.
1 Absence of thesis statement.
The main point is not clearly stated.
No sequence of ideas.
No overall presentation of the argument.
No basic structure of essay.
Badly mishandled sentence structure.
Lack of convincing and logic argument.
The essay is lacking in content.

