International Journal of Multidisciplinary Research and Growth Evaluation.

The Impact of brainstorming (Note taking) strategy on Iranian intermediate EFL Learners' writing skill

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Abstract
The present study aimed at investigating the effect of brainstorming technique, note taking on EFL learners' writing performance. To this end, 54 Iranian EFL intermediate learners were invited to participate at this study. The sample was distributed into two classes. Class A represents the experimental group totaling thirty students taught through brainstorming strategy, note taking and class B represents the control group with 24 students. Their performance on the pre-test and post test in both experimental and control groups were compared. As data analysis indicated, the experimental group performance on the post-test was considerably higher than their performance on the pre-test. The result of the study revealed that the students who were taught note-taking technique had better writing ability than those who were taught traditionally. In other words, the use of note-taking technique is more effective. Finally the research findings imply that the use of note-taking technique can affect the students' writing competence optimally.

DOI: https://doi.org/10.5281/zenodo.8188553

1. Introduction
Writing is considered as one of the cumbersome skills in EFL context. Hyland (2002) pointed out that writing is a socio cognitive activity which involves skills in planning and drafting. Writing is always seen as one of the most prominent skills in EFL pedagogy whose paramountcy is especially underscored in academic and higher educational setting. However, for the students, writing is mostly regarded as challenging and unmanageable tasks. This leaves an immense responsibility on EFL teachers and writing instructors who are expected to bring the learners into terms with this focal, yet undervalued skill.

The use of Brainstorming as a controversial issue has long been viewed with suspicion by language teachers and thus it has unfortunately been ignored as a valid activity for language practice and improvement. However, considering the nature of brainstorming and creative thinking, we can say that there are important elements in the teaching process which makes it suitable for being employed in language teaching procedure.

By introducing brainstorming techniques we want to suggest that explicit instruction of strategy has a measurable influence on writing performance. It is also suggested that EFL teachers should move from a product based approach to a process focused approach in their teaching of writing as the latter may contribute towards activating student's thinking and creating ideas for a writing task. Beyond the instructional and learning strategies influences on the learners performance. Their language performance is affected by social/economic factors when group working.

Brainstorming is a very important, yet often overlooked part of the writing process. This step produces valuable oral rehearsal of thoughts and ideas which are essential for students' learning. Brainstorming offers the teacher an opportunity to help students activate prior knowledge, give feedback on ideas, work together in a group, draw connections among various concepts and help students develop substrands for topics.

Brainstorming also helps develop organizational skills as students have an opportunity to clarify and organize ideas before they write. Teachers can conduct brainstorming in a number of ways.

Note taking is simply a way of consciously recording important information so that you can recall it later regardless of how good you think your memory is. You will need to take notes in certain situations to remind yourself what was said. It is a mistake to think, when going to a meeting or attending a lecture or some other important talk, that you will remember the details of what has been said. You may well-remember the overall topic of the discussion, even some very specific details, but you won't remember everything. These techniques may help you get out of that deer-in-the-headlights mood during which you are certain you will never figure out what to write. The frustration at the beginning of the process can often be minimized if you use them to get you over the early writing hurdles.

A great deal of research has tested Osborn's claims about the effectiveness of group brainstorming. Many studies have verified that groups generate more ideas when they use Osborn's brainstorming rules than when they do not. However, when the performance of interactive brainstorming groups is compared to the pooled performance of the same number of individuals brainstorming alone (nominal group), nominal groups outperform interactive groups in both the quantity and quality of ideas generated. Most brainstorming research has focused on social factors in the productivity gap between interactive and nominal groups. However, researchers have recently begun to investigate cognitive factors as well, in particular the extent to which idea exchange influences idea generation.

As was suggested by Harmer in the year 1998, the writing skill had finally been recognized as an important skill for language learning. Having said that, through extensive research, a number of approaches and techniques have been provided regarding ESL or L2 writing during the last decade. But this study aims at surveying whether concepts clustering and note taking have influence on writing performance of Iranian EFL learners.

1. 2 Research Questions and Hypotheses
2. The main research questions addressed in this study were:
3. Does note taking as a brainstorming strategy lead to gains in writing?
4. Is there any significant difference between the mean score of the experimental and control group

2. Research Method
2.1 Participants
The sample of the study consisted of 54 female Students of English (intermediate level) classified into two classes, one serving as experimental group and the other as control group. The students were assigned into the two groups using simple random sampling, where 24 of the participants were randomly put into the control group and 30 others in the experimental group (note taking group). They were all interested to participate in the survey because of their eagerness to learn more and promote their essay writing skills. All of them studied English as a foreign language in a private institute in Tabriz, Iran.

2.2 Instrumentation
In order to make sure of the homogeneity of control and experimental groups in terms of English language knowledge, a test of Preliminary English Test (pet) was administered. PET includes four parts: reading, writing, listening and speaking. But because of administration restrictions we select just two parts, reading and writing. The reading part consisted of 35 Multiple-choice questions and the writing part consisted of 3 parts: sentence transformation, writing a short message, writing a letter or short story. There were 42 questions in all and the time allotted was 90 minutes. Preparing a fruitful, weighty, yet an easy and suitable subject for the level of the participants, a pre-post test was administered to two groups before and after the implementation of the proposed technique on the experimental group. Then the students in the groups were asked to write an expository essay on given topics, before the instruction (pre-test) and after the instruction (post-test). The topics for the pre-test and post-test were the same. Compositions were then scored out of 20. The students' papers were scored by two raters.

2.3 Procedure
Before the students in the experimental group received any instruction, all the students in the two groups were asked to write an essay about the given topic. The allotted time for the topic was thirty minutes. The papers were collected and each students' score was measured based on the average score for the two raters.

Strategy instruction phase started a week after the students participated in the pre-test. They participated in ten 45 minutes study sessions. The students in the experimental group received the instruction for brainstorming strategies (note taking). Two weeks after the instruction period of the strategy of brainstorming strategies all the students in different groups again wrote essays about the given topic. The papers were collocated and each students' score was measured based on the average score from the two raters.

To measure the students' writing ability, they were asked to write essays. Their essays were then scored based on a checklist (Kenyons's checklist).

Rating was assigned for three criteria: Content, Organization and style. The marking scheme was first explained to the raters. The final score for each essay was then calculated by recording the mean of the two raters' scores. Students' essays were scored out of 15 points as follows: Content and Organization 10 and style 5. Each skill has a five level scoring scale ranging from excellent to poor containing; essay coherence, vocabulary use, spelling and handwriting were taken into consideration by the raters as follows:

Excellent gets 5 scores, very good gets 4 scores, good gets 3 scores, not bad gets 2 scores, and finally poor gets 1 score.

Compositions were scored by two teachers who taught writing courses for many years. For each paper, examiners were required to read the paper attentively and to combine the scores into a single score. Essays were then scored out of 20.

2.4 Design
Research designs are the structure of research. It is the foundation of the study. Research design consists of observations, measures, treatments, programs, groups, assignment to groups, and time. Among the designs to consider are the True-Experimental design, Quasi-Experimental design, and the Non-Experimental design.

This study had a Quasi- experimental pretest-posttest control group design in which two classes were made randomly in a language institute in Tabriz, Iran. One class served as an experimental group and one as control. The independent variable was brainstorming strategy (note taking) and the dependent variable was the performance of the experimental

and control groups on the essay writing pretest and posttest. For the purpose of this study, all participants completed the same writing task before the study and one week later at the end of the study. The control group in this experiment followed the traditional product based approach in which the English writing mainly focused on providing practice for producing writing products. The students first learned how to write simple and complex sentences, and then started constructing paragraphs from models, frames, and other guides. Finally, they wrote a text by expanding an outline or summary provided. However, the procedure for experimental class was rather different. This procedure was intended to stimulate students' thinking, to create and organize ideas, and to compose the raw materials into a text. It ran as follows:
Thinking individually
Verbalizing ideas in pairs or groups

Brainstorm ideas in oral and note forms
Classifying ideas into proper categories
Completing the writing task in fifty minutes
Students participated constructively and enthusiastically in the classroom interventions and were very positive about the brainstorming technique they studied.

3. Data Analysis
3.1 Results of PET Scores
The participants of this study were 70 EFL students. After administering the proficiency test, 54 students who took the scores between 50 and 65 were considered as homogenous intermediate level and were chosen as the participants of this study. The statistical parameters of mean, Std deviation, Skewness and Kurtosis for pet test scores are depicted.

Table 1: Descriptive Statistics of Scores of English Proficiency Test

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Pettest Valid N (listwie)	54	47.00	58.00	53.1111	2.98650	-.198	.354	-.958	.695

The mean of proficiency scores was 53.11 and the standard deviation was 2.98. The distribution of proficiency scores was approximately normal because the ratios of Skewness (-.198) and kurtosis (-.958) to their respective standard errors were not over +2. In order to ensure the reliability of the proficiency test, a correlation analysis and reliability analysis

of proficiency scores were carried out through the Cronbach Alpha method. The correlation analysis and reliability analysis of proficiency tests showed that the selected Pet test items were highly correlated and reliable. Table 2 shows the reliability analysis of the proficiency test.

Table 2: Reliability Statistics of Proficiency Test

Cronbach's Alpha	N of Items
.870	42

Cronbach's Alpha showed that the instrument enjoyed a high degree of internal consistency and all the questions in the proficiency test were appropriate to students' level. 3.2 Results of Reliability Estimation for Pre-test and Post-test of Writing.
As mentioned earlier, all the participants took the writing test.

In order to examine whether the writing scores were reliable or not, a second rater was asked to score the pretest and post-test. Then, a Pearson correlation was run to obtain the degree of togetherness between the two sets of writing scores for pre-test and post-test. The results are shown in Tables 3 and 4.

Table 3: Correlations Analysis of Pre Writing Scores

		Pre writing score 1	Pre writing score 2
Pre writing score 1	Pearson Correlation	1	.725**
	Sig. (2-tailed)		.000
	N	45	45
Pre writing score 2	Pearson Correlation	.725**	1
	Sig. (2-tailed)	.000	
	N	45	45

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4: Correlations Analysis of Post Writing Scores

		Pre writing score 1	Pre writing score 2
Pre writing score 1	Pearson Correlation	1	.724**
	Sig. (2-tailed)		.000
	N	45	45
Pre writing score 2	Pearson Correlation	.724**	1
	Sig. (2-tailed)	.000	
	N	45	45

**. Correlation is significant at the 0.01 level (2-tailed).

According to Table 5 and 6, the correlation between the raters' scores for pre-test and post-test were .723 and .724, respectively. Thus, the results showed a high correlation

between the two raters as indicating a high level of inter-rater reliability.

2.2 Results of Anova to Compare Three Groups at Pre-test and Post-test

The study examined the application of brainstorming strategies on the learners' writing ability, in a way that the explicit instruction of the strategies would help students in experimental group to improve their writing skill. Through brainstorming, students can easily understand and organize their thoughts and increase their conceptual understanding which in turn helps them organize their ideas. The existence of the pretest and posttest as the two dependent variables and three experimental groups as independent variables led to the use of one-way ANOVA in this study. Table 7 shows the descriptive statistics of pre and post test for two groups. The statistics show mean, standard deviation also minimum and maximum scores for each group.

Table 5: Descriptives Statistics of Two Groups

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Pre Test								
1.00	30	16.0000	1.77281	.45774	15.0183	16.9817	13.00	19.00
2.00	24	15.6667	1.39728	.36078	14.8929	17.0681	13.00	18.00
Total	54	15.9556	1.56605	.23345	15.3319	16.4261	13.00	19.00
Post Test								
1.00	30	15.9333	1.75119	.45216	14.9636	16.9031	13.00	19.00
3.00	24	18.4667	1.18723	.30654	17.8092	19.1241	16.00	20.00
Total	54	17.4889	1.79168	.33046	16.9506	18.0272	13.00	20.00

Table 8 shows the results of Anova to compare the statistical significance of the difference among two groups at pre-test and post-test. The level of significance (alpha level) for the examination of the research hypotheses was set to .04 for pre-test and posttest differences.

Table 6: Result of ANOVA for Pre-test and Post-test Differences

		Sum of Squares	df	Mean Square	F	Sig.
Pretest	Between Groups	2.178	2	1.089	.433	.652
	Within Groups	105.733	42	2.517		
	Total	107.911	44			
Pretest	Between Groups	55.644	2	27.822	13.651	.000
	Within Groups	85.600	42	2.038		
	Total	141.244	44			

As it is seen in Table 9, the level of significance observed for the differences among two groups at the pretest was .542 and higher than the alpha level. Thus, differences among two groups at the pre-test was not statistically significant while the level of significance for the differences among groups at the post-test was zero and lower than alpha level .04 showing that the differences among groups at the post-test were statistically significant.

2.5 Results of Post-hoc

Comparisons for Post-test Results Since the Anova results in Table 9 above indicated a significant difference among the three groups at the post test, the examination of multiple comparison was required. For this purpose, Tukey HSD Post-hoc statistics was used to spot the exact place of the differences among three groups.

4. Discussion

The result of data collection shows that note taking technique was more effective than traditional technique to teach writing for the students of the English Department of Sobhe Enghelab. It can be known from a significant difference on the student's writing competence between those who were taught using note taking technique and those who are taught using traditional technique. The result of the analysis shows that the mean score (X) of the students who were taught using note taking technique (18.46) was higher than those who were taught using traditional tech(18.06). Thus, it can be concluded that the students who were taught using note taking had better writing ability than those who were taught using traditional technique.

The functional complexity accounts for the lack of specific note taking training in schools and universities. Teaching is limited to the production of summary texts involving the sorting, ranking and reformulation of what the student has read or heard. Faced with the need to take notes, students develop their own methods and thereby become aware of the consequences and contradictions in their choices.

Learning to take notes well undoubtedly takes as much time as learning to write in a relatively experienced way. Taking into account the different functional aspects of note taking that have been mentioned we believe learning to take notes involves the development of a range of skills that take several years to master.

The aim of teaching note taking would be to help students progress not more quickly but in a way that their skills in using this indispensable tool are improved. **5. Conclusion**

Our purpose here was to examine the effect of strategy training on the improvement of EFL learners' proficiency. For this purpose, we compared the effect of two brainstorming techniques on the EFL intermediate learners' essay writing. Data revealed students receiving ten sessions of strategy training scored starkly higher than those who did not, over their writing tests. It was proved that teaching the writing strategy to the students of the experimental group was more successful than teaching a product based approach to students in the control group. Teaching brainstorming strategy proved effective in making students' progress in essay writing abilities in terms of content and organization,

mechanics of writing, language used as well as skills emerged from creative thinking abilities (fluency, flexibility, originality, and elaboration) and considerable changes in strengthening the learners cooperation in write their essays. Teaching brainstorming strategy had a significant effect on the mean score of the students' English writing skill. In other words, the mean score of students' English writing skill showed significant variation between experimental and control groups. However, the result showed that teaching one strategy type has more benefits than the other on students' essay writing ability. Our experimental group outperformed the control group in writing scores. The result of this paper added to the literature about brainstorming and students' essay writing ability with the results that have been proved above. This study's finding is consistent with previous studies reporting the positive impact of clustering technique on second language learning.(Erlik Widiyani, 2010) the effectiveness of pre-writing strategy on their writing. Based on these findings, this study concluded that clustering could be a viable strategy to improve second language writing for intermediate learners.

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