

An Investigation of the Interdependence between Writing in Persian as L1 and English as L2 on Female Intermediate Students: Language Problem or Writing Problem

Mona Mirzaee

Department of English Language, Islamic Azad University, Sari Branch, Sari, Iran

Amir Marzban

Department of English Language, Islamic Azad University, Qaemshahr Branch, Qaemshahr, Iran

Abstract—English is the leading foreign language enjoying a prestigious position in many countries, including Iran. Many Iranian learners start learning English from first grade of junior high school; some other people send their children to English institutes as early as primary school or even pre-school, yet the problem is that most of them have problems in obtaining the satisfactory level of proficiency either in receptive skills (Listening and Reading) or productive skills (Speaking and Writing) or in both. Among the four skills, writing is of great importance. Hence, the current study examined the interdependence between writing in Persian (L1) and English (L2). For this purpose, 30 Iranian EFL learners majoring in English Translation at Islamic Azad University of Qaemshahr were selected. First of all, a TOEFL test was used to homogenize the learners. Then, the participants were asked to write English and Persian compositions on the same topic in narrative, descriptive and expository genres in two separate sessions, first L2 compositions then L1 composition after a two-week delay. These writings were scored according to the ESL Composition Profile (Jacobs et al. 1981) by two scorers for each language. Using Pearson product-moment correlation, the correlation between L2 proficiency and L1 writing to L2 writing was examined. The outcomes displayed large correlations between L2 proficiency and L2 writing but no correlation between L1 writing and L2 writing. The findings entail some pedagogical implications for improving EFL learners' L2 writing ability through getting more knowledge in English rather than focusing on Persian writing.

Index Terms—interdependence, EFL learners, L1 writing, L2 writing, L2 proficiency

I. INTRODUCTION

There are four skills in learning a language which consist of listening, reading, writing and speaking. Of the four skills in any languages, writing seems to be of great significance either in the first or second language. Chastain (1988) defines writing as: "Writing is a basic communication skill and a unique asset in the process of learning a second language." Halliday (1975) refers to writing as learning how to mean. Ahangari (2007) refers to writing "as an instrument through which people communicate with one another in time and space, transmitting their accumulated culture from one generation to another". Writing is vitally related not only to the life of individuals but to the life of the community. Acquiring proficiency in this skill paves the way for better communication since anyone needs to write as well as to speak in order to transfer what they are already thinking about. The importance of writing skill and its prominent role in demonstrating students' learning magnitude is undeniable be it writing in the first or the second language (as cited in Javadi-Sfa, Vahdany, & Sabet, 2013). Although writing is a necessity, many people are faced with some problems in techniques of writing in first or second language. Writing in second language can be as easy or difficult as writing in first language. The Persian language is no exception in this regard as many students even at university levels have difficulty in their English writings. According to Birjandi & Marzban (2004) and Javadi-Sfa, Vahdany, & Sabet, (2013), "the role of first language and its influence in second language acquisition, as an important issue in the field of language, has occupied researchers for the last few decades."

II. LITERATURE REVIEW

There are an increasing number of researchers who observed remarkable differences between first and second language writing with the most marked one being that second language writers have two languages in their repositories as opposed to many L1 writers (Liu, 2004). A couple of theories and hypotheses have contributed to shaping the knowledge on the interdependence between learners' languages.

A. Linguistic Interdependence Hypothesis

"This hypothesis posits that language operations such as reading and writing are transferable and intertwined; that is, second language skills are only superficially distinct and that at some basic core they are interdependent or is in actuality the same. Further, once a set of language operations has been acquired, they will also be available within second language context. According to this hypothesis, when a language operation such as reading and writing has been acquired in a language, the same operation is not 'reacquired' in another language but is simply applied in the second language. The operation is simply available upon need"(as cited in Bernhardt & Kamil, 1995).

B. Common Underlying Proficiency

Common Underlying Proficiency says that proficiencies involving more cognitively demanding tasks such as abstract thinking, problem-solving, content learning and literacy are common among languages. Common underlying proficiency refers to the interdependence of skills, concepts and linguistic knowledge found in a central processing system. If a child comprehends the concepts of some words in his mother tongue, it will be easier to acquire the labels of the terms in the second language, e.g. understanding the concept of 'beauty' in the first language paves the way for doing the same in the second language.

C. Threshold Hypothesis

Threshold Hypothesis as stated by Cummins (2000) explains that "a minimum threshold in language proficiency must be passed before a second-language speaker can reap any benefits from first language". It means that if a second language learner is going to benefits from his first language, he must have passed a certain level of competence in his second language. In other words, this hypothesis, in its most rudimentary form states that in order to write in a second language, a level of second language linguistic ability must first be achieved (as cited in Cummins 2000).

Arefi (1997) analyzed "the role of the first language literacy in second language acquisition where languages are different. It was designed to investigate the relationship between first language (Persian) writing skills and second language (English) writing performance". Results of the study indicated that Persian writing skills were transferred to the English language.

Based on the investigations of Wolfersberger (2003) about "the composing process and writing strategies of Japanese subjects in their L1 and L2, it was found out that while some L1 strategies may transfer to the L2 writing processes, lower proficiency writers struggle in utilizing all strategies that could help their writing process in the L2".

Ahangari (2007) explored "the ways in which the transfer of assumptions from L1 writing can sometimes help the process of writing in L2". The study was done to investigate the possible impact of first language literacy skills on writing ability in second language. According to the results, the teachers must consider both inter-lingual transfer and intra-lingual input in their analysis of second language literacy development (as cited in Ahangari 2007).

The focus of the study by Zare'ee (2009) was "on the linguistic and rhetorical patterns of L1 and L2 writing samples of Iranian EFL learners and the aim was to determine possible quantitative differences". The participants were obliged to write compositions both in English and Persian on the same topic two separate sittings. These tasks were then scored according to the ESL Composition Profile by two expert scorers. "The results of the study showed that: a) there was a moderate positive correlation between L1 and L2 writing total scores, b) texts written in L1 were significantly longer than those written in L2, c) L1 writing texts were more complex than L2 writing ones in terms of T-units, d) T-units in texts written in L1 were more than those written in L2, and e) the number of spelling errors in L2 writing samples were higher than those of L1 writing samples. These results were compared to those of similar studies comparing L1 and L2 writing"(as cited in Zare'ee 2009).

III. METHODOLOGY

This study was intended to investigate whether Iranian female learners' weaknesses in English writing are due to their lack of proficiency in second language vocabulary and grammar or to their weaknesses in writing in general. The novelty value of this study is in investigating the L2 writing problems through analyzing the contribution of L1 writing and L2 proficiency to L2 writing. For this study, three main questions were addressed.

1. Does English proficiency contribute to English writing?
2. Does Persian writing contribute to English writing?
3. Is there any significant difference between the amount of variance accounted for by the contribution of L1 writing ability and L2 proficiency to L2 writing ability?

A. Participants

In this study thirty participants were chosen from Islamic Azad University of Qaemshahr in which they studied English Translation. All of them were female who were between twenty and thirty years old. An availability sampling (Convenience Sampling) technique was used to choose 30 samples for this study. They had passed the courses of paragraph writing and advanced writing at the university and it was supposed that they had gained the required ability to take part in this study which had one group of learners in two different sittings.

B. The Instruments

TOEFL test: In order to come up with homogeneous groups of participants with respect to their English proficiency, a sample of a TOEFL actual test was administered. This test included 90 items in multiple-choice format. The structure and written section included 40 items and 50 items in the reading comprehension section. Since listening had no role in this study, this section was omitted.

Essay writing: The participants were supposed to write essays one in English and the other in Persian with three topics in three different genres as narrative, descriptive and expository. The topics are as follows:

1. Narrative: Narrate your first day at a new school or college.
2. Descriptive: Describe your best friend.
3. Expository: What are the causes and effects of divorce on families?

ESL Composition Profile (Jacobs et al., 1981, p. 91): This checklist was used as the writing rating scale. It was then translated into Persian in order for Persian essays to be corrected. The rationale behind using this scale is that it is a valid rubric for assessing writing since its validity related issues, including face validity, content validity, concurrent validity, and construct validity have already been reported by Jacobs et al. (1981) (as cited in Javadi-Sfa, Vahdany, & Sabet, 2013). Moreover, the efficacy of Jacobs et al.'s (1981) framework has been investigated by Brown and Baily (1984), and it is found to be a sound practice in assessing writing performance.

C. Procedures

The actual TOEFL test which was done for the sake of homogenizing students was the first to be administered. It was distributed among 75 junior and senior English Translation students of Islamic Azad University of Qaemshahr who had recently passed the simple writing and advanced writing courses. Students were given 90 minutes to answer the test and the rating scale was a score out of 100. After calculating the mean and standard deviation, extreme scores were excluded from the sample and so the sample decreased to thirty standing between one standard deviation below and one above the mean.

In the next step, three English essay topics were given to students and were asked to write about three to four paragraphs using at least 100 to 150 words within 90 minutes. For the Persian writing, the topics were translated into Persian in order to keep both tests the same. After a period of two weeks, they did the same about the Persian test. The reason for the two-week gap and taking the English one first was to eliminate the possible threat of translation from L1 to L2 and also to reduce the risk of remembering English test. It was thought that if the subjects had to write the second writing immediately after the first one, the subjects might have remembered what they wrote in the English essay and would translate them into Persian to make their job easier. The intention of the researcher for choosing these topics were that the participants did not need to have strong general knowledge since it is a crucial factor in writing. If the topics were more difficult or needed a lot of general knowledge, the participants had to spend most of their time on finding necessary information rather than focusing on structure. The topics were in a way that almost everyone had the required knowledge to write about. Then, the compositions were evaluated based on ESL Composition Profile (Jacobs et al., 1981, p. 91) for analytical scoring. The rating was used to score the collected samples in five different categories as content, organization, vocabulary, language use and mechanics.

Both L1 and L2 compositions were scored by two different scorers. They all scored the writings with the same rating scale. By using correlation analysis, the consistency of the two raters' judgments was tested and the outcome revealed a high level of inter-rater reliability and turned out to be significant, so the average score given by the two raters was considered as the participants' final score on writing.

In order to investigate the interdependence between L1 writing or L2 writing, descriptive and correlation analysis were conducted on the composition scores written in the two languages. The descriptive statistics were related to calculating mean, standard deviation and table format. It should be mentioned that analysis of data is done by SPSS software. Inter-rater reliability was measured through Pearson Correlation Coefficient for ascertaining the reliability of the scores on the writing tests.

In order to test the null hypotheses, a scatter plot and correlation analysis was conducted. Then, Pearson Product Moment analysis was used to examine the correlation between the overall scores of L1 and L2 writings. In addition to Coefficient of correlation (r), coefficient of determination (r^2) was used in order to calculate the contribution of L1 writing to L2 writing and also the contribution of L2 proficiency to L2 writing.

IV. RESULTS

Before doing data analysis, in order to see whether we were able to use Pearson-product moment or Spearman as a means of calculating correlation, the researcher had to firstly run Normality test. Therefore the TOEFL scores, the Persian and English writing scores were put in Kolmogorov-Smirnov method to determine the normality of data in terms of distribution. The result of normality test shows that Sig value of the all scores is higher than significance level (0.05). So, they did meet the assumption of normality and we used Pearson-product moment correlation (see Table 1). As it was explained before, a TOEFL test was used to homogenize the participants which resulted in the mean score of 40 and standard deviation of 11 (Table 2).

TABLE I.
TEST OF NORMALITY

		TOEFL	English writing	Persian writing
N		30	30	30
Normal Parameters ^{a,b}	Mean	37.4667	74.0056	56.1322
	Std. Deviation	6.20196	8.21030	7.43732
Most Extreme Differences	Absolute	.160	.115	.103
	Positive	.160	.115	.103
	Negative	-.115	-.081	-.091
Kolmogorov-Smirnov Z		.877	.632	.562
Asymp. Sig. (2-tailed)		0.425	0.819	0.910

TABLE II.
RESULT OF TOEFL TEST

N	Mean	SD	Upper(+1SD)	Lower(-1SD)
75	40	11	51	29

Then, each of English and Persian writings was scored by two raters using ESL composition profile of Jacobs. et al. 1981. Once the writings were scored, the inter-rater reliability was calculated by using Pearson Correlation Coefficient formula using SPSS. The inter-rater reliability indexes were high for both Persian raters ($r = .832$) and English raters ($r = .875$) which indicate a strong correlation and is therefore acceptable for a reliable writing assessment.

As shown in Table 3, the descriptive statistics of TOEFL score and L2 writing was done. The mean score of TOEFL test was 38.33 with the standard deviation of 5.73 and the mean of L2 writing scores was 74 with the standard deviation of 8.21. The correlation between participants' total score on the TOEFL test and L2 compositions was 0.82(p -value=0.00 < 0.05) with the correlation of determination of 0.67 which means %67 of students' L2 proficiency contributes to L2 writing; in other words, %67 of English writing was due to the participants' proficiency in English. (see Table 4).

According to table 4, sig (.000) is less than ($\alpha=0/05$); therefore, English proficiency contributes to English writing. It can also be inferred that more proficiency in L2 can predict better performance in L2 writing. In other words, there is a relatively high positive relationship between the TOEFL scores of participants and L2 writing. Through statistical analysis, a positive linear association between L2 proficiency and L2 writing total scores was confirmed. This is illustrated in figure 1 below.

TABLE III.
DESCRIPTIVE STATISTICS OF TOEFL SCORE AND L2 WRITING SCORE

	Mean	SD	N
TOEFL score	38.33	5.73	30
L2 writing score	74	8.21	30

TABLE IV.
RESULTS OF CORRELATIONAL ANALYSIS AND CORREALATION OF DETERMINATION BETWEEN TOEFL SCORE AND L2 WRITING SCORE

TOEFL score	L2 writing score
Pearson Correlation	0.823
Sig. (2 tailed)	0.00
N	30
Correlation of determination	0.67

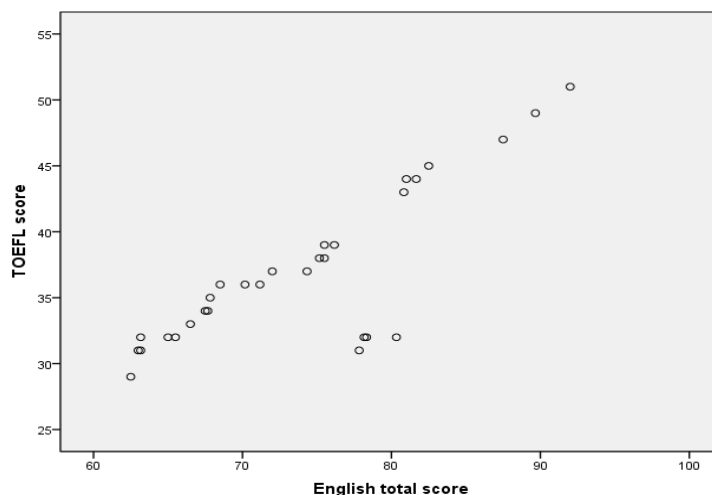


Figure 1: scatter plot of TOEFL score and English total score

The second descriptive statistics of L1 and L2 writing was done the same as the previous step. The mean score of L1 writing was 56.13 and the standard deviation was 7.43. The mean score of L2 writing was 74 and the standard deviation was 8.21 which are all demonstrated in the table 5.

According to the results, the correlation between English writing and Persian writing was -0.04 (p-value=0.826 > 0.05) which means there's no relationship between these two variables. The correlation of determination was 0.0016 which is also meaningless showing that there is no influence of Persian writing on English writing.

In correlational analysis it was shown that sig (.826) is more than $\alpha=0.05$ so it is assumed that Persian writing does not contribute to English writing as figure 2 expresses no significant relationship.

TABLE V.
DESCRIPTIVE STATISTICS OF L1 AND L2 WRITING

	Mean	SD	N
L1 writing	56.13	7.43	30
L2 writing	74	8.21	30

TABLE VI.
RESULTS OF CORREALTIONAL ANALYSIS AND CORREALTION OF DETERMINATION BETWEEN L1 AND L2 WRITING

L1 writing	L2 writing score
Pearson Correlation	-0.042
Sig. (2 tailed)	0.826
N	30
Correlation of determination	0.0016

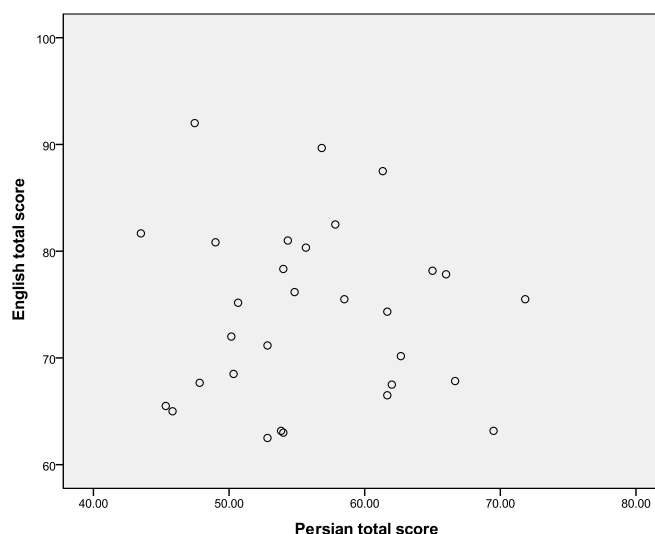


Figure 2: scatter plot of L1 and L2 writing

Variance is an indicator of the average distance of scores from the mean. They are high if the sample is heterogeneous and contains extreme scores, whereas they are low in a homogeneous sample with all the scores clustered around the mean (Dornyei, 2007, p.214). Regarding the last research question that if there was any significant difference between the amount of variance accounted for by the contribution of L1 writing ability and L2 proficiency to L2 writing ability, the variance of English proficiency and Persian writing was evaluated. The amount of variance accounted for by the contribution of English proficiency was 32.83 and the amount of variance accounted for by the contribution of Persian writing to English writing was 55.20.

The amount of variance of Persian writing is higher than the one of English proficiency. As it was mentioned before, the higher the variance, the more heterogeneous students are. Thus, students were more homogenous in their English proficiency.

TABLE VIII.
RESULTS OF VARIANCES OF ENGLISH PROFICIENCY AND PERSIAN WRITING

	SD	Variance
English proficiency	5.73	32.83
Persian writing	7.43	55.20

Homogeneity of variances does not literally mean that they do not differ by an amount that is statistically significant. "To determine whether the samples meet the criterion of equality of variances, an *F*max test is used. The largest variance is always divided by the smallest variance. Unless the calculated *F* equals or exceeds the appropriate *F* critical value, it may be assumed that the variances are homogeneous and the difference is not significant"(as cited in W. Best, 2006). The 0.05 level of significance for 29 degrees of freedom had been used and the *t* critical value necessary for

rejection would be 2.045. Because the calculated t critical ratio of 1.68 did not exceed the 2.045 t table values, it was proved that there was no significant difference between the amount of variance accounted for by the contribution of L1 writing ability and L2 language proficiency to L2 writing ability.

TABLE IX.
F RATIO OF TWO VARIANCES

Degree of Freedom	29
F ratio	1.68

V. DISCUSSION AND CONCLUSIONS

After gathering the data from intermediate language learners by using TOEFL test as a homogenizing instrument, English writing and Persian writing, their mean scores, standard deviation, reliability and correlation of determination were analyzed.

According to the first hypothesis, English proficiency contributes to English writing. As learners' knowledge in English increases, their ability will be improved as well. If learners desire to be proficient in their L2 writing, they have to enhance their vocabulary domain and grammatical knowledge. If not, their L2 writing will remain poor. Moreover, as it was proved in this study, Persian writing does not contribute to English writing. Having a certain level of proficiency in L1 writing does not lead to high ability in L2 writing. According to the results found in this study, higher ability in first language does not lead to higher ability in second language. It is possible for students who have some weaknesses in their L1 writing to have a good capability in their L2 writing. On the other hand, there were a couple of participants whose writings in Persian were really good but their L2 writings were not as good as their L1 writing. The last negotiable factor in this research was analyzing the amount of variance accounted for by the contribution of L1 writing ability and L2 proficiency to L2 writing ability the amount of variance of L1 writing was higher than the amount of variance in L2 writing. Therefore, participants' scores were more heterogeneous in their Persian writing and more homogeneous in their English writing.

This study aimed to investigate whether it is language problem or writing problem that makes this skill problematic for most of Iranian learners. Due to the outcome, it can be claimed that it is the learners L2 proficiency not L1 writing ability that causes the L2 learners to have weaknesses in writing.

Like other studies, this research had some limitations. One of them was that the results of the study came from only female EFL learners and no male took part in this research which could lead to a different result. Another point which is considered as the limitation of the present study was that the sample size was small and this could limit the generalizability of the results; thus, the findings should have been submitted with a larger sample of participants. Furthermore, this study was conducted only on university students studying English Translation and did not investigate the situation on other levels and it could be conducted on English institute students which might yield other results.

This study investigated interdependence between writing skill of two languages. Working on other skills like speaking as another productive skill could be a subject for further studies. It would be interesting to see that whether or not fluency in L1 speaking contributes to L2 speaking. Other researches could compare the impact of L1 translation on L2 writing as one of the researcher's objects in this study was to eliminate the risk of translation

REFERENCES

- [1] Ahangari, S. (2007). The Relationship between First and Second Language Composition Writing. Retrieved November 15, 2013 from <http://repo.uum.edu.my/3267/1/S1.pdf>.
- [2] Arefi, M. (1997). The Relationship between First and Second Language Writing Skills for Iranian Students in Sydney: An Implication of the Interdependence Hypothesis. University of Sydney, Nepean.
- [3] Bernhardt, E. B. & Kamil, M. L. (1995). Interpreting relationships between L1 and L2 reading: Consolidating the linguistic threshold and the linguistic interdependence hypotheses. *Applied Linguistics*, 16(1), 15-34.
- [4] Birjandi, Parviz., & Marzban, Amir. (2004). The Interdependence between the Process and the Product of Reading in English and Persian. *Matn Pajouhi Adabi. Allameh Tabatabaie University*. 20 (1383)27-41.
- [5] Brown, J.D. & Bailey, K.M. (1984). A categorical instrument for scoring second language writing skills. *Language Learning*, 34, 21-24.
- [6] Chastain, K. (1988). Developing second-language skill (3rd ed.). USA: Harcourt Brace, Jovanovich, Inc.
- [7] Cummins, J. (2000). Language, Power and Pedagogy. Retrieved December 5, 2013 from <http://www.naldic.org.uk/eal-initial-teacher-education/resources/ite-archive-bilingualism>.
- [8] Dornyei, Zoltan. (2007). Research Methods in Applied Linguistics. London: Oxford University Press.
- [9] Halliday, M. (1975). Learning how to mean. London: Edward Arnold.
- [10] Jacobs, H. L., Zinkgraf, S. A., Wormuth, D. R., Hartfiel, V. F. & Hughey, J. B. (1981). Testing ESL composition: A practical approach, Rowley, MA: Newbury House Publication.
- [11] Liu, Y. (2004). The Cognitive Process of Translation in L2 Writing. PHD Dissertation. Purdue University.
- [12] Javadi-Safa, A., Vahdany, F. & Khalil sabet, M. (2013). A Study of the Relationship between Persian and English Writing Skills among Adult EFL Learners in Iran. *International Journal of Applied Linguistics & English Literature*. Retrieved January 20, 2014 from <http://www.ijalel.org/pdf/231.pdf>.
- [13] W. Best, John., & V. Kahn, James (2006). Research in Education. Tenth edition. Boston: Pearson Education Inc.

- [14] Wolfersberger, M. (2003). L1 to L2 writing process and strategy transfer: a look at lower proficiency writers. *TESL-EJ: Teaching English as a Second or Foreign Language*, 7(2), A6 1-15.
- [15] Zare'ee, A., Farvardin, M. (2009). Comparison of university level EFL learners' linguistic and rhetorical patterns as reflected in their L1 and L2 writing. Turkey: *Novitas Royal*. 3(2), 143-155.

Mona Mirzaee attained her M.A in TEFL from Islamic Azad University, Sari Branch, Sari, Iran. She is teaching English in language teaching institutes for teenagers and adults. Her research interests are teaching and Second Language writing.

Amir Marzban is an assistant professor of TESOL at Islamic Azad University, Qaemshahr Branch. His research interests include conversion analysis, L2 reading & writing, CALL, and teacher education. He has published in both Iranian and International journals and also has presented in many international conferences.