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## THE USE OF TEXTBOOK IN BASIC STATISTICS

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**Abstract:** *The research concentrated on the use of textbook/workbook as additional teaching aid for better teaching in Basic Statistics at Cagayan State university particularly at the College of Hospitality and Industry Management at Andrews Campus, Tuguegarao City, Philippines. The study made use of descriptive correlational research. The respondents of this study were the College junior students enrolled in Basic Statistics at Cagayan State University. This study is limited to the mean performance rating of students in Basic Statistics and their perception on the use of textbook in their subject. The study was conducted in the College of Hospitality and Industry Management for second semester for the school year 2015-2016, which involved 7 blocks enrolled in the class of the researcher of the said college, making a total of 318 students.*

*The instrument used in gathering pertinent data and information for this study was formulated on the basis of questionnaire related from classroom situation, which consists of two parts: final grades of students and the perception on the use of textbook in their subject Basic Statistics. This study made use of Frequency counts and percentage to categorized the respondents. For the perception of students on the use of textbook in Basic Statistics, A modified Likert Scale value was assigned to score the five categories and to analyze the perception of students on the use of textbook in their subject Basic Statistics, the item mean was used. The Chi-Square Test was used to find out whether significant relationships exist between the perceptions of respondents in their performance rating in Basic Statistics. The mean performance rating of the respondents in their subject Basic Statistics is 84.11 percent. The average rating of the respondents belongs to satisfactory level, which indicates that students have learned much from their subject Basic Statistics. On the test of relationship between perception on the use of textbook and their performance rating in Basic Statistics shows that it is significant at an alpha of 0.05.*

**Key Words:** *Basic Statistics, Performance Rating, Instructional Aid/Material, Textbook/Workbook, Classroom Situation, Descriptive Correlational Method*



## **INTRODUCTION**

Teaching is essentially a communication process between teacher and students. Modern educational practice recognizes the value of growing number of instructional materials as aids to effective teaching and learning.

Mathematics is an integral part of the school curriculum. It is taught in the college level to deepen the basic skills learned in elementary and high school. Learning of mathematics should be given importance to attain a worldwide excellence along this field. In the field of mathematics it is deemed necessary to make use of audio-visual aid to facilitate teaching and make learning more meaningful.

Cagayan State University is rapidly undergoing innovations and advances to cope with the rapid changes of society particularly the learners. With these scientific changes taking place, it is very essential that this institution must give emphasis in the teaching of mathematics particularly in the College of Hospitality and Industry Management. Knowledge in mathematics is, indeed, important not only in school but also in the daily undertakings of the students. Teachers should be skilful in using the appropriate audio-visual aids and strategies in teaching in order to maintain interest of students to participate in classroom activities most especially the drills and exercises to word problems indicated in the book. If we could be regular in our class, make necessary adjustments, and make our lessons interesting with the aid of the textbook designed for their subject Basic Statistics, maximum learning will be attained.

Since our college is known for its achievement of producing quality instruction of its high caliber faculty staff and academic performance of students. But such recognize deeds and fame of the institution shall be greatly affected hence, contribute to students unsatisfactory performance if students would keep on getting absent from their classes and no textbook/workbook to use in the class. Hence, this would definitely affect their academic performance in mathematics.

The aforementioned factors causing low productivity and poor performance both educators and students would somehow be the source of the school's image and credibility deterioration paving the way of uplifting society's discontentment and distrust with respect of said practices, the researcher deemed it necessary to conduct a research study on the mathematical performance of students in relation with the use of textbook/workbook in



their course Basic Statistics knowing that the said college is in-charge and responsible for producing managers, hoteliers, businessmen, etc. of the community.

Educators in the College of Hospitality and Industry Management are working so hard in the analysis of the total learning situation in order to improve quality education for this present year.

**According to Lardizabal (1977)** Teaching is essentially a communication process between teacher and students. To ensure sound and effective use of audio-visual aids it has become important for teachers to know and understand certain facts about these materials, such as 1) the educational values derived from their uses; 2) the guidelines in the use of these aids; 3) the various kinds and uses of audio-visual aids; and 4) the various sources of audio-visual aids.

The textbook is the most commonly used in teaching aid. It is well-organized textbook is placed in the hands of an effective teacher, it can be most helpful aid to promote learning. A well-organized textbook can be used to advantage which makes it an invaluable educational tool. Among the advantages are:

1. It provides a common core of learning that is essential in intelligent class discussion, problem-solving situation, and small group work.
2. It contains a concentration of course-related materials, such as suggested collateral readings, projects, problems, exercises, and other suggestions for specific points worth considering in carrying out the objectives of the course.
3. It helps students understand how various parts of the course content are interrelated and provides him with an easy means of review. **Callahan, (1966, p.216)**

The following are some suggestions for achieving conduciveness to student learning.

1. Correlate the textbook with other learning materials. Utilize supplemental readings, other classroom experiences, and extra school activities
2. Teach the pupils to evaluate and discriminate as they read. Develop an attitude of critical thinking concerning the textbook. Spend class time on class discussion, problem solving, small group work on broad concepts and attitudes contained in the textbook rather than paraphrasing the textbook.
3. Teach the students the best way to study a textbook, i.e. use of table of contents, index, glossaries, reference lists, and illustrations.



According to **Julian (1998)** behavior consists of the nature of the individual and the nature of situation in which the individual find himself. Individual behaves by responding to the stimulation from the environment. In which care, the make-up of individual will contribute to the behavior of an individual.

**Dilem (1980)** in her study conducted in Mountain Province found out that there were forty-two behavior problems of school children. Foremost of these are:

1. restlessness
2. giggling
3. eating inside the classroom
4. scattering of papers
5. pushing while in line

She concluded that the behavior problems of pupils were the results of unfavorable treatment that they received at home and in the school, economic instability of the family and social relations with peers.

The effectiveness of teaching-learning process can be increased greatly through the proper use of instructional aids. Among these aids are printed materials, audio aids, visual aids, audio aids, demonstrations, community resources and auto instructional materials. These aids are commonly referred as audio-visual aids because they are sensory objects and images utilized to promote meaningful communication.

### **SIGNIFICANCE OF THE STUDY**

The results of this study are considered significant to the following:

**Teachers.** The result of this study would served as a basis in threshing out possible solutions to problems which they encounter in teaching Basic Statistics and in consequence formulate plans in improving their techniques or strategies in giving mathematical exercise or activities suited to the students' level or understanding

**Students.** The result of this study would enable the students to assess themselves and discover their strength and weaknesses, to remedy their point of weakness and freed from the shackle preventing them to grow and improve their scholastic achievement.

**Administration.** It is hoped that the result of this study would served as an eye-opener to those brother in the profession especially in the struggle for keeping and innovating



instructional methods and material if only to let students attain quality education and for the administrators to support any program for innovation and teachers professional growth.

**Future Researchers.** The result of this study would serve as a basis for parallel studies to be conducted using wide scope.

**Researcher.** Who was encouraged more to fulfil her dynamic and unending desire to assist mathematically inclined students and low performer respondents to attain the best he can.

### **STATEMENT OF THE PROBLEM**

This study aimed to assess the use of textbook/workbook in Basic Statistics at the Cagayan State University, Second Semester for the school year 2015-2016.

Specifically, this research work attempted to answer the following questions:

1. What is the performance rating of the Junior college students in their subject Basic Statistics for second semester, SY 2015-2016?
2. What is the perception of the respondents on the use of textbook/workbook in their subject Basic Statistics?
3. Is there a significant relationship between the performance rating of the junior college students in the College of Hospitality and Industry Management and their perception on the use of Textbook in Basic Statistics?

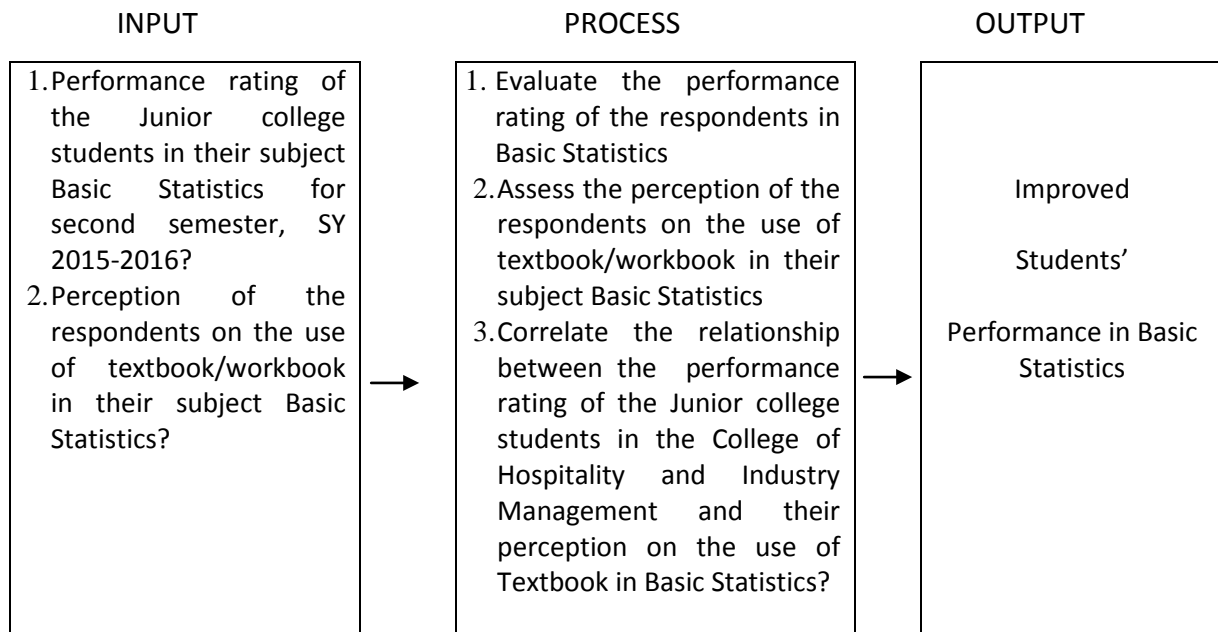
### **HYPOTHESIS**

This study was guided by the lone hypothesis.

There is no significant relationship between the performance rating of the junior college students in the College of Hospitality and Industry Management and their perception on the use of Textbook in Basic Statistics?

### **RESEARCH PARADIGM**

Figure 1 represents the paradigm of the study from which it is anchored. The paradigm shows that the inputs of the study consist of the performance rating of respondents in Basic Statistics. Further considered, as input of the study is the perception on the use of textbook/workbook in Basic Statistics by the respondents.



**Figure 1. The Research Paradigm of the Study**

As a process in the system approach, the perception of the respondents on the use of textbook/workbook was included for analysis. Furthermore, a correlation between the perception of the respondents on the use of textbook and their performance rating in their subject Basic Statistics was assessed to ascertain whether significant relationship exists between them.

## **METHODS**

### **Research Design**

The researcher used the descriptive-correlational method of research.

### **Respondents of the Study**

The respondents involved in this study was 318 which was taken from the College of Hospitality and Industry Management enrolled in Basic Statistics for second semester SY 2015-2016.

### **Statistical Analysis**

This study made use of the following statistical tools, which were needed in the analysis of the data.

Frequency counts and percentage was use to categorized the respondents.

For the perception of students on the use of textbook in Mathematics of Investment, A modified Likert Scale value was assigned to score the five categories as follows:



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Scale Value	Categories
5 points	Always
4 points	Often
3 points	Regularly
2 points	Seldom
1 point	Never

To analyze the perception of students on the use of textbook in their subject Basic Statistics, the item mean was used.

A criterion scale was used by the researcher for the assessment of results as follows:

Mean Range	Arbitrary Level
4.20-5.00	Always
3.40-4.19	Often
2.60-3.39	Regularly
1.80-2.59	Seldom
1.00-1.79	Never

Mean Mathematical Performance of students.

	Mean Range	Arbitrary Level
	94-98	Outstanding
High	89-93	Very Satisfactory
Moderate	84-88	Satisfactory
Low	79-83	Fair
	74-78	Poor

The Chi-Square Test was used to find out whether significant relationships exist between the perceptions of respondents in their performance rating in Basic Statistics.

## RESULTS AND DISCUSSION

The researcher summarizes the findings as follows:

### A. Performance Rating of Respondents in Basic Statistics

The mean performance rating of the respondents in their subject Basic Statistics is 84.11 percent. The average ratings of the respondents belong to satisfactory level, which indicates that students have learned much from their subject Basic Statistics.

### B. Perception of Students on the use of textbook/workbook in their subject Basic Statistics

The category mean of 4.44 with a descriptive scale of often further implies that the use of textbook in Basic Statistics would enhance better performance and increase participation and the attitude of liking the subject, which is a Waterloo of so many students.



### **C. Test of Relationship between the perception of students on the use of textbook and their performance rating in Basic Statistics**

The Chi-square test yielded with a probability value of 0. 0.00000845 at the alpha of 0.05. Since the probability is less than alpha, then the null hypothesis earlier stated is rejected; hence there is a significant relationship between the perception of the respondents on the use of textbook/workbook and their performance rating in Basic Statistics.

### **CONCLUSION**

The teacher should earnestly make learning experiences of the students enjoyable, fruitful and meaningful. The learner must be active in classroom activities for maximum learning because very little learning takes place without personal involvement. Significantly, relate with the use of printed materials as a teaching aid in Basic Statistics like textbook/workbook to their performance rating.

Although instructional aids cannot teach themselves, they need a skillful teacher to make them effective.

### **RECOMMENDATIONS**

#### **A. Students**

1. Students should display at all times a positive attitudes towards the use of textbook/workbook in their subject Basic Statistics.

#### **B. Teachers**

1. The teacher must consider the provision of individual differences to motivate and facilitate active participation in any classroom activity.
2. Teachers should be skillful in maximizing the use of textbook in their class to optimize learning.
3. The teacher should correlate the textbook with other learning materials. Utilize supplemental readings, other classroom experiences, and extra school activities.

#### **C. Administration**

1. The school/administration should support author/s of textbook in our institution for the publication and utilization of their books.





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