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ISSN (Online): 2455-7838

SJIF Impact Factor (2016): 4.144

EPRA International Journal of

# Research & Development

(IJRD)

Monthly Peer Reviewed & Indexed  
International Online Journal

Volume:2, Issue:4, April 2017



Published By :  
EPRA Journals

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## THE EFFECT OF INQUIRY APPROACH ON THE ACHIEVEMENT TEST IN ENGLISH LANGUAGE

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### ABSTRACT

*In this study, it focuses on the effect of inquiry approach on the achievement test in the English Language. The study made use of the experimental approach in order to get the relevant results. The performances of the respondents after the experiment were analyzed and interpreted.*

**KEYWORDS:** *Inquiry Approach, Teaching Strategies, Effect of Inquiry Approach, Teaching, Education, Test Validation, Achievement Test, Performance*

### INTRODUCTION

An inquiry approach is concentrated on the use of questions and learning content as a way to teach content skills and problem-solving skills. The approach is described to be students centered, with the teacher as to facilitate the learning in the classroom. There is more emphasis on "how the students come to know the ideas" and less on "what the student know." Learners are more involved in the learning the skills and the knowledge through active participation. The more interested and engaged the students are by a subject or project, the easier it will be for them to learn intensive knowledge. Learning becomes almost effortless when something fascinates students and reflects their interests and goals.

### STATEMENT OF THE PROBLEMS

This study determined the effect of inquiry approach on the achievement test in the English Language. It sought to answer the following specific sub-problems.

1. What is the performance of the students in the pre-achievement test in the English Language?
2. Is there a significant difference between the performances of Group A and Group B students in the pre-achievement test in English Language?

3. What is the performance of the students in the post-achievement test in the English Language?
4. Is there a significant difference between the performances of Group A and Group B students in the post-achievement test in English Language?
5. Is there a significant difference between the performances of students when (a) exposed to inquiry approach; (b) when not exposed to inquiry approach?

### METHODS AND PROCEDURES

The study employed the quasi-experimental methods of research under the pre and post method. This was sometimes referred to as the semi-experimental. These are partly but not fully experimental designs, they control some but not all of the sources of internal validity. They exist for the situation in which complete the experimental control is difficult or impossible (Tuckman, 1972).

In this method, the experimenter cannot design a full or pure experiment, with the usual control group assignment to groups, manipulation of the test, and pre and posttests, but must design partial experiments lacking one or more of these factors. That's why they are called quasi or semi to signify that they lack at least some of the control expected in a full or pure experiment (Bailey, 1994).

Along with this line, the researcher employed the quasi-experimental methods of research because of the following claimed: that there were no randomizations done among the two groups of subjects, two classes or groups of students were involved in the study, in which possible effects of reactive arrangement was minimized, the groups under study were left intact, and the use of pre-test to ascertain initial achievement of the intact groups and adjust for initial differences.

### **RESEARCH INSTRUMENT**

The main instrument used by the researcher in this study was the 50 item multiple choice achievement tests in the English Language constructed and validated by the researcher. A questionnaire was prepared by the researcher to establish the content validity of the achievement test through the adjustment of competent teachers. A checklist likewise was prepared further by the researcher to establish the face validity of the test through the judgment of competent teachers. The subjects of the study were the 110 students. There were 257 students classified into five sections on the basis of enrollment on the first come; first, serve basis. Of the five sections, 2 of these sections were the subjects of the study each consisting of 55 subjects each group.

The researcher tossed a coin in order to determine as to what particular section belonging to Group A and Group B. In this scheme, Group A was the experimental group and was exposed to the inquiry approach, whereas Group B was the control group and the subjects are not exposed to the inquiry approach, but to the usual lecture of the lessons.

### **RESEARCH RESPONDENTS**

In the selection of the research respondents for each control and experimental group, the following criteria were observed: the age, sex, the general average and their scores in the entrance test. Moreover, 10 master teachers, 10 department heads, 10 experts who have wider knowledge in test constructions were the respondents of the study in establishing the content and face validity of the test.

### **STATISTICAL TOOL**

In the conducted study the research procedures were observed and guided the researcher: the researcher used the two sections of classes in the conduct of the experiment. Tossed a coin to determine which section assigned to the experimental group and the control group. The researcher administered the pre-test to both groups. The researcher taught the experimental group using the inquiry approach instruction and also taught the control group without using the inquiry approach, but on the usual methods of the lesson.

The research explained the procedure of inquiry approach to the experimental group. Such procedures were as follows: recognizing and stating the problem, formulating the hypothesis, gathering data, reporting data and findings, testing the hypothesis, formulating the concepts and generalizations. The researcher administered the post-test to both groups after teaching all the identified lessons or topics for the purpose and the analysis of the pre-test and post-test results.

Furthermore, in the construction of the main instrument of the study the following steps were followed: Established the content validity of the pre-test and the post-test as an instrument of the study. The researcher saw to it that every item was pertinent to the topic as stated in the scope and sequence being taught. Every item was referred to the content of the learning competencies or intended learning outcomes. The researcher prepared a table of the specification to ensure a good distribution of content and objectives tested.

Moreover, the researcher requested 10 master teachers teaching English and their school heads to validate the test, through a questionnaire, their pooled judgment was sought to determine the suitability of the test items. To establish the face validity of the test a checklist was prepared by the researcher and requested 10 master teachers teaching the subjects to validate the test through a checklist their pooled judgment was sought to determine the suitability of the test items. The test was tried out to 50 students, three weeks before the actual experiment. After scoring the papers, the test was subjected to item analysis. The computation of the discrimination power and index of difficulty of each item was done following the procedure is given by Adanza (1999).

1. Average the scored test or answer sheets in order from high to low.
2. Separate two sub-group of test papers, an upper group, consisting of approximately 27 percent of the total group, which received the highest scores on the test, and a lower group consisting of an equal number of papers from those which received the lowest scores.
3. Count the number of items each possible response to each item was chosen on the papers of the upper group. Do the same separately for the papers of the lower group.
4. Record these response counts opposite the responses they refer to on a copy of the test. In a tally sheet, tally the number of cases from each group, which gets the item right for each of all the items.
5. Compute the tallies to frequencies and then to proportions.
6. Compute the difficulty index of each item.

7. Compute the discrimination index of each item.

In item analysis, items with difficulty indices within .20 and .80 are good or valid items while below .20 and above .80 are poor items. However, items with an index of discrimination of .40 and above are very good items, .30 to .39 are reasonably good items, .20 to .29 are marginal items and .19 and below are poor items.

The reliability of the instrument was determined was determine by using the inter-consistency method of obtaining reliability coefficient in this method. The formula is a measure of internal consistency or homogeneity of the measuring instrument. The steps in applying the Kuder-Richardson Formula 20 are as follows (Calmorin, 1994).

1. Compute the variance (SD<sup>2</sup>) of the test scores for the whole groups.
2. Find the proportions passing each item (pi) and the proportions failing each item (qi).
3. Multiply pi and qi for each item, and the sum for all the items. This gives the pi qi value or equivalent.
4. Substitute the calculated values in the formula.
5. The result of the item analysis of the try-out test served as the basis for the computation.

The data of interest was the performance of the students subjected to study. They were presented in various tables, analyzed and interpreted in terms of the problems and hypothesis. In order to answer the problem number one and two and the performance of the students in the pre and post-test, the mean score and standard deviation were employed. In order to compare the achievement of the students exposed to inquiry approach and the students that are not exposed to an inquiry approach, the mean score of one group in relation to that of another group was used.

Basically, the t-test is used to determine the main effect of inquiry approach and the achievement score. Likewise, the same statistical treatment was used to determine the significant difference in the performance of the students in the pre and post-test.

The following steps in the computation of the t-test are summarized thus (Calmorin, 2000): find the mean for each group solve the variance of each group, compute the t-test value, compute the degrees of freedom, choose the levels of probability, either .01 or .05 and refer to the t-distribution.

### **FINDINGS OF THE STUDY**

From the data gathered, the following study findings are formulated: from the pre-achievement test conducted, the students shows a mean performance score of 20.26 for Group A and 23.34 for Group B which is far beyond from the accepted passing mean performance of score of 50 percent.

Furthermore, the students mastered 20.26 percent for Group A and 22.34 percent for Group B. of the skills in the given pre-achievement test. There is a significant difference between the performances of the two groups of students in the pre-achievement test in the English Language.

By the application of the inquiry approach in teaching the lessons, the performance of Group A gives a remarkable increase as to the score obtained by the respondents on the achievement. The mean performance score of 68.03 deduced that 68 percent of the skills were mastered by the students.

There is a significant difference between the performances of the two groups of students on the post achievement test. The group of students who were exposed to the inquiry approach significantly performed better than those students who were not exposed to the inquiry approach as exhibited by the obtained mean of 37 percent and the standard deviation of 4.70 with a mean performance score of 68 in the post achievement test.

### **CONCLUSIONS**

Based on the data gathered and the findings of the study the following conclusions are hereby presented:

That the performance of the students in the pre-achievement test is below the mean performance score of 50 percent which means that there is a need for in-depth discussion and involvement of students as far classroom activities are concerned.

That the inquiry approach gave a good effect on the performance of the students as measured by the post achievement test.

The exposure of the respondents to the inquiry approach in the different learning lessons exhibited an outstanding performance on the post achievement.

### **RECOMMENDATIONS**

Based on the data gathered, study findings and conclusions the following recommendations are hereby advanced:

It is encouraged by this study that before the actual application of the inquiry approach to a particular lesson, a conduct of pre-achievement test should then be necessary. In this way, the teacher can easily pinpoint the strength and weaknesses of the students. Furthermore, a diagnostics test is the necessity in any subject so as to measure the skills that the students had come up with.

The use of inquiry approach should be encouraged to apply to other subjects such as Math, Science and Social Studies so as to measure the effectiveness of this approach to another field. Furthermore, the use of other approaches in teaching

the lesson should be tried out by the teacher to suit the level of the student's multiple intelligence.

The exposure of the students to varied teaching strategies and the teacher in the preparation of the lesson for the day should always observe approaches. Teachers should be guided by the concepts and principles of individual performance, learner-centered and process oriented in the selection of effective teaching approaches.

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