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Developing ESL Students' Writing

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***Abstract*—**Some of the students' problems in writing skill stem from inadequate preparation for the writing assignment. Students should be taught how to write well when they arrive in language classes. Having selected a topic, the students examine and explore the theme from as large a variety of viewpoints as their background and imagination make possible. Another strategy is that the students prepare an Outline before writing the paper. The comparison between the two mentioned thought provoking techniques was carried out between the two class groups –students of Islamic Azad University of Dezful who were studying "Writing 2" as their main course. Each class group was assigned to write five compositions separately in different periods of time. Then a t-test for each pair of exams between the two class groups showed that the t-observed in each pair was more than the t-critical. Consequently, the first hypothesis which states those who utilize Brainstorming as a thought provoking technique in prewriting phase are more successful than those who outline the papers before writing was verified.

***Keywords*—**Brainstorming, Outlining, Prewriting, Thought provoking techniques

I. Introduction

MOST of the students' problems in writing skill refer to inadequate preparation for the writing assignment, and all of the instructions center around a description of the results of writing. The purpose of prewriting is to generate an abundance of raw materials and notes that will give the writer some strategies for writing the first draft. Any of the following prewriting strategies can help the writer have a better writing assignment: Brainstorming, Making lists, Webbing, Outlining, and so on. Among those thought provoking techniques in prewriting phase, Brainstorming and Outlining seem more influential than others. Brainstorming as a thought provoking technique stimulates students' schemata, generates latent vocabulary, helps them to organize ideas and to activate their imagination. Another strategy is that students outline their writing. This is done by preparing an Outline before writing the paper and it assists the writer in the creation phase.

A. Research Questions

In order to fulfill the purpose of the study which is to consider whether prewriting techniques are effective in students writing and to see which one of thought provoking techniques, *following questions are raised:*

1. Is there any relationship between Brainstorming and Outlining in prewriting phase?
2. Is Brainstorming more effective than Outlining in prewriting phase?

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B. Definition of Key Terms

The following key terms have been applied in this study:

Prewriting phase: It is the most crucial phase in writing process that generates an abundance or raw materials and notes that will give the writer some strategies for writing the first draft.

Brainstorming: It is the rapid pooling of all ideas that an individual or a group of people can come up with before any discussion or judgment takes place.

Outlining: An Outline is an arrangement of related topics or ideas in a numbered list that will efficiently carry out the purpose of an essay.

C. Hypotheses

Hypotheses 1: It is believed that those who utilize Brainstorming as a thought provoking technique, are more successful than those who outline the paper before writing.

Null Hypothesis: There is no relationship between Brainstorming and Outlining.

II. Review of Literature

Early versions of "the writing process" introduced a linear stage model, or a straight – ahead view of composing. This later gave way to a recursive theory that sees writing as a two-steps-forward one-step-back process in which writers can "discover" new meanings at any point along the way. A linear stage model of composing: In a 1964 study, D. Gordon Rohman and Albert O. Wleck presented a stage model of composing comprised of prewriting, writing rewriting, and editing. Rohman then published "Prewriting: The Stage of Discovery in the Writing Process" which helped establish a view of prewriting as the most important phase of the composing process. This emphasis on prewriting prevailed in the 1970s but then gave way to increasing interests in teaching revision, in students' focusing on final writing products (e.g. in portfolios), and in teachers' assessment of students' writing. Emphasis on prewriting: In a 1972 essay entitled "Teach Writing as Process, Not Product" Donald Murray described prewriting as "everything that takes place before the draft " and as the phase of writing that "takes about 85% of a writer's time". Peter Elbow, Ken McCrorie, James Britton, James Moffett, Janice Lauer, and Ann Berthoff were also well – known 1970s advocates of process pedagogies that had a special focus on teaching prewriting or "invention". This initial emphasis on invention provided teachers with a fresh new perspective on teaching writing but also led to the criticism that too little attention was being paid to the quality of students' final drafts.

III. Method

In order to actualize this study, the researcher will ask 40 students in two classes to write compositions. After the administration of the proficiency test and comparing the statistical means of the two class groups, the participants will be given some instructions about the two thought provoking techniques (Brainstorming and Outlining) separately and then they will be given a topic. To reject H_0 and to conform H_1 Hypothesis, the researcher will choose 20 students who are studying writing 2 in Islamic Azad University of Dezful, and in comparison he will select another writing 2 class of 20 students held over there.

A. Setting

The setting for this study includes two ordinary classrooms in the Humanities faculty of Islamic Azad University of Dezful.

B. Subjects

The investigation of thought provoking techniques in prewriting phase is intended for 40 typical second – year college students of Islamic Azad University of Dezful who are studying "writing 2 " as their main course in two homogeneous classes. The criterion for focusing on this selected population is a proficiency test in grammar, reading comprehension and vocabulary in English. There are 20 students in each class. The first class group includes young adult students who are just getting along with studying at the university while the second group comprises adult students who are often high school teachers. Each class group is told separately to write compositions based on what they have been taught as a kind of thought provoking technique, in one class Brainstorming and in another one Outlining. Of course, they have been trained to write paragraph systematically by their own teacher who was teaching for both classes.

C. Design and Construction

To use necessary items for proficiency test, 20 vocabulary questions 20 grammatical items and regarding reading comprehension, 10 questions were raised from NMTC'S TOEFL test. All together, the proficiency test includes 50 questions and each question has a two points mark with the total of 100 points. Based on the statistical description of the proficiency test, we realized that the Mean of the first group was equal to 85.3, the Minimum score was 70 and the Maximum score was 94. The Mean of the second group was equal to 84.4. The minimum score was 70 and the Maximum score was 92. Regarding the results of the proficiency test, the mean difference of the two proficiency tests was equal to 0.9 that is a reasonable difference level to compare the two classes against each other for this research. Having taught the students of the two classes how to use a specific thought provoking technique (Brainstorming or Outlining) and having shown them some samples of writing compositions, the teacher will collect all compositions that have been written by students and all of the papers are marked to show each group's error and then they will be given students to see their flaws.

D. Treatment

Getting informed about the similarities between the proficiency levels of the two groups, the researcher starts teaching each group how to write a paragraph, then he teaches each group technique, i.e. he teaches one group how to outline the paragraphs and indoctrinates the other one how to brainstorm them. It is to be noted that the way he uses to teach each technique is totally different. Brainstorming can be performed individually or as a group. What has been considered here is individual Brainstorming that is every student makes his mind to write down what he remembers based on his background knowledge and schemata. As a matter of fact, He lets them write freely and without limitation. It is to be mentioned that he should emphasize on the continuation of writing based on students' dormant knowledge and schemata. The chosen form of Brainstorming has been clustering through which the teacher indoctrinates them to splash the words which stem from their background knowledge on the paper and then to use them in their sentences. On the other hand, Outlining as another thought provoking technique is considered as one of the most influential techniques that helps the students write in a systematic way. The type of applied Outline is Sentence Outline and students will be sequentially assigned to write a paragraph based on Outline during four sessions.

E. An Analytic Scale for Scoring the Writing Tasks

Having collected the papers and having marked the existing errors, the teacher is supposed to rate composition by applying an analytic scale offered by Brown and Bailey. Regarding this scale, each composition will be rated on five domains: organization that includes introduction, body and conclusion, logical development of ideas that consists of content, grammar, punctuation, spelling and mechanics and style and quality of expression. It is to be noted that the mentioned scale starts with 1-5 and 6-11 as unacceptable –or –not college-level work of writings,12-14 as adequate to fair writings,15-17 as good to adequate, and 18-20 as excellent to good writing. To initiate with the first domain, we should know that organization includes 'a topic sentence', 'supporting sentences', 'unity', 'logical order' and 'conclusion' scaled from 'not adequate' to 'adequate' to 'good' and to 'excellent'. The second domain, logical development of ideas, consists of content which deals with the 'major' and 'minor' development of controlling idea scaled from 'not adequate' to 'weak' to 'adequate' to 'good' and to 'excellent'. Likewise, 'unity' and 'logical order' scaled from 'not adequate' to 'weak' to 'adequate' to 'good' and to 'excellent'. Then 'coherence' is scaled from 'not coherent' to 'weak' to 'good' and to 'excellent' sentences. The next domain, grammar, comprises 'verb forms', 'tense sequences, 'articles', 'preposition', 'modal', and 'relative pronouns' scaled from 'not adequate' to 'hard to read' to 'some grammatical problems' to 'good' to 'excellent'. The fourth domain, punctuation, spelling and mechanics, is scaled from

'misuse to some error', to 'correct use of punctuation', 'capitalization' and 'spelling'. Then, 'the use of indentation', 'margins' and 'page layout' are rated from 'no correct use of indentation' and 'appropriate margins'. Afterwards, the writing is scaled from 'bad' to 'good' handwriting. The last domain 'style and quality of expression' gets along with 'the word choice' that is scaled from 'inappropriate to poor word choice' to 'correct use of word choice'. Likewise, it includes 'register' that is rated from 'no register' to 'lack of awareness of register' to 'good application of register'.

F. Data Collection

Based on the mentioned analytic scale, the data were gathered in terms of five writing tasks. The following tables reveal the data collected from the first and the second group of writing 2 students. The collected data were recorded in S.P.S.S. statistical program. The variables 1st Gwr-1_o, 1st Gwr-2_0, 1st Gwr-3_0, 1st Gwr-4_0, 1st Gwr-5_0 and 1st Gpro are assigned to the first Group Students' compositions which have been shown through number 1 to 5 original scores by the first interrater and the first group students' proficiency test score. Likewise, the variables 2nd Gwr-1_0, 2nd Gwr-2_0, 2nd Gwr-3_0, 2nd Gwr-4_0, 2nd Gwr-5_0 and 2nd Gpro are assigned to the second group students' compositions which have been ranked from number 1 to 5 original scores by the first interrater and the second group students' proficiency test score.

TABLE I
DATA COLLECTED FOR THE FIRST GROUP STUDENTS' WRITING BASED ON BRAINSTORMING

Students	*1st Gpro*	*1st Gwr-1_0*	*1st Gwr-2_0*	*1st Gwr-3_0*	*1st Gwr-4_0*	*1st Gwr-5_0*
1	**80**	**69**	**75**	**75**	**75**	**74**
2	**70**	**64**	**64**	**64**	**64**	**64**
3	**90**	**83**	**84**	**84**	**84**	**85**
4	**90**	**94**	**94**	**94**	**96**	**96**
5	**92**	**89**	**91**	**90**	**91**	**90**
6	**88**	**87**	**89**	**88**	**89**	**88**
7	**88**	**91**	**92**	**92**	**92**	**92**
8	**80**	**76**	**70**	**72**	**72**	**72**
9	**85**	**86**	**87**	**88**	**89**	**84**
10	**83**	**86**	**85**	**86**	**86**	**86**
11	**90**	**91**	**93**	**94**	**94**	**94**
12	**75**	**74**	**74**	**76**	**78**	**78**
13	**80**	**73**	**75**	**76**	**76**	**78**
14	**94**	**100**	**100**	**99**	**100**	**100**
15	**88**	**89**	**90**	**90**	**92**	**94**
16	**90**	**95**	**95**	**96**	**96**	**98**
17	**89**	**95**	**96**	**96**	**98**	**98**
18	**88**	**95**	**96**	**98**	**99**	**99**
19	**84**	**90**	**92**	**92**	**94**	**96**
20	**82**	**92**	**84**	**84**	**86**	**86**

G.Data Collected for the First Group Students' Writing Based on Brainstorming

According to five compositions collected from each student, the sample size was: N=20, the Minimum Score=64.00 and the Maximum Score=100 and also the Mean for the writing exam was: 1st Gwr-1_0=85.95, the Mean for the second writing exam was: 1st Gwr-2_0=86.30, the Mean for the third writing exam was: 1st Gwr-3_0=86.70, the Mean for the fourth writing exam was: 1st Gwr-4_0=87.55, and the Mean for the final writing exam was: 1st Grw-5_0=87.60

TABLE II
DATA COLLECTED FOR THE SECOND GROUP STUDENTS' WRITING BASED ON OUTLINING

Students	*2nd Gpro*	*2nd Gwr-1_0*	*2nd Gwr-2_0*	*2nd Gwr-3_0*	*2nd Gwr-4_0*	*2nd Gwr-5_0*
1	**78**	**72**	**73**	**73**	**71**	**72**
2	**82**	**63**	**66**	**67**	**66**	**66**
3	**88**	**80**	**81**	**81**	**81**	**81**
4	**89**	**92**	**94**	**92**	**93**	**93**
5	**84**	**93**	**94**	**95**	**95**	**95**
6	**85**	**87**	**85**	**78**	**87**	**87**
7	**89**	**96**	**94**	**96**	**96**	**96**
8	**92**	**78**	**78**	**80**	**80**	**80**
9	**79**	**87**	**88**	**90**	**90**	**91**
10	**83**	**85**	**85**	**86**	**84**	**85**
11	**82**	**88**	**89**	**87**	**89**	**89**
12	**90**	**75**	**73**	**75**	**76**	**76**
13	**88**	**66**	**68**	**67**	**68**	**68**
14	**86**	**64**	**65**	**66**	**65**	**66**
15	**87**	**87**	**88**	**88**	**88**	**89**
16	**70**	**80**	**81**	**81**	**82**	**83**
17	**88**	**88**	**88**	**90**	**90**	**88**
18	**89**	**75**	**76**	**76**	**76**	**78**
19	**82**	**88**	**80**	**82**	**82**	**82**
20	**83**	**88**	**88**	**89**	**88**	**89**

H.Data Collected for the Second Group Students' Writing Based on Outlining

Regarding the five compositions collected from each student, the sample size was: N=20, the Minimum Score=64.00 and the Maximum Score=96.00 and also the Mean for the first writing exam was: 2nd Gwr-1_0=81.20, the Mean for the second writing exam was: 2nd Gwr-2_0=81.70, the Mean for the third writing exam was: 2nd Gwr-3_0=81.95, the Mean for the fourth writing exam was: 2nd Gwr-4_0=82.35, and the Mean for the final writing exam was: 2nd Gwr-5_0=82.70.

TABLE III
DATA DESCRIPTION FOR WRITING 2 FIRST / SECOND CLASS

Variable	*N*	*Mean*	*Median*	*St Dev*	*SE Mean*	*Min*	*Max*
1st Gwr-1_0	**20**	**85.95**	**89.00**	**9.78**	**2.18**	**64**	**100**
1st Gwr-2_0	**20**	**86.30**	**89.50**	**9.85**	**2.20**	**64**	**100**
1st Gwr-3_0	**20**	**86.70**	**89.00**	**9.60**	**2.14**	**64**	**99**
1st Gwr-4_0	**20**	**87.55**	**90.00**	**9.92**	**2.22**	**64**	**100**
1st Gwr-5_0	**20**	**87.60**	**89.00**	**10.11**	**2.26**	**64**	**100**
2nd Gwr-1_0	**20**	**81.20**	**82.50**	**9.63**	**2.15**	**63**	**96**
2nd Gwr-2_0	**20**	**81.70**	**83.00**	**9.18**	**2.05**	**65**	**94**
2nd Gwr-3_0	**20**	**81.95**	**81.50**	**9.21**	**2.05**	**66**	**96**
2nd Gwr-4_0	**20**	**82.35**	**83.00**	**9.49**	**2.11**	**65**	**96**
2nd Gwr-5_0	**20**	**82.70**	**84.00**	**9.29**	**2.04**	**66**	**96**

Based on the previous table, five compositions were gathered from each student in the first writing 2 class. The Sample Size was N=20, the Minimum Score=64 and the maximum Score=100. In addition, the mean for the writings were 1^{st} Gwr-1_0=85.95, 1^{st} Gwr-2_0=86.30, 1^{st} Gwr-3_0=86.70, 1^{st} Gwr-4_0=87.55 and 1^{st} Gwr-5_0=87.60. According to the second group, five compositions were collected from each student. The Sample Size was N=20, the Minimum Score=63.00 and the Maximum Score=96. Likewise, the means for the writings were 2^{nd} Gwr-1_o=81.20, 2^{nd} Gwr-2_o=81.70. 2^{nd} Gwr-3_0=81.95, 2^{nd} Gwr-4_0=82.35 and 2^{nd} Gwr-5_0= 82.70. According to t-test, it should stated that it is applied to compare the means of the two groups and to show how confident the researcher can be that the differences between experiment and control groups as a result of a treatment are not due to the chance, [33]. Then, the researcher will be provided with a t-value which is derived from the result of the t-test. The t-value reveals the given size of the sample in research. And it can be viewed in [14]'s Research Design and Statistics for Applied Linguistics (1981, p. 272). The t-test is used to evaluate the differences between two proportions. Likewise, it can be used to compare a sample with a population. According to the applied t-test, the null hypothesis (H_0) for this t-test study indicates that there is no difference between our sample mean and the mean already established for the population. As you can see in part one, we are going to find the difference between the sample mean and the population mean, in the top – half, then the bottom half implies that we have to divide that difference by the standard error of means.

I. Paired T-test Between the First and the Second Group's Exams

PAIRED T FOR 1^{ST} GWR-1_0-2^{ND} GWR-1_0

	N	Mean	St Dev	SE Mean
1^{st} Gwr-1_0	20	85.95	9.78	2.18
2^{nd} Gwr-1_0	20	81.20	9.63	2.15
1^{st} Gwr-1_0-2^{nd} Gwr-1_0 (Difference)	20	4.75	9.64	2.15

95% CI for mean difference: (Lower: 0.23; Upper: 9.26)

T_0= 2.202; P-Value: 0.040; $T_{critical}$ value for df=19 at 0.05 level of significance for two-tailed test=2.093, so $T_0 > T_{critical}$; therefore, H_0 is rejected and H_1 is verified.

PAIRED T FOR 1^{ST} GWR-2_0-2^{ND} GWR-2_0

	N	Mean	St Dev	SE Mean
1^{st} Gwr- 2_0	20	86.30	9.85	2.20
2^{nd} Gwr-2_0	20	81.70	9.18	2.05
1^{st} Gwr-2_0-2^{nd} Gwr-2_0 (Difference)	20	4.60	9.74	2.17

95% CI for mean difference: (Lower: 4.11; Upper: 9.15)

T_0=2.112; P-Value: 0.048; $T_{critical}$ value for df=19 at 0.05 level of significance for two-tailed test=2.90, so $T_0 > T_{critical}$; therefore, H_0 is rejected and H_1 is verified.

PAIRED T FOR 1^{ST} GWR-3_0-2^{ND} GWR-3_0

	N	Mean	St Dev	SE Mean
1^{st} Gwr- 3_0	20	86.70	9.60	2.14
2^{nd} Gwr-3_0	20	81.95	9.21	2.06
1^{st} Gwr-3_0-2^{nd} Gwr-3_0 (Difference)	20	4.75	9.94	2.22

95% CI for mean difference: (Lower: 9.73; Upper: 9.40)

T_0=2.137; P-Value: 0.46; $T_{critical}$ value for df=19 at 0.05 level of significance for two-tailed test=2.90, so $T_0 > T_{critical}$; therefore, H_0 is rejected and H_1 is verified.

PAIRED T FOR 1^{ST} GWR-4_0-2^{ND} GWR-4_0

	N	Mean	St Dev	SE Mean
1^{st} Gwr- 4_0	20	87.55	9.92	2.22
2^{nd} Gwr-4_0	20	82.35	9.46	2.11
1^{st} Gwr-4_0-2^{nd} Gwr-4_0 (Difference)	20	5.20	9.92	2.22

95% CI for mean difference: (Lower: 0.55; Upper: 9.48)

T_0=2.342; P-Value: 0.30; $T_{critical}$ value for df=19 at 0.05 level of significance for two-tailed test=2.90, so $T_0 > T_{critical}$; therefore, H_0 is rejected and H_1 is verified.

PAIRED T FOR 1^{ST} GWR-5_0-2^{ND} GWR-5_0

	N	Mean	St Dev	SE Mean
1^{st} Gwr- 5_0	20	87.60	10.11	2.26
2^{nd} Gwr-5_0	20	82.70	9.29	2.07
1^{st} Gwr-5_0-2^{nd} Gwr-5_0 (Difference)	20	4.90	10.23	2.28

95% CI for mean difference: (Lower: 0.11; Upper: 9.68)

T_0=2.141; P-Value: 0.45; $T_{critical}$ value for df =19 at 0.05 level of significance for two-tailed test=2.09, so $T_0 > T_{critical}$; therefore, H_0 is rejected and H_1 is verified.

J. Table of Collected Data from the First Group's Writings by Second Interrater

In order to be certain from the data that have been already recorded, the researcher is suggested to provide a copy of all the first group's writing compositions to another interrater for second set of data score by the interrater, Table 3. Legend the data was recorded as the result of this research. The selected students of 20, the variables chosen for this section were 1^{st} Gwr-1_1, 1^{st} Gwr-2_1, 1^{st} Gwr-3_1, 1^{st} Gwr-4_1,1^{st} Gwr-5_1 corresponding to first group's writing 1 thought writing 4 scored by the second interrater and first group final writing also scored by the second interrater. The sample size of the first group is equal to N=20. Likewise, the variables chosen for this part are: 1^{st} Gwr-1_1, 1^{st} Gwr-2_1, 1^{st} Gwr-3_1, 1^{st} Gwr-4_1, and 1^{st} Gwr-5_1. These writing compositions are scored by the second interrater.

TABLE IV
DATA COLLECTED FOR THE FIRST GROUP'S WRITING COMPOSITIONS BY THE SECOND INTERRATER

Students	*1^{st} Gwr-1_1*	*1^{st} Gwr-2_1*	*1^{st} Gwr-3_1*	*1^{st} Gwr-4_1*	*1^{st} Gwr-5_1*
1	**72**	**73**	**75**	**73**	**74**
2	**58**	**64**	**65**	**65**	**64**
3	**83**	**85**	**85**	**85**	**86**
4	**94**	**95**	**96**	**97**	**96**
5	**90**	**91**	**91**	**92**	**92**
6	**85**	**85**	**88**	**86**	**87**
7	**84**	**84**	**94**	**94**	**94**
8	**73**	**74**	**74**	**75**	**75**
9	**80**	**82**	**83**	**84**	**84**
10	**86**	**86**	**87**	**87**	**87**
11	**92**	**94**	**95**	**95**	**95**
12	**74**	**75**	**77**	**78**	**78**
13	**75**	**76**	**77**	**76**	**76**
14	**100**	**100**	**100**	**100**	**100**
15	**90**	**92**	**93**	**93**	**93**
16	**96**	**96**	**96**	**97**	**98**
17	**96**	**98**	**97**	**98**	**98**
18	**96**	**92**	**98**	**99**	**99**
19	**90**	**84**	**96**	**94**	**96**
20	**84**	**73**	**88**	**86**	**87**

K. Table of Collected Data for the Second Group's Writing by Second Interrater

To be aware of the certainty of the data that we have already collected, the researcher prepares a copy of all the second group's compositions to another interrater for the second set of data score the interrater. The selected students are 20, the variables chosen for this section are 2^{nd} Gwr-1_1, 2^{nd} Gwr-2_1, 2^{nd} Gwr-3_1, 2^{nd} Gwr-4_1, 2^{nd} Gwr-5_1 that are corrected by the second interrater.

TABLE VI
DATA COLLECTED FOR THE SECOND GROUP'S WRITING COMPOSITIONS BY THE SECOND INTERRATER

Students	*2^{nd} Gwr-1_1*	*2^{nd} Gwr-2_1*	*2^{nd} Gwr-3_1*	*2^{nd} Gwr-4_1*	*2^{nd} Gwr-5_1*
1	**71**	**72**	**74**	**75**	**73**
2	**63**	**65**	**68**	**68**	**65**
3	**78**	**79**	**82**	**82**	**80**
4	**90**	**90**	**94**	**94**	**93**
5	**93**	**95**	**96**	**97**	**94**
6	**88**	**85**	**91**	**89**	**89**
7	**96**	**95**	**97**	**97**	**96**
8	**75**	**79**	**81**	**82**	**79**
9	**85**	**86**	**90**	**92**	**90**
10	**85**	**85**	**88**	**90**	**88**
11	**89**	**89**	**90**	**90**	**89**
12	**74**	**71**	**76**	**71**	**74**
13	**64**	**65**	**67**	**69**	**66**
14	**62**	**64**	**67**	**64**	**65**
15	**85**	**85**	**86**	**86**	**87**
16	**78**	**78**	**80**	**80**	**79**
17	**88**	**88**	**91**	**90**	**88**
18	**76**	**76**	**77**	**74**	**75**
19	**80**	**79**	**82**	**82**	**81**
20	**86**	**88**	**90**	**90**	**87**

L. Two-sample Paired T-test on the Score Obtained between Original Score and Second Interrater Score

In this section, the researcher is supposed to calculate t-score value between first set scored by the original interrater (teacher) and the second set of data scored by the second interrater (another qualified experience teacher) for the first and the second group's subjects writings compositions to run two sample paired t-test, the researcher has used S.P.S.S. program.

PAIRED T-TEST AND CI: 1^{ST} GWR1_0-1^{ST} GWR-1_1

	N	Mean	St Dev	SE Mean
1^{st} Gwr-1_0	20	85.95	09.78	2.18
1^{st} Gwr-1_1	20	85.40	10.67	2.38
1^{st} Gwr-1_0-1^{st} Gwr-1_1 (Difference)	20	0.55	2.99	0.67

95% CI for mean difference: (Lower: | -0.85 |; Upper: 1.95)

T_0 = 0.820; P-Value: 0.42; $T_{critical}$ value for df=19 at 0.05 level of significance for two-tailed test = 2.093, so $T_0 > T_{critical}$; therefore, H_0 is rejected and H_1 is verified.

PAIRED T-TEST AND CI: 1^{ST} GWR 2_0-1^{ST} GWR-2_1

	N	Mean	St Dev	SE Mean
1^{st} Gwr-2_0	20	86.30	09.85	2.20
1^{st} Gwr-2_1	20	86.10	9.80	2.19
1^{st} Gwr-2_0-1^{st} Gwr-2_1 (Difference)	20	0.20	2.70	0.60

95% CI for mean difference: (Lower: | -1.06 |; Upper: 1.46)

T_0 = 0.330; P-Value: 0.74; $T_{critical}$ value for df=19 at 0.05 level of significance for two-tailed test = 2.093, so $T_0 > T_{critical}$; therefore, H_0 is rejected and H_1 is verified.

PAIRED T-TEST AND CI: 1^{ST} GWR 3_0-1^{ST} GWR-3_1

	N	Mean	St Dev	SE Mean
1^{st} Gwr-3_0	20	86.70	9.60	2.14
1^{st} Gwr-3_1	20	87.75	9.75	2.17
1^{st} Gwr-3_0-1^{st} Gwr-3_1 (Difference)	20	- 1.50	1.84	0.41

95% CI for mean difference: (Lower: |-1.91|; Upper: |-0.18|)

T_0 = 2.540; P – Value: 0.020; $T_{critical}$ value for df = 19 at 0.05 level of significance for two-tailed test = 2.093 , so $T_0 > T_{critical}$; therefore , H_0 is rejected and H_1 is verified.

PAIRED T-TEST AND CI: 1^{ST} GWR 4_0-1^{ST} GWR-4_1

	N	Mean	St Dev	SE Mean
1^{st} Gwr-4_0	20	87.55	9.92	2.22
1^{st} Gwr-4_1	20	87.70	9.96	2.22
1^{st} Gwr-4_0-1^{st} Gwr-4_1 (Difference)	20	- 0.15	1.75	0.39

95% CI for mean difference: (Lower: |-0.97|; Upper: 0.67)

T_0 = 0.382; P-Value: 0.707; $T_{critical}$ value for df=19 at 0.05 level of significance for two-tailed test = 2.093, so $T_0 > T_{critical}$; therefore, H_0 is not rejected.

PAIRED T-TEST AND CI: 1^{ST} GWR 5_0-1^{ST} GWR-5_1

	N	Mean	St Dev	SE Mean
1^{st} Gwr-5_0	20	87.60	10.11	2.26
1^{st} Gwr-5_1	20	87.95	10.07	2.25
1^{st} Gwr-5_0-1^{st} Gwr-5_1 (Difference)	20	- 0.35	1.13	0.25

95% CI for mean difference: (Lower: |-0.88|; Upper: 0.18)

T_0 = 0.377; P-Value: 0.18; $T_{critical}$ value for df=19 at 0.05 level of significance for two-tailed test = 2.093, so $T_0 > T_{critical}$; therefore, H_0 is not rejected.

PAIRED T-TEST AND CI: 2^{ND} GWR 1_0-2^{ND} GWR-1_1

	N	Mean	St Dev	SE Mean
2^{nd} Gwr-1_0	20	81.20	9.63	2.15
2^{nd} Gwr-1_1	20	80.30	9.94	2.22
2^{nd} Gwr-1_0-1_1-2^{nd} Gwr-1_1 (Difference)	20	- 0.90	1.25	0.28

95% CI for difference: (Lower: -0.31; Upper: 1.48)

T_0 = 3.214; P-Value: 0.05; $T_{critical}$ value for df=19 at 0.05 level of significance for two-tailed test = 2.093, so $T_0 > T_{critical}$; therefore, H_0 is rejected and H_1 is verified.

PAIRED T-TEST AND CI: 2^{ND} GWR 2_0-2^{ND} GWR-2_1

	N	Mean	St Dev	SE Mean
2^{nd} Gwr-2_0	20	81.70	9.18	2.05
2^{nd} Gwr-2_1	20	80.85	9.96	2.15
2^{nd} Gwr-2_0-2_1-2^{nd} Gwr-2_1 (Difference)	20	- 0.85	1.72	0.38

95% CI for mean difference: (Lower: |-4.25|; Upper: 1.65)

T_0 = 2.203; P-Value: 0.40; $T_{critical}$ value for df=19 at 0.05 level of significance for two-tailed test = 2.093, so $T_0 > T_{critical}$; therefore, H_0 is rejected and H_1 is verified.

PAIRED T-TEST AND CI: 2^{ND} GWR 3_0-2^{ND} GWR-3_1

	N	Mean	St Dev	SE Mean
2^{nd} Gwr-3_0	20	81.90	9.30	2.07
2^{nd} Gwr-3_1	20	81.35	9.48	2.12
2^{nd} Gwr-3_0-3_1-2^{nd} Gwr-3_1 (Difference)	20	- 1.45	2.92	0.65

95% CI for mean difference: (Lower: |-2.82|; Upper: |-7.94|)

T_0 = 2.214; P-Value: 0.039; $T_{critical}$ value for df=19 at 0.05 level of significance for two-tailed test = 2.093, so $T_0 > T_{critical}$; therefore, H_0 is rejected.

PAIRED T-TEST AND CI: 2^{ND} GWR 4_0-2^{ND} GWR-4_1

	N	Mean	St Dev	SE Mean
2^{nd} Gwr-4_0	20	82.25	9.65	2.15
2^{nd} Gwr-4_1	20	83.35	9.70	2.17
2^{nd} Gwr-4_0-4_1-2^{nd} Gwr-4_1 (Difference)	20	- 1.10	2.04	0.45

95% CI for mean difference: (Lower: |-2.05|; Upper: |-0.14|)

T_0 = 2.40; P-Value: 0.027; $T_{critical}$ value for df=19 at 0.05 level of significance for two-tailed test = 2.093, so $T_0 > T_{critical}$; therefore, H_0 is rejected.

PAIRED T-TEST AND CI: 2^{ND} GWR 5_0-2^{ND} GWR-5_1

	N	Mean	St Dev	SE Mean
2^{nd} Gwr-5_0	20	82.70	9.29	2.07
2^{nd} Gwr-5_1	20	81.90	9.72	2.17
2^{nd} Gwr-5_0-5_1-2^{nd} Gwr-5_1 (Difference)	20	0.80	1.60	0.35

95% CI for mean difference: (Lower: |-4.6|; Upper: |-1.55|)

T_0 = 2.223; P-Value: 0.039; $T_{critical}$ value for df=19 at 0.05 level of significance for two-tailed test = 2.093, so $T_0 > T_{critical}$; therefore, H_0 is rejected and H_1 is verified.

After running two-sample paired t-test, for Paired T for 1^{st} Gwr 1_0-1^{st} Gwr 1_1, the t-value calculated is equal to 0.820 regardless of the sign and the calculated degree of freedom (DF) is equal to 19. Therefore, If we turn to t-distribution table to look up the critical value, we will find out than based on the df=19 going across to intersect with level of significance for two-tailed test of 0.05 column is equal to 2.093. Unfortunately, our t-value is not enough above t-critical; thus, we cannot reject the null hypothesis for scores. After running two-sample paired t-test, for Paired T for 1^{st} Gwr 2_0-1^{st} Gwr 2_1, the t-value calculated is equal to 0.330 regardless of the sign and the calculated degree of freedom (DF) is equal to 19. Therefore, if we turn to t-distribution table to look up the critical value, we will find out that based on the df=19 going across to intersect with level significance for two-tailed test of 0.05 column is equal to 2.093. Unfortunately, our t-value is not enough above t-critical; thus, we cannot reject the null hypothesis for scores. After running two-sample paired t-test, for Paired T for 1^{st} Gwr 3_0-1^{st} Gwr 3_1, the t-value calculated is equal to 2.540 regardless of the sign and the calculated degree of freedom (DF) is equal to 19. Therefore, If we turn to t-distribution table to look up the critical value, we will find out than based on the df=19 going across to intersect with level of significance for two-tailed test of 0.05 column is equal to 2.093. Unfortunately, our t-value is not enough above t-critical; thus, we cannot reject the null hypothesis for scores. After running two-sample paired t-test, for Paired T for 1^{st} Gwr 4_0-1^{st} Gwr 4_1, the t-value calculated is equal to 0.382 regardless of the sign and the calculated degree of freedom (DF) is equal to 19. Therefore, If we turn to t-distribution table to look up the critical value, we will find out than based on the df=19 going across to intersect with level of significance for two-tailed test of 0.05 column is equal to 2.093. Unfortunately, our t-value is not enough above t-critical; thus, we cannot reject the null hypothesis for scores. After running two-sample paired t-test, for Paired T for 1^{st} Gwr 5_0-1^{st} Gwr 5_1, the t-value calculated is equal to 0.377 regardless of the sign and the calculated degree of freedom (DF) is equal to 19. Therefore, If we turn to t-distribution table to look up the critical value, we will find out than based on the df=19 going across to intersect with level of significance for two-tailed test of 0.05 column is equal to 2.093. Unfortunately, our t-value is not enough above t-critical; thus, we cannot reject the null hypothesis for scores. After running two-sample paired t-test, for Paired T for 2^{nd} Gwr 1_0-2^{nd} Gwr 1_1, the t-value calculated is equal to 3.214 regardless of the sign and the calculated degree of freedom (DF) is equal to 19. Therefore, If we turn to t-distribution table to look up the critical value, we will find out than based on the df=19 going across to intersect with level of significance for two-tailed test of 0.05 column is equal to 2.093. Fortunately, our t-value is enough above t-critical; thus, we can reject the null hypothesis for scores. After running two- sample paired t-test, for Paired T for 2^{nd} Gwr 2_0-2^{nd} Gwr 2_1, the t-value calculated is equal to 2.203 regardless of the sign and the calculated degree of freedom (DF) is equal to 19. Therefore, If we turn to t-distribution table to look up the critical value, we will find out than based on the df=19 going across to intersect with level of significance for two-tailed test of 0.05 column is equal to 2.093. Fortunately, our t-value is enough above t-critical; thus, we cannot reject the null hypothesis for scores. After running two-sample paired t-test, for Paired T for 2^{nd} Gwr 3_0-2^{nd} Gwr 3_1, the t-value calculated is equal to 2.214 regardless of the sign and the calculated degree of freedom (DF) is equal to 19. Therefore, If we turn to t-distribution table to look up the critical value, we will find out than based on the df=19 going across to intersect with level of significance for two-tailed test of 0.05 column is equal to 2.093. Hopefully, our t-value is above t-critical; thus, we can reject the null hypothesis for scores. After running two-sample paired t-test, for Paired T for 2^{nd} Gwr 4_0-2^{nd} Gwr 4_1, the t-value calculated is equal to 2.400 regardless of the sign and the calculated degree of freedom (DF) is equal to 19. Therefore, If we turn to t-distribution table to look up the critical value, we will find out than based on the df=19 going across to intersect with level of significance for two-tailed test of 0.05 column is equal to 2.093. Fortunately, our t-value is enough above t-critical; thus, we can reject the null hypothesis for scores. After running two-sample paired t-test, for Paired T for 2^{nd} Gwr 5_0-2^{nd} Gwr 5_1, the t-value calculated is equal to 2.223 regardless of the sign and the calculated degree of freedom (DF) is equal to 19. Therefore, If we turn to t-distribution table to look up the critical value, we will find out than based on the df=19 going across to intersect with level of significance for two-tailed test of 0.05 column is equal to 2.093. Fortunately, our t-value is enough above t-critical; thus, we can reject the null hypothesis for scores.

IV. Result

Having finished all calculations, we are supposed to start analyzing and interpreting the results of each calculation deliberately. It is to be noted than each group took five exams based on what was trained as a thought provoking technique

(Brainstorming /Outlining). And the last exam in each group was considered as the final exam. The reason for holding five exams based on one thought provoking technique in each group was that the trend of students' development in writing skill would be witnessed clearly; in addition, the statistics would be more exact. That's why each student was taken five exams. According to the results of the exams, the observed t in each comparison between the first and the second group is higher than the t critical value, that is equal to 2.093, so they reject the null hypothesis and admit H_1.The resulted observed t in each exam was considered as 1^{st} Gwr 1_o versus 2^{nd} Gwr 1_o by t-value=2.202 > 2.093, 1^{st} Gwr 2_o versus 2^{nd} Gwr 2_o by t-value = 2.112 > 2.093, 1^{st} Gwr 3_o versus 2^{nd} Gwr 3_o by t-value=2.137 > 2.093, 1^{st} Gwr 5_o versus 2^{nd} Gwr 5_o by t-value=2.141 > 2.093. Finally, regarding the computed two-sample paired t -test on the recorded data and based on the obtained scores by the second interrater for the first and the second group subjects, we realized that six two-sample paired t-test verified the first hypothesis which stated that those who utilize Brainstorming as a thought provoking technique, are more successful than those who Outline the papers before writing. 2^{nd} Gwr 1_o versus 2^{nd} Gwr 1_1 by t-value=3.214 > 2.093, 2^{nd} Gwr 2_o versus 2^{nd} Gwr 2_1 by t-value=2.203 > 2.093, 1^{st} Gwr 3_o versus 1^{st} Gwr 3_1 by t-value=2.540 > 2.093, 2^{nd} Gwr 3_o versus 2^{nd} Gwr 3_1 by t-value=2.214 > 2.093, 2^{nd} Gwr 4_o versus 2^{nd} Gwr 4_1 by t-value=2.400 > 2.093, and 2^{nd} Gwr 5_o versus 2^{nd} Gwr 5_1 by t-value=2.223 > 2.093 that is an acceptable result to obtain.

V. Discussion

Whatever was discussed up to now was the consideration of students' development in writing skill by assigning them to use one of the most advantageous thought provoking techniques in pre-writing phase. As a matter of fact, we came to this point that students abilities in writing skill would be promoted by involving them a fruitful pre-writing phase and such a kind of situation could be made if some thought provoking techniques would be applied. Among these thought provoking techniques, Brainstorming and Outlining seemed more influential than other techniques. According to Brainstorming as one of the most advantageous thought provoking technique in prewriting phase, students in one class were taught to write individually in a way which was applied to focus on their schemata and background knowledge. It should be noted that during writing through brainstorming technique, the teacher was removing their anxieties about grammatical points and he wanted them not to stop writing. These students took five exams regarding Brainstorming as one of the thought provoking techniques in prewriting phase. On the other hand, students of another class were taught to write paragraphs inductively through Outlining as another thought provoking technique. The main concern in such a kind of writing was teaching them to write systematically regarding all grammatical points. This type of exam was repeated four times in that class. Later, the papers were corrected once by the teacher and once by someone else who was proficient enough in analyzing date, through analytical scale offered by James Dean Brown, then the resulted data were analyzed and calculated separately and through a paired t-test for each held exam between the two groups, it was noticed that the observed t in each exam was higher than the critical t (2.093), which was gained by regarding the degree of freedom and checking it in the related table, [14]. Fortunately, our null hypothesis was rejected and it was proved that those who applied Brainstorming were more successful than those who utilized Outlining as a thought provoking technique in pre-writing phase. In order to have a remarkable writing class, the teacher should spend more time on prewriting phase. He is suggested to allow the students to write freely without any limitations. Likewise, he should activate students' schemata and background knowledge about certain topic and awaken their latent vocabulary. To actualize such a situation, the teacher must let them think about the topic during the sessions and encourage them to raise their opinions as much as they can. Then these words will be applied in the students' compositions. All in all, prewriting seems to be a crucial phase for teaching the students how to write well when they arrive in language classes [10].

A. Pedagogical Implication for L_2 Writing Classes

According to pedagogical implication of this research, it has been shown that the researcher should generate a quantity of ideas, focus student's attention on a particular topic, encourage learners to take risks in sharing their ideas and opinions, introduce the practice of idea collection prior to beginning tasks such as writing or solving problems and provide an opportunity for the students to share ideas and expand their existing knowledge by building on each other's contributions so that they can be prepared completely for the writing phase. In fact, the researcher applies Brainstorming technique in such a way that the students can strengthen their prewriting abilities. Of course, students should be interested in the topic; they should have some reasons for writing on that topic; they should have some ideas and back ground knowledge need to write about the topic and they should be aware of the grading system used by the teacher to evaluate their compositions [10]. All in all, prewriting is considered as the most crucial phase in the writing process because it provides assistance with regard to helpful processes or information for preparing an acceptable paper. During the prewriting phase, students must be given direction, a topic, or something to discuss. Students must be given a chance to write freely without limitation and they will be given some instructions to write systematically. As a matter of fact, the prewriting phase includes schema activation and providing necessary background which is actualized through Brainstorming as the most brilliant thought provoking technique, in spite of the fact that there are some other helpful techniques in prewriting phase.

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