International Academic Institute for Science and Technology

International Academic Journal of Humanities Vol. 2, No.2, 2015, pp. 62-73.
ISSN 2454-2245

International Academic Journal of Humanities

www.iaiest.com

The Effect of In-text Antecedent Identification on Reading Comprehension Development of Post-elementary Students

Farnoush Taheryan

Master of Teaching English as a Foreign Language, Ministry of Education, Semnan, Iran.

Abstract

Nowadays English as an international language has attracted a lot of attentions. Enabling students to read and comprehend different passages is a goal in the field of education in Iran where English is a foreign language. The present study aimed at examining the effect of in-text antecedent identification on reading comprehension development of post-elementary students. In order to test this hypothesis, two classes in a high school were selected, each class with 35 students. The two groups took the Nelson test; and comparing the means through t-test showed that these two groups were homogeneous. In order to conduct this research, 8 sessions of instruction were carried out. The passages used were the same for both groups (experimental and control groups), but for experimental group the antecedents of pronouns were provided next to them in parentheses. After 8 sessions of instruction, two groups took a test with 5 reading passages and 30 questions as post-test. The data obtained from the groups were compared through t-test, and the researcher concluded that in-text antecedent identification had a positive effect on reading comprehension of post-elementary students.

Keywords: antecedent identification, in-text antecedent identification, reading comprehension development, post-elementary.

Introduction:

The development of reading skill is influenced by children's pre-reading skills and several underlying cognitive antecedents (e.g., de Jong & van der Leij, 2002; Parrila, Kirby, & McQuarrie,2004) as well as teaching practices (e.g., Carlisle, Kelcey, Berebitsky, & Phelps, 2011; Connor, Morrison, & Katch, 2004).

In recent years, there has been increased focus on the teaching of reading and other literacy skills. Part of this may be due to the recognition that reading is probably the most important skill for second language (L2) learners in academic contexts (Grabe, 1991) and part of it may come from an increase in the number of people worldwide who are learning English as a second or foreign language. It may be a result of the recent implementation of standards in

much of public education, a movement built upon the belief that basic literacy instruction should be a fundamental component of public education (Celce-Murcia, 2001).

Another possible factor contributing to an increased focus on reading instruction in EFL contexts may be the growing number of countries that are moving toward making English language instruction mandatory from a younger age. Given the portability of books and other reading materials (as well as the increasing availability of reading material over the internet), reading is gradually being recognized as a valuable source of language input; particularly, for students in learning environments (as in some EFL contexts) in which fluent speakers of English are generally not available to provide other kinds of language input (Celce-Murcia, 2001).

According to the Simple View of Reading (Gough & Tunmer, 1986), reading comprehension is a product of two components: decoding and linguistic comprehension. Several studies including those that have been carried out in transparent orthographies (e.g., de Jong & van der Leij, 2002; Lerkkanen et al., 2004; Verhoeven & van Leeuwe, 2008) have supported this model showing that both decoding skills and linguistic comprehension are related to further reading comprehension.

The main difference in the attitude to reading in recent years has been the emphasis on providing guidance for students in developing their skill in reading, rather than merely expecting it to develop somehow of its own accord (Rivers, 1981). Contemporary teachers of language try to understand the processes involved in the reading of a written text, especially a text in a non-native language. They then plan learning experiences to help their students develop habits of reading which will lead them to direct comprehension of the text, that, if this aim is to be achieved, progress must be unhurried but steady and the teaching of the skill must be continuous.

The purpose of this research is to find out the effect of in-text antecedent identification on reading comprehension development of EFL students at post-elementary level. After administering a general proficiency test to two classes in high school (first grade) and comparing the results with t-test and seeing no significant difference between these two groups, the method of in-text antecedent identification was carried out in one class (experimental group) and in the other class (control group) the usual method of teaching reading was done. The final test administered to both groups showed the difference.

Comprehension

Comprehension means comprehending the meaning of a word, sentence or passage of discourse while apprehending the intension of the writer and succeeding in reading her / his message to the larger extent of our own system of knowledge. Generally, we say comprehension appears when the reader constructs the message from the information in the text and matches it to his cognitive structure.

Antecedent identification

According to the Kleinmann (1987), comprehensible reading involves the following:

- Identifying order of events and arguments
- Identifying referents (What does the word 'it' (L. 12) mean?)
- Guessing the meaning of words from context
- Summarizing the reading passage

Antecedent identification helps foreign language learners to become independent and autonomous and enables them to get ready for reading and comprehending authentic materials. In-text antecedent identification method for teaching reading is in line with the above mentioned points.

In-text antecedent identification

It means providing the references or antecedents of pronouns in parentheses next to them.

Post-elementary

Post-elementary learners are the subjects with the mean score of 16.69, standard deviation of 5.11, and the variance of 26.21 and the range of 23.5. These results obtained from subjects' pre-test performance.

Method

Participants

Two classes of students in Kar-o-Danesh high school were selected. Each class had 35 female students. Students of these classes took the Nelson test as the pre-test. The results of the pre-test, through t-test, indicated that the students of both classes were homogeneous. Therefore, one of the classes was randomly considered as the control group and the other as the experimental group with special treatment. Moreover, 25 more students (first grade) of the same school took the Nelson test as a pilot group.

Materials

The subjects were presented with 8 reading passages selected from "Stories for Reading Comprehension" by L.A. Hill, 1988. The passages were alike for both control and experimental groups, but for experimental group, the antecedents of the pronouns were provided in parentheses next to them. The passages were given to another class (first grade) with 25 students at the same school. They had underlined those pronouns whose antecedents were not clear to them. Then the researcher inserted the antecedents of those pronouns in the passages just for the experimental group. The antecedents included possessive pronouns, subject pronouns, object pronouns and adverbs of place and time.

Measures

In this survey, two types of tests were applied. First, Nelson test (50 C) as a pre-test with 50 questions for 50 minutes was administered. The other test was the post-test, with 5 passages selected from "Stories for Reading Comprehension" by L.A. Hill, 1988 and 30 reading comprehension questions for 1 hour.

Besides the purpose of try-out the materials before final administration of the two groups, and with the intension of determining the test suitability and effectiveness, and also observing the reactions of the test takers to the materials, the pre-test (the Nelson test) and the post-test (reading comprehension passages taken from Hill's book and questions) were administered to another group with 25 students (first grade) to pilot the Nelson test and the post- test and validate these two tests, too.

Procedures

The data was collected by the researcher from 70 subjects in two groups of 35 named the experimental and control groups. For the purpose of conducting this research, both groups were given the Nelson test (50 C). The results thorough t-test indicated that the two groups were homogeneous. Before the administration of the Nelson test to the two groups, it was administered to another group of 25 students at the same school (first grade) in order to pilot the Nelson test. So, appropriate tests were presented to the students.

In order to do the treatment, 8 sessions of instruction were considered. The class met 8 mornings for forty minutes a session. During 8 sessions of instructions, 8 reading passages were taught. The passages were the same for both control and experimental groups, but for the experimental group the passages contained in-text antecedents of pronouns (subject, object, possessive pronouns and adverbs of place and time) with the intension of observing the effect of the treatment.

The instructor for both experimental and control groups was the researcher herself. Only one passage was presented during each session of instruction. In order to teach new vocabulary, students had to read the text for themselves (silent reading), underline the words and expressions whose meanings were not clear to them and announce them to the teacher later. Then the instructor read the text herself and at the end of each sentence students announced their unknown words. She wrote them down on the board and explained them through English explanations, synonyms, antonyms and Farsi equivalent as the last resort.

It should be stated that these passages had been given to another class (first grade) with 25 students at the same school. They had underlined those pronouns whose antecedents were not clear to them. Then the researcher inserted the antecedents of those pronouns in the passages just for the experimental group to see the effect of in-text antecedent identification on reading comprehension development.

For the control group, the researcher applied the ordinary method of teaching reading comprehension used in high schools. However, the experimental group worked on the passages contained the antecedents of pronouns (subject, object, possessive pronouns and adverbs of place and time). The instructor provided explanations about anaphora and cataphora in a sentence, paragraph or a text.

At the end of each session, the instructor was supposed to ask some comprehension questions from the subjects in both groups to be sure that they comprehended the passages thoroughly and completely. The subjects were allowed to use their mother tongue (Farsi) to ask their questions. Finally, after 8 sessions of instruction, the two groups took a test as a post-test. The test included 5 passages from Hill's book and 30 reading comprehension questions administered in 1 hour. In order to determine the test suitability and effectiveness and observing the reactions of test takers, the pre-test (the Nelson test) and the post-test (reading comprehension questions) were administered to another group with 25 students (first grade) to pilot and validate the pre-test and the post-test. Then the means obtained for the two groups were compared through a t-test.

Design

In this survey, the researcher intended to apply intact group design to investigate the effect of in-text antecedent identification on reading comprehension development of the students. There

was one independent variable named in-text antecedent identification and one dependent variable which was the scores in the final reading comprehension test. Both of the classes took the Nelson test and the researcher used a t-test between them and the result showed that these classes were homogeneous. Another test, the post-test was taken after 8 sessions of instruction. Finally, there was a t-test between the post-tests of the experimental and control groups. The schematic representation for the research design is illustrated as follows:

Groups	Pre-test	Treatment	Post-test
Control	T1	-	T2
Experimental	T1	X	T2

Result

Descriptive statistics

Nelson test

Three groups took the Nelson test as pre-test; they were pilot group (25), control group (35), and experimental group (35). Frequencies, means, standard deviations and other values of pre-test scores have been presented in the following tables. As it is observable, the mean score of control group is 16.77 and the mean score of experimental group is 16.62 that are very close to each other.

Table 1: Frequency and other values of control group and experimental group (pre-test)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	9.00	3	2.1	8.6	8.6
	10.00	1	0.7	2.9	11.4
	11.00	4	2.9	11.4	22.9
	14.00	2	1.4	5.7	28.6
	15.00	4	2.9	11.4	40.0
	16.00	2	1.4	5.7	45.7
	17.00	6	4.3	17.1	62.9
	18.00	1	0.7	2.9	65.7
	19.00	2	1.4	5.7	71.4
	20.00	3	2.1	8.6	80.0
	21.00	2	1.4	5.7	85.7
	22.00	2	1.4	5.7	91.4
	24.00	1	0.7	2.9	94.3
	25.00	1	0.7	2.9	97.1
	33.00	1	0.7	2.9	100.0
	Total	35	25.0	100.0	
Missing	System	105	75.0		
	Total	140	100.0		

a) Frequency and other values of control group (pre-test)

b) Frequency and other values of experimental group (pre-test)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	7.00	1	0.7	2.9	2.9
	9.00	1	0.7	2.9	5.7
	10.00	1	0.7	2.9	8.6
	11.00	1	0.7	2.9	11.4
	13.00	7	5.0	20.00	31.4
	14.00	1	0.7	2.9	34.3
	15.00	5	3.6	14.3	48.6
	16.00	2	1.4	5.7	54.3
	17.00	4	2.9	11.4	65.7
	18.00	2	1.4	5.7	71.4
	19.00	3	2.1	8.6	80.0
	20.00	1	0.7	2.9	82.9
	21.00	1	0.7	2.9	85.7
	23.00	1	0.7	2.9	88.6
	25.00	1	0.7	2.9	91.4
	26.00	1	0.7	2.9	94.3
	27.00	1	0.7	2.9	97.1
	30.00	1	0.7	2.9	100.0
	Total	35	25.0	100.0	
Missing	System	105	75.0		
	Total	140	100.0		

c) Control group (pre-test)

N	Valid	35
	Missing	105
	Mean	16.7714
	Median	17.0000
	Mode	17.00
Std. Derivation		5.1626
	Variance	26.6521
	Range	24.00
	Sum	587.00

d) Experimental group (pre-test)

N	Valid	35
	Missing	105
	Mean	16.6286
	Median	16.0000
	Mode	13.00
Std. Derivation		5.0764
	Variance	25.7697
	Range	23.00
	Sum	582.00

3.1.2 Post-test

Then a post-test was administered to those three groups. Frequencies, means, standard deviations and other values of post-test scores have been presented in the following tables. The mean score of experimental group, 18.22, compared to the mean score of control group, 12.82, shows significant difference that is the effect of treatment administration.

Table ٢. Frequency and other statistical values of control group and experimental group (post-test)

a) Frequency and other statistical values of control group (post-test)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	6.00	1	0.7	2.9	2.9
	7.00	4	2.9	11.4	14.3
	8.00	4	2.9	11.4	25.7
	9.00	2	1.4	5.7	31.4
	10.00	3	2.1	8.6	40.0
	11.00	3	2.1	8.6	48.0
	12.00	1	0.7	2.9	51.4
	13.00	2	1.4	5.7	57.1
	14.00	5	3.6	14.3	71.4
	15.00	1	0.7	2.9	74.3
	16.00	1	0.7	2.9	77.1
	17.00	2	1.4	5.7	82.9
	18.00	1	0.7	2.9	85.7
	19.00	1	0.7	2.9	88.6
	20.00	1	0.7	2.9	91.4
	21.00	1	0.7	2.9	94.3
	25.00	1	0.7	2.9	97.1
	26.00	1	0.7	2.9	100.0
	Total	35	25.0	100.0	
Missing	System	105	75.0		
	Total	140	100.0		

b) Frequency and other statistical values of experimental group (post-test)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	7.00	1	0.7	2.9	2.9
	8.00	1	0.7	2.9	5.7
	9.00	4	2.9	11.4	17.1
	11.00	1	0.7	2.9	20.0
	13.00	1	0.7	2.9	22.9
	15.00	3	2.1	8.6	31.4
	17.00	2	1.4	5.7	37.1
	19.00	2	1.4	5.7	42.9
	20.00	5	3.6	14.3	57.1
	21.00	6	4.3	17.1	74.3
	22.00	1	0.7	2.9	77.1
	23.00	4	2.9	11.4	88.6
	25.00	2	1.4	5.7	94.3
	27.00	1	0.7	2.9	97.1
	29.00	1	0.7	2.9	100.0
	Total	35	25.0	100.0	
Missing	System	105	75		
	Total	140	100		

c) Control group (post) -test

d) Experimental group **(**post-test)

N	Valid	35
	Missing	105
	Mean	12.8286
	Median	12.0000
	Mode	14.00
Std. Derivation		5.1477
	Variance	26.4992
	Range	20.00
	Sum	449.00

N	Valid	35
	Missing	105
	Mean	18.2286
	Median	20.0000
	Mode	21.00
Std. Derivation		5.7858
	Variance	33.4756
	Range	22.00
	Sum	638.00

Correlations

In order to compute the correlations among pilot group and control group, pilot group and experimental group, and control group and experimental group used in the pre-test and post-test, Pearson Product formula was used.

The results of the pre-test showed that there was significant and positive correlation among the three tests at the 0.01 level.

Table 3. Correlations of the pre-tests and post-tests

a) Correlations of the pre-tests

	PILOTPRE	**CONTRPRE**	**EXPERPRE**
PILOTPRE Pearson Correlation	1.000	0.969(**)	0.951(**)
Sig. (2-tailed)	.	.000	0.000
N	25	25	25
CONTRPRE Pearson Correlation	0.969(**)	1.000	0.961(**)
Sig. (2-tailed)	.000	.	.000
N	25	35	35
EXPERPRE Pearson Correlation	0.951(**)	0.961(**)	1.000
Sig. (2-tailed)	.000	.000	.
N	25	35	35

As shown in the following table, there was significant and positive correlation among the three tests applied to the pilot, control and experimental groups in the post-test**.**

b) Correlations of the post-tests

	PILOTPOST	**CONTPOST**	**EXPEPOST**

PILOTPRE Pearson Correlation	1.000	0.969(**)	0.955(**)
Sig. (2-tailed)	.	.000	.000
N	25	25	25
CONTRPRE Pearson Correlation	0.969(**)	1.000	0.908(**)
Sig. (2-tailed)	.000	.	.000
N	25	35	35
EXPERPRE Pearson Correlation	0.955(**)	0.908(**)	1.000
Sig. (2-tailed)	.000	.000	.
N	25	35	35

These findings also indicate the validity of the pre-test and the post-test.

T-Test

First a t-test was performed between the pre-test scores of the control and experimental groups to investigate the difference of the two means; the computed observed *t* is 0.117 at the 0.05 level of significance and the number of subjects is totally 70.The degree of freedom is 68 and critical t is 2.000. So, it is concluded that the two groups are homogeneous and have similar performance in the same measure.

Table 4. Independent Samples Test (pre-test and post-test)

a) Independent Samples Test (pre-test)

	Leven's Test for Equality of Variances		**t-test for equality of means**						
	F	**Sig.**	**t**	**d f**	**Sig.(2-tailed)**	**Mean Difference**	**Std. Error Difference**	**95%Confidence Interval of the Difference**	
								Lower	Upper
SQUARE									
Equal variances assumed	.001	.977	.117	68	.907	.1429	1.2238	-2.2993	2.5850
Equal variances not assumed			.117	67.981	.907	.1429	1.2238	-2.2993	2.5850

Another t-test between the post-test scores of the experimental and control groups indicates that the obtained value for *t* is -4.25. Now the *t* value is high enough, and the difference between the two groups is statistically significant to safely reject the null hypothesis.

The t-test supports our claim that in-text antecedent identification actually improved the reading comprehension ability of post-elementary students.

b) Independent Samples Test (post-test)

	Leven's Test for Equality of Variances		t-test for equality of means						
	F	Sig.	t	d f	Sig.(2-tailed)	Mean Difference	Std. Error Difference	95%Confidence Interval of the Difference	
								Lower	Upper
SQUARE Equal variances assumed	.718	.400	-4.125	68	.000	-5.4000	1.3090	-8.0121	-2.7879
Equal variances not assumed			-4.125	67.092	.000	-5.4000	1.3090	-8.0128	-2.7872

ANOVA

ANOVA allows us to compare several group means simultaneously. Since there is one dependent and one independent variable in our study, one-way ANOVA is applied. By using ANOVA, we can examine the differences between the means and decide whether those differences are likely to happen by chance or by the treatment effect.

Table 5. ***One-way ANOVA***

SQUARE

	Sum of Squares	df	Mean Square	F	Sig.
Between (combined) Groups	558.686	3	186.229	6.628	.000
Linear Contrast Term	.571	1	.571	.020	.887
Deviation	558.114	2	279.057	9.931	.000
Within Groups	3821486	136	28.099		
Total	4380.171	139			

The observed value of F is compared with its critical value using F-ratio table. The value of F critical depends on the degrees of freedom and the significance level selected.

If there is no treatment effect, our two estimates will be the same and the observed value of F will be 1. In our study, since the F-ratio was much larger than 1, 6.628, there was definitely the treatment effect and through one-way ANOVA, the null hypothesis was rejected.

Discussions:

The main objective of this research was to arrive at a conclusion regarding the effect of in-text antecedent identification on reading comprehension development of pot-elementary students. Different researches reveal that reading comprehension texts are frightening to many students and as soon as they encounter the texts in any examination, they ignore this part and go to the other parts. This paper suggests that the antecedents of the pronouns whose meaning is not clear to the learners be provided in parentheses next to them in the text.

Conclusion:

The aim of this study was to investigate the effect of in-text antecedent identification on learners' reading comprehension ability. The findings of the study suggested that in-text antecedent identification had a positive effect on the learners' performance.

Practical suggestions:

Since this study focused on reading skill, replicated research projects are in need to support the result of this investigation for three other skills, like listening, speaking and writing.

The present study is considered as a step toward teaching reading at the post-elementary level; there can be another projects at the intermediate and advanced levels intending to see the effects of in-text antecedent identification on reading comprehension ability of English as foreign language learners.

The subjects of this project were selected from high school students. There can be more investigations about the findings of this study on the students of English institutes or colleges.

This study was done on Iranian students that English is their foreign language; it is possible to do it on the students of other countries as EFL/ESL students.

Although the result of this study proved that in-text antecedent identification had a positive effect on reading comprehension development at post-elementary level, there is a great need to conduct new researches in order to find the other effective methods for enhancing reading comprehension ability of the learners, especially in Iran.

References

Carlisle, J., Kelcey, B., Berebitsky, D., & Phelps, G. (2011). Embracing the complexity of instruction: a study of the effects of teachers' instruction on students' reading comprehension. Scientific Studies of Reading, 15, 409e439.

Celce-Murcia, M. (2001). Teaching English as a second or foreign language, edited by M. Celce-Murcia. 3d ed. Boston: Heinle & Heinle. ISBN

Connor, C. M., Morrison, F. J., & Katch, L. E. (2004). Beyond the reading wars: the effect of childe instruction interactions on growth in early reading. Scientific Studies of Reading, 8, 305e336

De Jong, P., & van der Leij, A. (2003). Developmental changes in the manifestation of a phonological deficit in dyslexic children learning to read in a regular orthography. Effects of phonological abilities and linguistic comprehension on the development of reading. Journal of Educational Psychology, 95, 22e40.

Gough, P., & Tunmer, W. (1986). Decoding, reading, and reading disability. Remedial and Special Education, 7, 6e10.

Grabe, W. (1991). Current development in second language reading research. TESOL Quarterly, 25, 375-406.

Kleinmann, H. H. (1987). The effects of computer-assisted instruction on ESL reading achievement. Modern Language Journal, 47, 141-146.

Lerkkanen, M.-K., Rasku-Puttonen, H., Aunola, K., & Nurmi, J.-E. (2004). Predicting reading performance during the first and the second year of primary school. British Educational Research Journal, 30, 67e92.

Parrila, R., Kirby, J. R., & McQuarrie, L. (2004). Articulation rate, naming speed, verbal short-term memory, and phonological awareness: longitudinal predictors of early reading development. Scientific Studies of Reading, 8, 3e26. https://scholar.google.com

Rivers, W. (1981). Teaching foreign language skills. 2d ed. Chicago: University of Chicago Press. ISBN 0-226-72098-5

Verhoeven, L., & van Leeuwe, J. (2008). Prediction of the development of reading comprehension: a longitudinal study. Applied Cognitive Psychology, 22, 407e423. http://www.onlinelibary.wiley.com