CAN THE EFFICIENCY OF *L2* SUMMARIZATION BE IMPROVED: COSTS AND BENEFITS

I.N.J. Bogamuwa [1]

[1]*Department of Language Studies, Open University of Sri Lanka*

INTRODUCTION

In a summarizing task it is essential to convey correct information effectively as well as efficiently in a condensed form. Therefore, summary writers should have an adequate language ability to read, comprehend and reproduce information in a condensed form, whether the summary is produced in the first language or in the second language. Thus, quality of the summary is an important phenomenon as it reflects how effectively and efficiently information is reproduced. In Garner's (1982) study that assessed "efficiency of summarization" she claims that high-efficient students store information in memory efficiently while processing the information efficiently.

Most of the research conducted on summarization is based on the model of text comprehension developed by Kintsch and van Dijk (1978), and modified later by Brown and Day (1983). This model provides a theoretical explanation of how summarizing information promotes deep comprehension and learning. Further this theory explains how summary writers have to select the important ideas from the text, while reconstructing the meaning in a more succinct and general manner. Summary writing plays an imperative role not only in the reading and writing processes, but in the learning process as well, since, through summarizing a text or a passage students can judge the level of comprehension and retention of information that they have gathered (Bharuthram, 2006).

The current study examines the summary writing performance of thirty six Sri Lankan upper intermediate English as a second language (*ESL)* university students with special reference to the quality of their summaries before and after they were provided instruction on summary writing. The objective of this study is to examine the efficiency of summarization of upper intermediate level university ESL students and the impact of instruction on the quality of summary in their summary writing performance.

METHEDOLOGY

The following two major research questions are addressed in this study:

- What is the level of quality of the summary of upper intermediate ESL students?
- To what extent does instruction affect efficiency of *L2* summarization?

The hypotheses formulated were based on one general hypothesis: 'There is no significant difference between the means for the pre-test and the post-test groups'. Further, this research is concerned with null hypotheses and other possible outcomes in the form of alternative hypotheses. The sample consisted of 36 first year Diploma in English students from the Open University of Sri Lanka. These students learn English as a second language and their English proficiency level is at upper intermediate level. The participants completed a pre-test summary task before they were taught summary writing. This was followed by a post-test summary using the same source text after providing summarizing instruction. The pre-and post-test summaries were analyzed in terms of the quality of the summaries.

The method used by Palmer and Uso (1998) and Garner (1982) was adapted in the process of measuring the quality of the summaries. The following calculations were done in order to

[1] Correspondences should be addressed to I.N.J. Bogamuwa, Department of Language Studies, Open University of Sri Lanka (email: inbog@ou.ac.lk, Tel: 011 2881 057)

measure the quality of the summaries.

- students' inclusion of main points and the number of words used in students' summaries
- total number of main ideas and the average of main ideas per summary
- total number of words and the average of words per summary
- average of main ideas per summary was divided by the average of words per summary

Quality of the summaries of pre-test, as well as post-test, was calculated separately. However, grammar mistakes and text elaboration were disregarded at this point (Palmer & Uso, 1998). In addition to the textual analysis of the summaries, the impact of instruction on efficiency of summarization was also examined by comparing the quality of the summaries of the pre-and post-test summaries. The data obtained were scrutinized quantitatively. *T test* was applied as the main technique in the inferential statistics analysis while utilizing the Statistical Package for Social Sciences (SPSS) for the data processing. P*aired t-test* was applied to obtain *paired samples statistics* and *paired samples test.* Under *paired samples statistics*, value of *mean; standard deviation;* and *standard error mean* of the pre-test and the post-test were examined while *paired samples test* evaluated the *paired differences.* The outcome of *t test* was utilized to compare the *p-value* with the selected value of the *significance level*.

RESULTS AND DISCUSSION

1) What is the level of quality of the summary of upper intermediate ESL students?

In order to test the quality of the summary, first, the number of main points presented in each summary was counted, while calculating the number of words presented in each summary. Next, the total number of main points and total number of words included were calculated. Subsequently, the average of main ideas per summary and the average of words per summary were computed. Finally, the average of main ideas per summary was divided by the average of words per summary to obtain the level of quality of the summary (Palmer and Uso 1998; Garner, 1982).

The calculation of main points and number of words used in the pre-and post-test are demonstrated in the following table.

Table 1: Number of Main Points and Words Used in the Pre and Post-test Summaries

	Pre-test	Post-test
Total number of main ideas	116	156
Average of main ideas per summary	3.22	4.33
Total number of words	2475	2337
Average number of words per summary	68.75	64.91
Level of quality (Main ideas/words)	0.046	0.066

According to table 1 it is observed that the students had identified at least 3 main points out of 6 main points, while using approximately 69 words as an average number of words in the pre-test summary, resulting in the level of quality of pre-test summary being 0.046. Further it can be predicted that in the post-test summaries students had employed at least 4 main points as an average, while utilizing approximately 65 words as an average number of words, as creating the level of quality of post-test summary being 0.066.

2) To what extent does instruction affect efficiency of *L2* summarization?

Under this question it was examined whether students had improved the efficiency of summarization after they were provided the summarizing instruction. In order to examine the improvement of quality of the summary, the main ideas and the number of words included in the pre-and post-test were compared.

Main Hypotheses:

H_0 - There is no significant difference between the means for the quality of summary in the pre-and post-test groups.

H_1 - The mean for the quality of summary in the post-test group is significantly higher than that for the pre-test group.

Sub Hypotheses I:

H_0 - There is no significant difference between the means for the number of main points included in the pre-and post-test groups.

H_1 - The mean for the number of main points included in the post-test group is significantly higher than that for the pre-test group.

Sub Hypotheses II:

H_0 - There is no significant difference between the means for the number of words included in the pre-and post-test groups.

H_1 - The mean for the number of words included in the post-test group is significantly lesser than that for the pre-test group.

Clustered bar figure in figure 1 demonstrates the percentages of the frequencies of number of main points included by the students in the pre-and post-test summaries.

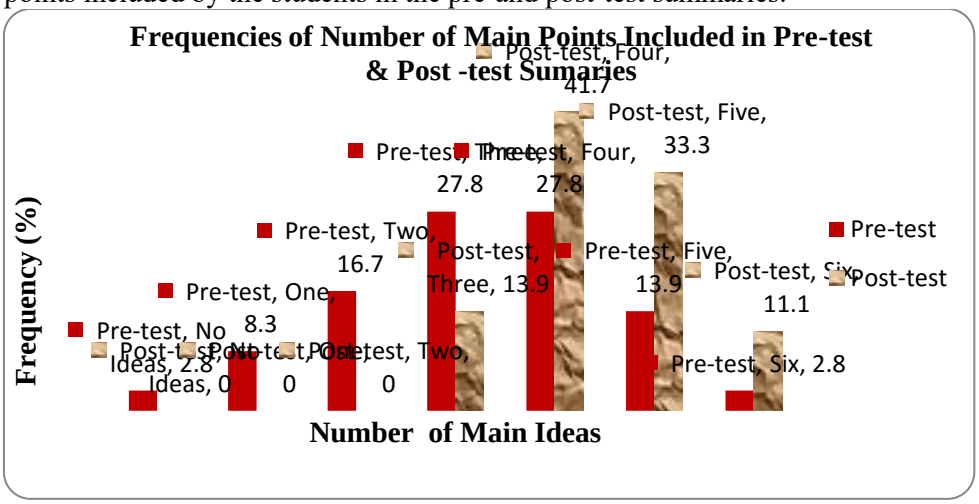

Figure 1: Frequencies of Number of Main Points Used in the Pre-and Post-test Summaries

As figure 1 presents, more number of main points were identified in the post-test than in the pre-test. That is, four, five, and six main ideas were included in varying degrees: 41.7%, 33.3%, and 11.1% respectively in the post-test summaries whereas 'no ideas', 'one', and 'two' main idea categories are represented only by the pre-test. Thus, it is obvious that more number of main points were included in the post-test summaries than in the pre-test.

Next, results of the paired samples test of number of main ideas, as well as number of words included in the pre-and post-test summaries are discussed.

Table 2: Paired Samples Statistics of Main Ideas and Number of words Included in the Pre-and Post-test Summaries

	Mean			N	Std. Deviation		Std. Error Mean	
	Main Ideas	No. of Words	Level of Quality		Main Ideas	No. of Words	Main Ideas	No. of Words
Pre-test	3.22	68.75	0.047	36	1.355	7.883	.226	1.314
Post-test	4.42	64.78	0.068	36	.874	5.688	.146	.948

According to table 2, the post-test obtained higher mean (4.42) for the inclusion of the main ideas than the pre-test (3.22) by improving the inclusion of main ideas in the post-test. Meantime, the mean of the number of words employed in the post-test summaries (64.78) is

lower than in the pre-test (68.75) by indicating that the students had utilized lesser number of words in the post-test than in their pre-test summaries.

Table 3 shows the paired differences of the main points included and the number of words used in the pre-and post-test summaries.

Table 3: Paired Samples Test of Number of Main Ideas and Number of Words Used in the Pre-and Post-test Summaries

			Main Ideas	No. of Words
Paired Differences	Mean		-1.194	3.972
	Std. Deviation		1.261	9.620
	Std. Error Mean		.210	1.603
	95% Confidence Interval of the Difference	Lower	.717	.717
		Upper	7.227	7.227
T			-5.684	2.478
Df			35	35
Sig. (2-tailed)			.000	.018

Considering the *p value* or the significant level for the main ideas in the table 3, it can be decided that the null hypothesis (H_0) of sub hypothesis I is rejected since the *p value* is .000 <.05 (α). Further as it demonstrates the *p value* for the number of words used is .018 <.05 (α) the null hypothesis (H_0) of sub hypothesis II is also can be rejected.

As a final point, by scrutinizing the means for level of quality, we can conclude that the post-test has obtained a higher mean (0.068) than the pre-test mean (0.047). Thus, the null hypothesis (H_0) of the main hypothesis can be rejected while accepting the alternative hypothesis (H_1).

CONCLUSIONS

Considering the overall findings, the pre-test summaries as well as pos-test summaries can be considered as "middle-range efficiency summaries" as Garner (1982:277) defined “middle–range efficiency summaries would present some of the important ideas in a moderate number of words” in the concept of “efficiency of summarization”. However, an improvement could be noticed in the level of quality of the post-test since the average of the main points included was increased from 3.22 to 4.33, as well as the average of number of words employed was reduced from 68.75 to 64.91. Accordingly, these data provide evidence that, after students were provided instruction on summarization they were cable to depict a high number of relevant points in a fairly moderate number of words in their post-test summaries. Thus, the number of words and the main points included in a summary can be considered as the cost while the quality of summary is the benefit. Consequently, the posttest summaries yielded better cost/benefit results by improving the quality of summaries. Although all the students had not fully developed their skills to identify all main points that were included in the source text even in their post-test summaries, they may need more practice in summary writing to fully improve their efficiency of summarization. Although the current study considered only quantitative data obtained from the performance of the pre-and post-test summaries, qualitative data of the study would have provided an extensive view on summary performance as summarization procedure involves many more complex processes.

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