
Study on College Students' Discourse Analysis Competence and their Comprehension and Translation Performance

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Abstract: The study focuses on the correlation between college students' discourse analysis competence and their performance in comprehension and translation. The authors started a preliminary study by investigating the correlation between college students' performance in comprehension and translation. This investigation involved the students with comparable English proficiency as well as a reading comprehension and translation test. The calculation shows that the students' comprehension scores and translation scores are positively correlated, namely, the students who got higher scores in comprehension tend to gain higher scores in translation. To follow up the research, the student samples fell into two groups: the treatment group and the control group. Various discourse analysis techniques were put into four major categories and twenty-four sub-categories. Only in the treatment group's reading classroom were the students taught these techniques systematically, along with some passages and exercises for them to practice. Five months later, a three-part test was taken by both the treatment and control group, the scores were developed for each of these parts for each student. The results displays that the performance of the treatment group and the control group in comprehension and translation is significantly different. Furthermore, the mean scores of the treatment group in both comprehension and translation part are much higher than those of the control group, and its standard deviations are much lower than those of the control group. These statistical results prove that the treatment group's performance in comprehension and translation is significantly different from the control group's and suggests that the training of the students' discourse analysis techniques contributes to the improvement of their performance in comprehension and translation significantly. More efforts are called for to develop college students' discourse analysis competence in the course of college English teaching and more systematical and practical discourse analysis techniques are needed for college students to fully comprehend and faithfully translate.

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Introduction

In the last decades translation has been largely employed in classroom situations and discretely assessed in different kinds of tests in China. Translating means decoding the information in a given text in one language and encoding it into a different language, often reflecting a different culture. (Nida, 1984, p.23) It is not only a matter of matching lexical items or syntactic structures between the source language(SL) and the target language(TL), but also the communication of the functions of the SL. (Nida, 1984, p.166) Discourse is the highest or most general unit in the hierarchy of translation process, and discourse comprehension is the final aim in the decoding process of the SL and the first and foremost phase in the encoding process of the TL.

Since Jan.1996, translation from English into Chinese has been adopted as a part in College English Test Band 4 (CET4), the national English examination for non-English-major college students in China. In this part, there are five items which the testees should translate into Chinese, each consisting of one or two sentences. These sentences are all taken from the reading passages the students have just read in the Reading Comprehension Part of the test paper. The testees can refer back to the passages so as to identify their meanings in context.

It is pertinent to note that the sentence for translating in CET4 is not an isolated one, it is selected from a certain context, that is, a discourse. Attention can't be concentrated only on the syntactic and semantic analysis of the single sentence, but also its communicative function in the discourse. For the Chinese version, exactness of meaning is emphasized, not the translation techniques. Therefore, full and correct comprehension of the SL is of the first importance.

However, the results of past-year tests suggest that although most college students are able to understand the formal structures and logical meanings of sentences with an average degree of difficulty, within general or familiar topics, they can't understand the rhetorical and functional meanings of sentences, or sentences with specific topics or involving cultural differences. The basic reason may be their lack of training in discourse analysis and ignorance of even the simplest discourse analysis techniques.

Motivated by this status quo, the author started the present preliminary study, trying to investigate the relationship between college students' discourse analysis competence and their comprehension and translation performance.

Empirical Study

Subjects

This investigation involved two classes selected randomly from one university. The 30 students in each class are second-year students of science and engineering. In general, the students in the two classes have comparable English proficiency. First, they all have passed the university entrance examination, a nationwide exam. Second, in the university, they all have attended the same kind of English courses – reading and writing, listening and speaking, with the same textbook, and have received the same amount of teaching during the past year. Third, they are all required to pass the national examination – CET4, after two year's study in the university. Thus we may consider their English proficiency levels as approximately the same.

Procedure (1)

The study consisted of two phases. In the first phase, the students in both classes were required to read five passages. Each passage was followed by two exercises. In Exercise 1, there were five questions about the reading passage, for each of them there were four choices marked A, B, C and D, the students were required to decide on the best choice to answer the question. In Exercise 2, five sentences were taken from the reading passage for the students to translate into Chinese. The correct answer to each question in Ex.1 could be found respectively in each sentence for translating in Ex.2.

Hypothesis (1)

We wanted to make sure that the students' comprehension performance and translation performance are closely correlated. The hypothesis is as follows:

H1 = There is a significant correlation between the students' comprehension scores and their translation scores.

Data Analysis and Findings (1)

After the test finished, 60 completed papers were collected. The correlation coefficient between the comprehension scores and the translation scores was calculated.

Figure 1 Data for Correlation Analysis

Comprehension		Translation	
Σx	1636	Σy	1264
Σx^2	47040	Σy^2	29040
$(\Sigma x)^2$	2676496	$(\Sigma y)^2$	1597696
$\Sigma xy = 35950$			
$N = 60$			

$$r_{xy} = \frac{N(\sum xy) - (\sum x)(\sum y)}{\sqrt{[N\sum x^2 - (\sum x)^2][N\sum y^2 - (\sum y)^2]}} = 0.61$$

r_{xy} stands for correlation coefficient.

$$-1 \leq r_{xy} \leq +1$$

This correlation coefficient is positive, hence higher scores on one variable are associated with higher scores on the other variable. And the relatively high calculation shows that there is a close relationship between the two variables. Now we are safe in supporting the hypothesis, we can claim that the subjects' comprehension scores and translation scores are positively correlated, students who got higher scores in comprehension tend to gain higher scores in translation.

Procedure (2)

In the second phase, the student samples fell into two groups: Treatment group (G1) and Control group (G2).

We put various discourse analysis techniques into four major categories (Cohesion, Coherence, Background Knowledge and Inference) and twenty-four sub-categories (Reference, Substitution, Ellipsis, Conjunction, Reiteration, Collocation, Complementarity; Field, Mode, Tenor, Phatic, Directive, Informative, Interrogative, Expressive, Evocative, Performative, Narration, Description, Exposition, Argumentation, Dialogue; Knowledge of Cultural Differences, Knowledge in Specific Fields; Inference). Only in the treatment group's reading classroom did we teach the students these techniques, along with some passages and exercises for them to practice.

Five months later, the two classes were required to read five passages, each passage with five underlined sentences. Each underlined sentence was followed by a three-part exercise. In the first part, the grammar part, the verb or verbs in each underlined sentence was or were marked, the student was required to give the subject or logical subject of each verb. In the second part, the

comprehension part, each underlined sentence was given four kinds of explanations in English, the student needed to choose which one is nearest to the original in meaning. In the third part, the translation part, the student was required to translate each underlined sentence into Chinese. Scores were developed for each of these parts for each student.

Hypothesis (2)

We tried to find out the answer to the question: Whether the students' discourse analysis training contributes to the improvement of the students' performance in comprehension and translation significantly. The hypothesis is as follows:

H_0 = There is no significant relationship between the students' discourse analysis competence and their comprehension and translation.

To be more specific, we give the following three null hypotheses:

H_{01} = There is no significant difference between the two groups' performance in the grammar part.

H_{02} = There is no significant difference between the two groups' performance in the comprehension part.

H_{03} = There is no significant difference between the two groups' performance in the translation part.

Data Analysis and Findings (2)

The scores were distributed in Figure 2, 4 and 6. The result of ANOVA is tabulated in Figure 3, 5 and 7.

Grammar Part

Figure 2 Data for ANOVA

	G1	G2	
N	30	30	N=60
Σx	394	391	785
Σx^2	5336	5273	10609
$(\Sigma x)^2$	155236	152881	616225
X	13.13	13.03	
S	2.36	2.47	

Figure 3 ANOVA of Two Groups' Performance in the Grammar Part of the Test

Source of Variance	Ss	d.f	Ms	F
Between Groups	0.15	1	0.15	0.026
Within Groups	338.43	58	5.84	

$$F_{crit}(1, 58, 0.05) = 4.01$$

Figure 3 shows the F which equals to 0.026 is no greater than F_{crit} , hence we should accept the hypothesis: there is no significant difference between the two groups' performance in grammatical analysis.

Comprehension Part

Figure 4 Data for ANOVA

	G1	G2	
N	30	30	N=60
Σx	750	542	1292
Σx^2	1913	11164	30296
$(\Sigma x)^2$	5625	293764	1669264
X	25	18.07	
S	3.63	6.9	

Figure 5 ANOVA of Two Groups' Performance in the Comprehension Part of the Test

Source of Variance	Ss	d.f	Ms	F
Between Groups	721.07	1	721.07	23.84
Within Groups	1753.86	58	30.24	

$$F_{crit}(1, 58, 0.05) = 4.01$$

Translation Part

Figure 6 Data for ANOVA

	G1	G2	
N	30	30	N=60
Σx	682	492	1174
Σx^2	16236	8590	24826
$(\Sigma x)^2$	465124	242064	1378276
X	22.73	16.4	
S	4.02	6.24	

Figure 7 ANOVA of Two Groups' Performance in the Translation Part of the Test

Source of Variance	Ss	d.f	Ms	F
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Between Groups	601.67	1	601.67	27.86
Within Groups	1253.06	58	21.60	

$F_{crit}(1, 58, 0.05) = 4.01$

Figure 5 and 7 display the results: the F in both cases are much greater than F_{crit} . Thus we reject the null hypotheses, and claim that the performance of the treatment group and the control group in comprehension and translation is significantly different. Furthermore, from Figure 4 and 6, we find the mean scores of the treatment group in both the comprehension part and the translation part are much higher than those of the control group, and its standard deviations are much lower than those of control group. These statistical results prove that the treatment group's performance in comprehension and translation is significantly different from the control group's.

As we have mentioned, the students in both groups are randomly selected, and their language proficiencies are comparable. Their performance in the grammar part of the test also shows that they have similar grammatical competence. Therefore, the great difference between their abilities to comprehend and translate sentences in a text may be largely attributed to the experiment group's training in discourse analysis techniques. We may get the finding: the training of college students' discourse analysis techniques contributes to the improvement of their performance in comprehension and translation.

Conclusion and Limitations

This paper investigated the correlation between college students' performance in comprehension and translation as well as the relationship between the students' discourse analysis competence and their comprehension and translation performance. An experiment was designed to provide some empirical evidence, the result of which suggests: more efforts are called for to develop the students' discourse analysis competence in the course of college English teaching and more systematical and practical discourse analysis techniques are needed for college students to fully comprehend and faithfully translate.

The study unavoidably has its own limitations. First, the factors involved in comprehension and translation are so complex that any attempt to research on such a topic would unavoidably entail substantial risk. The authors only picked up some of the factors involved in the first phase of translation – comprehension of the original text. There are some other factors involved in source text

analysis such as sender, recipient, medium, place of communication, time of communication, and motive for communication etc.

Second, four categories and twenty-four subcategories undoubtedly cannot represent all discourse analysis techniques. They are what have been generally accepted as basic techniques and what our teaching experience has proved to be practical ones, certainly, they are also the result of limited materials, limited time and our limited experience and comprehension on this subject.

In short, the paper just serves as a preliminary study, which calls for further improvement and follow-up studies.

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