



## Effectiveness of Inductive and Deductive Methods in Enhancing the Paragraph Writing of Junior High School Students

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### ABSTRACT

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Proficiency in paragraph writing has to be developed by individuals who were obliged to participate in the academic endeavor for them to be globally competitive and likewise be a productive citizen. With this, the mentors in the academic society conscientiously played their role in considering various methods in teaching writing to make the acquisition affluent; yet followed the appropriate standards in obtaining the necessary skills in writing. For this reason, the present study was crafted, exploring the effectiveness of the inductive and deductive methods in enhancing the writing proficiency of Grade 9 students in the hinterland in the Division of Misamis Oriental. Using the quasi-experimental research design, the study assigned students to the experimental group (inductive method) and control group (deductive method). The two groups of students were given essay test before and after the interventions, which were given for almost eight weeks. The students' level of writing proficiency was determined using an analytic rubric that covered the following writing criteria: content, organization, development and use of the language. The essays were inter-rated by the English teachers. Data were analyzed and interpreted using both descriptive and inferential statistics.

Findings revealed that the students generally had unsatisfactory to less satisfactory writing proficiency indicating the need to improve their writing proficiency. However, after the interventions, only the deductive method was found to be effective in enhancing their writing proficiency. The inductive method did not work effectively for the hinterland students.

Therefore, it was concluded that deductive method was the appropriate method to be applied in teaching paragraph writing to the students who still need guide with the acquisition of the skill. It is recommended that the deductive method be used for students who lack foundational knowledge and skills in writing for such students are not yet ready for the inductive method that requires high thinking skills.

### KEYWORDS:

Inductive teaching approach, deductive teaching approach, teaching writing.

### INTRODUCTION

Paragraph writing is an important skill that students need to develop for it is an essential component of literacy. Students need to be proficient writers for them to participate in the literate society. Paragraph writing can likewise lead the students towards their personal development vis-a-vis effective communication. Equipped with writing skill, students can effectively interact in any formal and informal

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written communications necessary in their academic as well as in their professional life. Kellogg and Raulerson (2007) contended that writing proficiency is one of the major key measures of academic success. Hence, students must acquire the skills in writing for them to successfully reach their academic goals. Writing not only provides a gateway for knowledge acquisition but also supports and extends the "comprehension and learning of content material presented in class or text" (Graham, 2012, p5). Since effective writing is essential for students to succeed in school, teachers must help them to develop their writing proficiency through the use of effective teaching approaches and strategies.

This study assumed that the inductive approach was effective in enhancing students' writing proficiency. This

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assumption was anchored on the theory of constructivism by Bruner (1990) as cited by Huitt (2003), the chief theorists among the cognitive constructionists, which stated that students must dynamically shape knowledge and abilities rather than the stimuli brought by the external environment. This means students must actively take part in the activities that can enhance their knowledge and skills and not only lean on the external stimuli from the environment. Through this, students can modify and enhance their acquired knowledge and skills to come up with the new constructs.

In addition, the inductive approach was inspired by the theory of constructivism. This method involved teaching that presents specific concept before the general rule. In the writing class, “the teacher gives the students the data and lets them draw their own conclusions from the data. The students notice how the concept was used and then figure out and verbalize the rule” (Bruner, 1992 as cited by Khan, 2014). With this, students were presented with specific examples of the grammar rules, and they were allowed to decipher the general rule that the examples represent. Teachers’ roles were to guide, encourage, clarify, mediate, and sometimes even lecture. This means that the inductive approach does not really neglect the idea of lecture, but lecture should only serve as a guide for the learners on how they will do the practice. In case learners had some clarification on the activities, the teacher should immediately emphasize the expected performance that is required of the learners.

In the researcher’s school, students were found to have low paragraph writing proficiency in the English language. Such level of writing proficiency was made evident in their individual daily performance record. It was also found that most of these students were from the Grade 9 level. They had a hard time expressing their ideas in writing, which can be attributed to their lack of mastery of the basics of English. In the recent school year, the same set of students were found to be also poor in writing especially in the context of grammar. This fact was disturbing and had become a challenge to the English teachers, more so that English was the medium used for knowledge acquisition, self-expression, and instruction.

Other than the fact that the students had issues in writing, the teachers were observed to be using unrelentingly the same methods or strategies in teaching writing, which were lecture, and individual writing. Hence, this study explored the effectiveness of two approaches in teaching writing, the inductive and the deductive method.

### METHODOLOGY

This study utilized the two samples, pretest-post-test quasi-experimental research design as it sought to determine effectiveness of the inductive approach in enhancing the writing proficiency of Junior High School students. The study involved two intact groups of students: the treatment group exposed to the inductive approach and the control group

exposed to the deductive approach. Both groups were given a test before and after the intervention to determine their writing proficiency.

This study was conducted in one junior high school of the Division of Misamis Oriental. The school had a population of 289 from pre-school to grade 10. The respondents of this study were the Grade 9 students of the two purposively selected intact classes. These classes were handled by the researcher; thus, the experiment was carried out by the researcher herself. Originally, there were 35 students in each group but there were only 20 students for each group which were counted as respondents. The other students were either dropped out or missed several class sessions, hence their exclusion as respondents.

Before the implementation of each intervention (inductive and deductive), the researcher gave the students a pretest, which was an essay writing on a given topic. After the pretest, the researcher implemented the intervention for eight weeks. After the experiment, the researcher gave the students a post-test on the same essay writing topic. The essays written before and after the intervention were rated by at least three English teachers using a 4-point rubric. Two teachers were Teacher III and the other one was a Teacher I. All of them majored English. They were proficient in both written and oral form of the languages. They were proficient for they did not only earn masters’ degree but also earned commendable performances in the field of English language. Two of the raters were even proficient in research writing, and the other one was a renowned coach in English competitions.

Moreover, during intervention implementation, the first group was exposed to the *inductive approach* in teaching and used the following activities: (a) *Conversation Practice*, (b) *Dictation*, (c) *Self-correcting*, and (d) *Paragraph Writing*.

*Conversation practice* was done by asking the students some series of questions. Right after, students were expected to provide the right answers following the grammar structure embedded in the lesson. Afterwards, the students had formulated questions adhering to the grammar structure of the lesson and these were then the questions that they had used during their dialogue simulations. Moreover, in the *dictation* the students were expected to write a passage in verbatim based on how the teacher dictated the paragraph. The passage was read five times ensuring that the students were able to write each word in the passage. The students were asked to listen, while teacher had read the passage three times in a normal pace. For the fourth time, students were asked to jot down every word that the teacher said while she/he read the paragraph slower observing proper pauses. Lastly, the students were allowed to check their written work as the teacher read the passage in the normal pace.

In addition to this, *Self-correcting* activity was made as the students were allowed to check their own work or the work of their classmates. They were given a clue on the

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possible writing mistakes that they had committed and through the editing symbols as a clue, students were asked to proofread their written work before they were asked to revise it. Lastly, the *paragraph writing* was adapted from Larsen-Freeman's (2000) paragraph writing activity; where students were asked to write about a given topic. They were allowed to use their own writing styles. They were also allowed to base their written work through a sample reading text or through their memory.

On the other hand, the other group was exposed to the *deductive approach* in teaching writing following the Grammar-Translation Approach activities: (a) *Translation of the Literary Passage*, (b) *Reading Comprehension Questions*, and (c) *Deductive Application of Rule*. First, in the *translation of the literary passage* students were asked to translate a reading passage using their mother tongue. Second, in *Reading Comprehension Questions*, students were asked to read a passage and answer a number of questions assessing their reading comprehension ability. Finally, in the *deductive application of rule* activity, students were explicitly presented with the grammar structure in such a way that the teacher discussed the rules and modelled on how such rule had to be applied in writing. Consequently, learners were expected to apply the rule to the grammar exercises given by the teacher.

Two research instruments were used in the study. The first one was the essay writing test that contained the

topic to be developed. The topic which was given to the students was "*Should boys learn how to cook?*" This was in connection with the gender roles issue. The second instrument was a rubric for the assessment of the quality of the essays. The 4-point rubric covered four writing criteria as follows: Content, Organization, Development, and Use of the Language.

Descriptive statistics (frequency, percentage, and mean) were used to describe the students' writing proficiency per writing criterion. T-test for independent samples was used to determine any significant difference in the students' essay ratings before and after the intervention and to determine any significant difference in the students' essay rating increments to conclude the effectiveness of the interventions.

### RESULTS AND DISCUSSION

This section presents and discusses the findings for each problem of the study. The presentation and discussion flow follows the order of the objectives of the study.

#### Participants' Performance in the Essay Test

The results of the pretest for the Inductive and Deductive method in the writing proficiency levels per Writing Criterion were shown in the tables below.

Table 1 shows the mean scores in the essay's pretest and post-test of students exposed to the inductive method.

**Table 1. Mean Scores in the Essay's Pretest and Post-test of Students Exposed to the Inductive Method**

Writing Criteria	Pretest		Post-test	
	Mean	Description	Mean	Description
Content	1.75	Less Satisfactory	1.45	Unsatisfactory
Organization	1.70	Unsatisfactory	1.50	Unsatisfactory
Development	1.50	Unsatisfactory	1.35	Unsatisfactory
Use of the Language	1.20	Unsatisfactory	1.20	Unsatisfactory
<b>Total Mean</b>	<b>1.53</b>	<b>Unsatisfactory</b>	<b>1.37</b>	<b>Unsatisfactory</b>

As revealed, the students obtained an overall rating of 1.53 (Unsatisfactory) in the pretest and 1.37 (Unsatisfactory) in the post-test, indicating that the students had *unsatisfactory* writing proficiency level. The students had poor writing proficiency.

As to *content*, most of the students did not fully understand the question posed for the essay writing. Consequently, the content of their essays did not answer the question. Hence, in both the pretest and post-test, they got unsatisfactory ratings (1.75 and 1.45, respectively).

This means that the students do not have a clue on the right answers that they had jotted down. As students commented:

*"I don't like the English subject because I can't understand the English language, the*

*reason why I find it difficult to write a paragraph."*

*"the explanation was so fast. I was not able to listen on how to do it the reason why I can't write a paragraph"*

Hence, students had to be guided on the answers that need to be included in the essay. Further explanation on what was asked in the essay question should be done and they need illustrations on the ways of answering. Meaning, students had to be modelled on the step by step procedures in answering the essay question. Since this was not done in the inductive method, students were not able to provide the appropriate performance expected of them. This implied that the students

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in the present study need to be further exposed to the techniques in providing direct and correct answers to essay questions.

In terms of organization, the students struggled organizing their thoughts. They failed to use conjunctions or connectors to establish the relationship between and among sentences and even paragraphs. They lacked connectors in their writings that made the flow of their thoughts disorganized, making their essay hard to understand. Their failure to organize their thoughts earned them unsatisfactory ratings in the pretest and post-test (1.70 and 1.50 respectively).

As regards to the development, the students did not demonstrate the ability to expound their points in the essay. That is, their essays lacked substance. Not much idea could be found in their essays.

As to the Use of the Language the students also failed to demonstrate richness of words to convey their thoughts. Their ideas were blurred by the poor use of the words. Their counted vocabulary could also explain why they failed to develop well their ideas.

The table further shows that the students' ratings in all writing criteria (content, organization, development and the use of the language) were also unsatisfactory. In the post-

test, the students also got unsatisfactory ratings in all writing criteria. A closer look at the data reveals that the students' writing proficiency did not at all improve after the intervention. Hence, in the group which was exposed to the inductive method, the students' writing proficiency level remained unsatisfactory in their essay writing with respect to all writing criteria before and after the intervention. Prince and Felder (2006) declared that the inductive method of teaching was worth attempting if the students have the prior background in the learner-centered ways of learning. This was not evident to the student respondents of this study. Students were not used to be left with the specific concepts which lead them to generate the general idea, considering the availability of resources. This can be effective if the learners can access to various materials and resources that they can utilize to help them gather data to come up with the general idea; but with the respondents' geographical setting and limited resources, they do not work that way. This was the reason why inductive method in teaching writing was ineffective to the students in the present study.

Table 2 shows the writing proficiency ratings in the pretest and post-test of students exposed to the deductive method.

**Table 2. Mean Scores in the Essay's Pretest and Post-test of Students Exposed to the Deductive Method**

Writing Criteria	Pretest		Post-test	
	Mean		Mean	
Content	1.85	Less Satisfactory	3.25	Very Satisfactory
Organization	1.80	Less Satisfactory	2.85	Satisfactory
Development	1.75	Less Satisfactory	2.80	Satisfactory
Use of the Language	1.85	Less Satisfactory	2.30	Less Satisfactory
<b>Total Mean</b>	<b>1.81</b>	<b>Less Satisfactory</b>	<b>2.80</b>	<b>Satisfactory</b>

As revealed in the table, the students' overall rating in the pretest was *Less Satisfactory* (1.81). That is, students' writing proficiency was poor. Also, the students obtained less satisfactory ratings with respect to all writing criteria.

However, in the post-test, the students obtained *satisfactory* (2.80) overall rating, indicating an improvement in their writing proficiency after exposure to the deductive method. In terms of the writing criteria, the students also got satisfactory rating along *content*, *organization*, and *development*, except the *use of language* that got a *less satisfactory* rating.

In the total mean of the pretest, the students got *less satisfactory* rating for content. This finding means that the students' essays contained some information errors. That is, these essays lacked facts to support their answer to the question. Also, the students' essay lacked substance; hence, their essay ratings were less satisfactory. However, in the post-test, along with the content, their essays improved from less satisfactory to *very satisfactory*.

There were also some errors in the use of language but they could not impair communication. On the *development* the essay lacked support details to explain their points. Some of their points were repetitious, incoherent, and illogical development of ideas. However, after the intervention, the students' paragraph writing improved from less satisfactory to satisfactory.

Along content, the students' paragraph writing improved from *less satisfactory* to *very satisfactory*. This result means that the intervention had helped them put substance to their writing. They learned how to expound their ideas giving details or examples or citing facts. Their discussions were related to the essay question.

In terms of *organization*, the students also improved their writing from less satisfactory to satisfactory. The same improvement was observed along development and the use of the language. The deductive method helped them organize their ideas by using appropriate connectors and making their ideas clearer and easier to follow.



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In view of the *use of the language*, students still had limited vocabulary and errors in terms of word choice may impair communication. This means that students cannot use the right words to express their ideas. They tend to misuse a word that distracts the communication. This implies that the students still needed to be exposed to intensive reading and vocabulary activities to enhance their vocabulary skills and this process takes time.

These findings imply that students indeed need intensive guidance in terms of their paragraph writing. Considering their local setting and the limited academic exposure, it was evident that deductive method was indeed effective in enhancing their paragraph writing proficiency.

### Test of Difference in the Pretest and Post-test

Table 3 reveals the results of the test of difference in the pretest and post-test ratings of each group of students.

**Table 3. Results of the Test of Difference in the Pretest and Post-test Ratings of the Two Groups of Students (Inductive Method and Deductive Method)**

Writing Criteria	Inductive Method				Deductive Method			
	t	Df	Sig. (2 tailed)	Interpretation	T	df	Sig. (2 tailed)	Interpretation
Content	-1.000	19	.083	Non- Significant	-10.466	19	.000	Significant
Organization	-1.000	19	.453	Non- Significant	-5.627	19	.000	Significant
Development	1.371	19	.186	Non- Significant	-6.850	19	.000	Significant
Use of the Language	1.371	19	.186	Non- Significant	-2.932	19	.009	Non- Significant
Overall	3.115	19	.249	Non- Significant	-12.694	19	.000	Significant

For the group exposed to inductive method, the p-value (.249) was higher than the 0.05 level of significance, leading to the non-rejection of the null hypothesis. Therefore, the students' pretest ratings and post-test ratings did not differ significantly. As shown in the table, the students' essay ratings remained *unsatisfactory* hence no improvement at all. It can therefore be inferred that the use of the inductive method for the type of students in the study was not effective in enhancing their writing proficiency.

On the other hand, for the students exposed to the deductive method, the p-value of .000 is lower than the 0.05 level of significance, leading to the rejection of the null hypothesis. Hence, the students' pretest and post-test ratings differed significantly. As shown in the table, the students' essay ratings increased from *less satisfactory* to *satisfactory* level. It can then be inferred that the use of deductive method for the type of students in the study was effective in enhancing their writing proficiency.

This result can be traced to the type of learners involved in the present study. Since learners reside in the hinterlands and they were not really exposed to reading due to the lack of reading resources, learners' ability to write was also affected. When learners are exposed to either recreational or academic purposes, it can have positive effect on the development of their compositional skills (Grabe, 2001). This means that to enhance the writing proficiency levels of the learners, they have to be exposed to extensive reading. With this, they can acquire various input and ideas that may serve as their prior knowledge that can be utilized

for the higher level of writing skill to positively respond to the assimilation process of the Inductive method. However, the respondents of the present study were not really given the luxury to indulge themselves in reading because of the lack of resources and facilities.

Considering the promising academic output of the Inductive method, still teachers have to thoroughly prepare the learners for the application of the inductive method in the class. As part of the preparation, since the major objective is to develop the writing proficiency level of the learners, extensive reading should be imposed. Learners still need sufficient support and guidance for them to store adequate amount of knowledge to be applied later in the higher level of the writing competency. Prince and Bucknell (2006) encouraged teachers to give adequate scaffolding by fully guiding and supporting the learners during the introductory part of the Inductive method. After which, learners will gradually be withdrawn from the scaffolding allowing them to be exposed to gain more experience and eventually enhance their self-esteem as they journey in discovering the concepts by themselves. Therefore, the respondents of this study were not yet ready to be taught through inductive method.

Based on this result, it can be inferred that Deductive method is effective in enhancing the writing proficiency level of the learners. In view of the limited reading resources and facilities respondents of this study were still considered as beginners. Deductive method which was traditionally used by teachers was also an effective method in teaching beginners

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since it was efficient and clear (Kahn, 2014). Learners were presented with the rules and structures and even showed with the model on the application of the rule. Therefore, with this method the respondents of this present study positively responded to the Deductive method hence it was effective in enhancing their writing proficiency level.

## Test of Difference in the Essay Increment Rating

Table 4 shows the results of the test of difference in the essay increment rating between the experimental and the control group.

**Table 4. Results of the Test of Difference in the Essay Increment Rating between the Two Groups of Students**

Criteria	T	P-Value	Decision	Interpretation
Content	-11.573	.000	Reject Ho	Significant
Organization	-8.850	.000	Reject Ho	Significant
Development	-9.448	.000	Reject Ho	Significant
Use of the Language	-5.596	.000	Reject Ho	Significant
Overall	-14.321	.000	Reject Ho	Significant

Table 4 revealed that the p-values of all the criteria are lesser than the 0.05 level of significance, hence leading to the rejection of the null hypothesis. That is, the two groups differ significantly in their incremental ratings after exposure to the interventions. The incremental ratings refer to the post-tests of both methods the inductive and the deductive methods. Between the two groups, the group exposed to the deductive method got higher overall incremental mean than the group exposed to the inductive method. Therefore, the deductive method was more effective in enhancing students' writing proficiency.

As earlier found, the inductive method did not improve the essay ratings of the students, thus it is considered ineffective.

During the intervention, students had undergone the inductive method activities, namely; *conversation practice*, *dictation*, and *paragraph practice*. During the *conversation practice*, as the teacher was doing the dialogue exercises with them, the students were struggling in grasping the content of the lesson. They were also struggling in speaking the target language. As a result, the grammar lesson which was the real content of the lesson was not recognized by them. Moreover, in the dictation, students were having a hard time scribbling the words that the teacher had uttered while reading. There was even a struggle in their spelling and the proper word choice. Much more in the paragraph writing, they seemed too tired to even finish writing a sentence. With this, students in this study needed reinforcement activity for them to recover. Khan (2014) declared that *copying* activity can be given to students for their spelling and sentence construction. This can lead to longer retention of the accurate spelling of the word and the practice of writing complete sentences.

The inductive method was found to be ineffective because of the type of students the study had. Generally, the students had unsatisfactory writing proficiency, indicating a lack of ability to write well. The inductive method requires high thinking skills needed for self-learning or self-discovery, brainstorming, group discussion, and creative thinking. Foundational knowledge and skills in writing must

have been possessed by the students for them to learn best through the inductive method. Hence, the inductive method did not work effectively for the kind of students of this study. Lacking the foundational knowledge and skills in writing, the students needed much the teacher's assistance and direct instruction, which were highly evident in the deductive method.

On the other hand, the deductive method significantly enhanced the students' essay ratings, thus it was proven effective. Students were comfortable in this method. During the intervention, the deductive method activities were implemented such as, *translation of the literary passage*, *reading comprehension process*, and the *deductive application of the rule*. As the *translation of the literary passage* activity was done, students had fun in translating the passage in their mother tongue. They even tend to elaborate some points in the passage. Hence, they performed the activity well. Next, was the *reading comprehension process* where students somehow understood most of what they read since they can reread the passage after knowing the comprehension question. Consequently, they somehow did a desirable performance on that activity. Finally, in the *deductive application of the rule* students were explicitly presented with the specific details on the application of the grammatical rules. They were even given the opportunity to be guided well as their confusions were immediately addressed during the assessment. Khan (2014) added that in deductive method rules were clearly explained and their application was clearly presented. As to the kind of learners this study has, deductive method was seen to be the effective method in teaching.

As a result, after the intervention, it was found out that the deductive method helped the students in enhancing their paragraph writing proficiency.

## CONCLUSION

The study concludes that the deductive method is an effective method in improving the writing proficiency of the students in the hinterland. The students' paragraph writing

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proficiency was improved using the deductive method for they were explicitly guided with the lessons and the expected learning outcome.

Therefore, in the selection of teaching method to use, teachers must consider the students' knowledge and skills. What may work for a type of students may not work for other type of students. Teacher's assistance and direct instructions are important aids in the enhancement of students writing proficiency. Any instructional materials must be tailored to the needs and interest of the students.

Moreover, since the deductive method is an effective method, though traditional, it should also be advanced especially for the classes whose students are found to have poor writing skills.

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