

Level of Condition and Extent of Adequacy of Resources in Secondary Schools in Taguig City and Their Effects on the National Achievement Test Performance

Saturnina L. Gomez

College of Education, Polytechnic University of the Philippines, Philippines
saturnina9955@gmail.com

Abstract

The results of the National Achievement Test (NAT) are used to evaluate and track how schools carry out their tasks and responsibilities. Other elements that may affect schools'/students' academic performance were the study's objectives. The state and adequacy of instructional and non-instructional materials and facilities, as well as the placement of schools that are prone to floods, were investigated. Teachers and students were given the opportunity to assess the state of their schools' physical resources and compare the information gathered to see whether there were any significant differences in their assessments. The majority of the data in this study was limited to the TAPAT division's selected flooded and non-flooded public secondary schools, and it used the independent-dependent-variable framework to determine how one variable influences the other. The findings of this study serve as a guide for concerned individuals in developing a policy framework to address this rising problem in the country, as well as reaffirming and supporting the demands of the perennially and non-perennially flooded public secondary schools. The results are difficult for the teachers since they may not be able to use their creativity and passion to help the pupils reach their goals. These will be demonstrated by their sincere implementation of a variety of alternative delivery schemes, instructional programs, curricula and materials, strategies and approaches, including policy changes and shifts, goal and objective formulation, and organized structuring in order to find quality education.

Keywords: Academic Performance, Achievement, Adequacy, Administrator, Flood, Facility, Material, Condition, Resources

Introduction

Philippine society places a great importance on education. Education is typically regarded as the best and longest-lasting investment across the archipelago. Education is likewise given top priority by the government, as stated in Subsection 2 of Section 2 of Article XIV of the 1987 Philippine Constitution. The state is required to maintain a free public education system at the primary and secondary levels. Our country will undoubtedly have personnel resources who are enlightened to be patriotic, conscientious, and globally competitive with this legislative foundation for an accessible, adequate, and relevant quality education.

The Education Act of 1982, or BP 232, an act providing for the establishment and maintenance of an integrated system of education, provides that one of the rights of students in school is the right to receive quality education in line with national goals and conducive to their full development as people with human dignity. The educational vision is an articulation of the ideal state of education, taking into account the concerns for effectiveness, equity, excellence, efficiency, and relevance in the light of the aspiration and development of students, as well as the benefits, welfare, and academic fulfillment of teachers, school officials, and society.

The Department of Education (DepEd) as the concerned agency as regards to education system of the country has done its best to address the needs of the schools and its stakeholders. DepEd had to cope a staggering classroom shortage of 34,000 (Quismorio, 2019). This compelled many schools to fall back on congested classrooms, a perennial quandary that has been fully addressed until the present. The country also lack teachers, and such shortage “is even larger when teacher credentials are factored in” (Garcia & Weiss, 2019). These two bring about humongous negative consequences, especially affecting the quality of basic education across the country. As UNICEF Philippines aptly states, “many Filipino children miss out on opportunities to learn. The number of children accessing education, the quality of education they receive, and the conditions of their learning environment are causes for concern” (UNICEF Philippines n.d.).

In addition, the scarcity of teachers and status of the learning environment of students, the 2018 Program for International Students Assessment (PISA) results, released on the 3rd of December 2019, revealed that out of 79 countries, the Philippines ranked last (79th) in the area of reading comprehension and second to the last (78th) in the areas of mathematics and science (Schleicher 2019). This embarrassing and shoddy showing in the 2018 PISA – which tested mostly 15-year-old students from different high schools in the country – seemed to open a can of worms; previously ignored issues and problems that have been running through the entire Philippine educational system came out into the open once more.

Further, The National Achievement Test (NAT) is a Philippine-made standardized test designed to determine students’ achievement level, strengths and weaknesses in five key curricular subject areas at the end of the school year. This serves as the basis in assessing the students’ academic performance as well the schools. The NAT was developed to measure what students in Grade Three, Grade Six and Second Year know and can do in five subject areas: Science, Mathematics, English, Filipino, and HeKaSi (Heograpiya, Kasaysayan at Sibika) in elementary and Araling Panlipunan in secondary level. Specifically, the test aims to: (1) provide empirical information on the achievement level of pupils/students in Grade Three, Grade Six and Second Year to serve as guide for policy makers, administrators, curriculum planners, supervisors, principals and teachers in their respective courses of action; (2) identify and analyze variations on achievement levels across the years by region, division, school and other variables; and (3) determine the rate of improvement in basic education with respect to individual schools within certain time frames (DepEd MC 89).

The ultimate outcome of the pursuit of the above-mentioned concerns in educational processes is shown in the kinds of graduates and school learners who are prepared to discharge their social, political, spiritual, and economic roles in society, thus enhancing the quality of life in the country and the world.

This study aimed to reveal the state of learning environment of the students, especially the instructional and non-instructional resources and the condition of the school’s vicinity that may affect their academic performance. Some schools in Taguig City are affected when natural calamities come.

Literature Review

Quality education is difficult to achieve, but it is a challenge for all educators and administrators to see that their learners are performing well. They must be aware of the complexity of school administration that arises from different settings or conditions of schools. S. M. Honea asserted the essentials of effective leadership when he said: "Authority without responsibility is disintegration and chaos; responsibility without authority is frustration and ineffectiveness." Failure in

performance leads to the breakdown of the educational system, deterioration of morale of members, and thwarting of the purposes for which the school was created. H. H. Schmitt cited an interview with Minda C. Sutaria which said: "Our thrust now is quality education, which to me does not just mean knowing how to read, write, compute, and think rationally. It also means that the child possesses the moral, civic, and spiritual values that make for sound citizenship. The quality of education taken from Dr. Salvador P. Lopez's statement is"... in principle, the best education possible in terms of what money can buy in terms of teachers and facilities, as well as academic standards and traditions developed over time. In realistic terms, however, it means, for a developing country like ours, the best education we can afford. But the best kind of education we can afford is in turn determined by the importance we attach to the educative enterprise" (Cruz, 1981).

The National Achievement Test (NAT) is an examination given annually in March to assess the competency of both public and private school students. The students' knowledge and skills are tested in the subjects of Mathematics, English, Science, Filipino and HEKASI for elementary schools, and Mathematics, English, Science, Filipino and Araling Panlipunan for high schools. The test is administered by the Department of Education's National Education Testing and Research Center (NETRC). The results are intended to guide the Department of Education in its efforts towards improving the quality of education in public schools and to provide appropriate intervention for students. A score of 75% and above indicates mastery of the subject, and 50% to less than 75% means near mastery, while a score of below 50% indicates low mastery.

The search for quality education has led the Philippine education to try out various alternate delivery schemes, instructional programs, curricula and materials, strategies and approaches, including changes and shifts in policies, goals and objectives, formulation and organized structuring. While many policies affect the quality of the output of the educational system, there is a need to look into other factors that impinge on organized educational efforts. Specifically, there is a need to examine the effects of the environment on the school. The learning of students depends upon the kind of environment that surrounds them. A good environment encourages children to perform well in school (Good, 1977).

A report prepared by the Oxfam-UK Geological Bureau research team headed by Dr. Kevin Rodolfo on the worsening of floods was published in a provincial tabloid (Malig: 2002). This report mentioned that the major reasons behind the worsening floods are: (1) rise in global sea level, (2) global warming, (3) deep mantle flow within the earth pulling down surface lands, (4) isostatic sinking, (5) sediment auto compacting, (6) tectonic movements or land movements along earthquake faults, (7) earth movements related to Mt. Pinatubo, and (8) ground water arsenic concentrations. Similarly, important delta-situated cities like Venice, Bangkok, Tokyo, and Shanghai are all slowly sinking due to ground water withdrawal and geologic plate movements.

The geographical delineation of floods in some regions reveals that they are particularly vulnerable to flooding due to their placement in low-lying areas near Manila Bay's lower reaches. Flood-prone locations include agricultural grounds, fishponds, and important infrastructure such as schools. As a result, they are particularly prone to calamities during the southwest monsoon season.

This study was inspired by Bruner's theory of instruction (Hall and Lindzey: 1970). This theory emphasizes the teachers' role in the instructional and learning processes. Bruner's concern with the development of the child's cognitive abilities and the need for appropriately structuring educational content led him to develop a theory of instruction. Bruner saw that maturation and the environment influence intellectual development, but Bruner turned most of his attention to the in-

structional environment. He recognized the importance of structure, but he focused on the responsibilities of the teacher rather than the responsibilities of the student.

An understanding of Bruner's theory of instruction depends on an understanding of three related matters: modes of learning, functions of categorization, and principles of instruction. Bruner views cognitive development as a series of spurts followed by times of consolidation. He believes that these "spurts in growth are organized around the emergence of certain capacities," and that certain parts of an event or body of knowledge must be mastered before the learner can master any other. Bruner speaks of three models of learning: enactive, iconic and symbolic.

Enactive learning is a method of learning that involves doing, acting, imitating, and manipulating objects. This is the mode most often used by young children. Indeed, it is nearly the only way in which children in the sensory motor stage can learn. The iconic mode of learning involves the use of images or pictures. As the child grows older and is encouraged to understand concepts and principles that are difficult to demonstrate, this style becomes increasingly crucial. Children in the pre-operational and concrete operational periods benefit much from iconic depiction. Learning through the written and spoken word is essentially equivalent with learning through the symbolic mode of learning. As one progresses from the stage of concrete activities to the stage of formal operations, it gets more useful and efficient.

One of the major theories that Bruner emphasizes is the concerned motivation. He puts a premium on the ability of teachers to motivate students. According to him, the teacher can motivate students in such a way that the desire to learn can be carried over from the classroom to the outside world. He believes that intrinsic motivation, that of creating an interest in the subject matter itself, so that the student is convinced that it is worth knowing, is better than extrinsic motivation in the form of high grades, medals, and other external goals.

Bruner (1970) believes that teachers can do a lot towards intellectual development in schools. He suggests that instead of teaching specific facts or developing skills, the underlying principles that give structure to the subject matter must be taught. General principles that make up the subject should be stressed. Furthermore, teachers should strive to make their subjects more interesting and worthwhile through proper motivation. Otherwise, very significant materials will be forgotten and effort wasted. There are three (3) processes involved in Bruner's Theory of learning, such as: acquisition, transformation, and evaluation. When students obtain and assimilate new information with understanding, there is acquisition. Transformation occurs when the information is manipulated or utilized to remove the difficulty or solve a suitable problem. Evaluation is done by finding out whether the information acquired is appropriately utilized. If any learning should take place, Bruner also stressed that understanding, readiness, independence, and motivation must be present. There should be a basic and logical relationship between and among the subjects for understanding. The teacher must use the simplest form of instruction to the readiness of the student. In turn, he must be self-sufficient in searching for information and be able to determine and correct his own errors, independently. Further learning is best acquired if the learner is properly motivated.

The nature of the learning process had been studied by psychologists and physiologists and several theories had been made about it. The Connectionist Theory refers to the famous S-R or Stimulus-Response Theory advanced by Edward Lee Thorndike (Good and Brophy: 1977). This theory is based on the concepts that bond connections are formed between situations and responses. Further, the theory supports that it is the key in the understanding of the learning process. This theory of connectionism involves the three (3) primary laws of learning which have influenced many teaching procedures, namely: 1.) the law of readiness, 2.) the law of exercise and 3.) the law of effect.

Research Questions

This study aimed to determine the level of condition and extent of adequacy of Physical Resources in Selected Flooded and Non-Flooded Public Secondary Schools in Taguig City and their effects on National Achievement Test (NAT) Performance. Specifically, the study sought answers to the following questions:

1. What is the level of condition and extent of adequacy of instructional, and non-instructional facilities, and instructional materials, as perceived by students and teachers in schools situated in flooded and non-flooded areas of Taguig City?
2. Are there significant differences in the student and teacher's perception on the level of condition and extent of adequacy of resources?
3. How does the level of condition and extent of adequacy of facilities and instructional materials affect students' National Achievement Test performance situated in the flooded and non-flooded areas?

The research was confined to four (4) public secondary schools in Taguig City in the TAPAT Division, two (2) from perennially and two (2) non-perennially flooded schools, respectively. This was conducted during the school year 2017-2018. The principal subjects of this research were four randomly selected high schools and their teachers and second-year students from whom the data was gathered.

All the pertinent and necessary information relative to the physical resources and their condition and adequacy, teachers' profiles and students' profiles were gathered mainly through the questionnaires and facts (NAT results taken from the division office). An in-depth investigation of school conditions through participative research techniques was used as the ideal for the nature of the study.

The aspects pertaining to the following subject components were considered such as: the profile of the schools' physical resources and their condition and adequacy, teachers and students' profile, and the academic performance on the National Achievement Test (NAT).

Methodology

The researchers utilized the descriptive method of research to describe the characteristics or phenomena of the population. The descriptive method of research could go into comparison and determination of relationships between the perceptions of the two groups of respondents, the students and the teachers. It is also useful in establishing baseline information on the nature of the area, the population and their demographic profile. Adanza (2009) pointed out that it descriptive method is designed for the investigator to gather information about the present condition, status, or trend, and to deal with what is prevailing. The main objective was to describe the nature of a situation, events, people, and the relationships between variables as they exist at the time of the study and to explore the causes of practical phenomena.

The researchers used a self-constructed questionnaire and a survey checklist as a tool in gathering data for this study. It was validated by three research experts and underwent reliability testing in three schools which were not included in the actual gathering where respondents were taken. The testing of the null hypothesis and the development of the generalization, principles, and theories were conducted to establish universal validity (Fraenkel and Waller: 1994).

A descriptive study describes and interprets the characteristics of the population or phenomenon studied. This study focused on describing the nature of a demographic division, without focusing on "why" a particular phenomenon occurs. In other words, it describes the subject of the re-

search, without covering why it happened. This relates to conditions or relationships, judgements held and processes going on, effects that are evident or trends that are developing. It primarily concerned with the condition, although it often considers past events and influences as they relate to current conditions (Miranda: 2007, citing Best and Khan).

Documentary analysis was also used to describe secondary data and records utilized in the study, the National Achievement Test results. Systematically and quantitatively, the content of documents found in the record section of the division office was a rich source of research information.

The respondents came from four schools: first, two were situated in a flooded area, R. Papa and Bagumbayan National High School, in Taguig City. There were 163 teachers and 1,564 sophomore students. The study needed 116 teacher-respondents and 318 student-respondents as the sample. Further, a total of 323 teachers and 3,304 students came from two schools located in non-flooded areas. Western Bicutan NHS and Signal Village National High School. The study needed 179 teacher-respondents and 357 student-respondents as the sample. The number of samples was proportional to the number of students per school. Random sampling was utilized to select the samples.

Results

Table 1. Level of Condition and Extent of Adequacy of Instructional Facilities in Schools Situated in Flooded Areas as Assessed by the Students

Instructional Facilities	Level of Condition	VD	Level of Adequacy	VD
Classroom	2.77	Functional	2.36	Inadequate
Library	2.64	Functional	2.49	Inadequate
Science Room	2.39	Functional	2.42	Inadequate
Mail Room	2.50	Functional	2.47	Inadequate
History Room	2.46	Fairly Functional	2.64	Adequate
Home Eco.Bldg.	2.44	Fairly Functional	2.56	Adequate
Ind'l Arts Bldg	2.39	Fairly Functional	2.38	Inadequate
Desks/Armchairs	2.32	Fairly Functional	2.72	Adequate
Over-all Mean	2.49	Fairly Functional	2.51	Adequate

Table 1 shows that the Level of Condition of instructional facilities in schools situated in flooded areas as perceived by students is generally Fairly Functional. As to the Extent of Adequacy, the students rated them Adequate.

The Table also shows that the students rated their classrooms ($\bar{X}=2.77$), the library ($\bar{X}=2.64$), the mathematics room ($\bar{X}=2.50$) and the Science room ($\bar{X}=2.39$) as Functional. All other instructional facilities are rated as Fairly Functional. Desks and Armchairs ($\bar{X}=2.32$) got the lowest rating although they were still considered Fairly Functional. Over-all mean ($\bar{X}=2.49$) shows that the instructional facilities are generally Fairly Functional.

As to the Extent of Adequacy, the table shows that only History Room ($\bar{X}=2.64$), the Home Economics Building ($\bar{X}=2.56$) and the Desks and Armchairs which got the highest mean ($\bar{X}=2.72$) are considered Adequate by the students. All other instructional facilities were rated Inadequate although the over-all mean ($\bar{X}=2.51$) indicates that generally the instructional materials are Adequate.

Table 2. Level of Condition and Extent of Adequacy of Instructional Facilities in Schools Situated in Non-Flooded Areas as Perceived by Students

Facilities for Instruction	Level of Condition	VD	Extent of Adequacy	VD
Classroom	2.65	Functional	2.72	Adequate
Library	2.66	Functional	2.90	Adequate
Science Room	2.69	Functional	2.68	Adequate
Mail Room	2.37	Fairly Functional	2.51	Adequate
History Room	2.66	Functional	2.63	Adequate
Home Eco.Bldg.	2.83	Functional	2.51	Adequate
Ind'l Arts Bldg	2.01	Fairly Functional	2.46	Inadequate
Desks/Armchairs	2.68	Functional	2.80	Adequate
Over-all Mean	2.56	Functional	2.65	Adequate

Table 2 shows that the Level of Condition of instructional facilities in schools situated in non-flooded areas as perceived by students is generally Functional. As to the Extent of Adequacy, the students rated them Adequate.

It also shows that the students described the level of condition of the instructional facilities as Functional (over-all \bar{X} =2.56). Given high ratings is the Home Eco. Bldg. (\bar{X} =2.83), Science Room (\bar{X} =2.69), Desks/Armchairs (\bar{X} =2.68), and the History Room and Library (both \bar{X} =2.66) Lowest ratings went to Industrial Arts Bldg. (\bar{X} =2.01) and Mathematics Room (\bar{X} =2.37) which are both described as Fairly Functional. The table shows generally all instructional facilities are Adequate (over-all mean \bar{X} =2.65) where the Library (\bar{X} =2.90) Desks/Armchairs (\bar{X} =2.80) and Classrooms (\bar{X} =2.72) are given high marks. Only the Industrial Arts Building was rated as Inadequate (\bar{X} =2.46).

Table 3. Level of Condition and Extent of Adequacy of Non-Instructional Facilities in Schools Situated in Flooded Areas as Perceived by Students

Non-Instructional Facilities	Level of Condition	VD	Extent of Adequacy	VD
Office	2.98	F	2.86	A
Faculty Room	2.79	F	2.86	A
BEIS Room	2.56	F	2.60	A
Guidance Room	2.83	F	2.74	A
Canteen	2.68	F	2.62	A
Rest Room	2.71	F	2.66	A
Water System	2.76	F	2.55	A
Stage	2.6	F	2.69	A
Over-all Mean	2.74	F	2.70	A

Table 3 shows that the Level of Condition of non-instructional facilities in schools situated in flooded areas as perceived by students is generally Functional (F). As to the Extent of Adequacy, the students rated them Adequate (A).

Table 4. Level of Condition and Extent of Adequacy of Non-Instructional Facilities in Schools Situated in Non-Flooded Areas as Perceived by Students

Non-Instructional Facilities	Level of Condition	VD	Extent of Adequacy	VD
Office	2.91	F	2.90	A
Faculty Room	2.66	F	2.65	A
BEIS Room	2.84	F	2.64	A
Guidance Room	2.72	F	2.46	I
Canteen	2.40	FF	2.45	I
Rest Room	2.61	F	2.48	I
Water System	2.83	F	2.50	A
Stage	2.56	F	2.63	A
Over-all Mean	2.69	F	2.59	A

Non-instructional facilities in schools situated in non-flooded areas are generally in Functional level of condition (over-all \bar{X} =2.69). Rated high are Office (\bar{X} =2.91), BEIS (\bar{X} =2.84), Water System (\bar{X} =2.83) and the Guidance Room (\bar{X} =2.72) which are described as Functional (F). Only the Canteen (\bar{X} =2.40) was rated Fairly Functional (FF) by the students.

The over-all mean (\bar{X} =2.59) as shown in Table 4 indicates that the extent of adequacy of the non-instructional facilities is described as Adequate. Office (\bar{X} =2.90), Faculty Room (\bar{X} =2.65) and Stage (\bar{X} =2.63) are all Adequate with high rating marks. There are non-instructional facilities which were rated Inadequate: Guidance room (\bar{X} =2.46), Canteen (\bar{X} =2.45) and rest rooms (\bar{X} =2.48).

Table 5. Level of Condition and Extent of Adequacy of Instructional Materials in Schools Situated in Non-Flooded Areas as Perceived by Students

Instructional Materials	Level of Condition	VD	Extent of Adequacy	VD
Textbooks	2.56	F	2.49	I
Workbooks	2.51	F	2.73	A
Reference Books	2.39	FF	2.14	I
Magazines/ Newspapers	2.30	FF	2.35	I
Map/Globe	2.40	FF	2.39	I
Encyclopedia	2.31	FF	2.36	I
Dictionary	2.54	F	2.54	A
Charts	2.52	F	2.73	A
Self-Testing Exercises	2.39	FF	2.83	A
Computers	2.20	FF	2.21	I
Television Set	2.57	F	2.35	I
Overhead Projector	2.33	FF	2.10	I
Over-all Mean	2.42	FF	2.44	I

As to the extent of adequacy as shown in the Table 5, the items Self-Testing Exercises (\bar{X} =2.83), Charts (\bar{X} =2.73), Workbooks (\bar{X} =2.73), and Dictionary (\bar{X} =2.54) and described by stu-

dents as Adequate (A). All other instructional materials were rated Inadequate (I). The over-all mean ($\bar{X}=2.44$) indicates that generally the instructional materials in schools situated in non-flooded as Inadequate (I).

Table 6. Level of Condition and Extent of Adequacy of Instructional Materials in Schools Situated in Flooded Areas as Perceived by Students

Instructional Materials	Level of Condition	VD	Extent of Adequacy	VD
Textbooks	2.60	F	2.59	A
Workbooks	2.60	F	2.74	A
Reference Books	2.56	F	2.58	A
Magazines/ Newspapers	2.57	F	2.55	A
Map/Globe	2.50	F	2.68	A
Encyclopedia	2.47	FF	2.54	A
Dictionary	2.65	F	2.63	A
Charts	2.86	F	2.74	A
Self-Testing Exercises	2.83	F	2.66	A
Computers	2.54	F	2.69	A
Television Set	2.19	FF	2.27	I
Overhead Projector	2.12	FF	2.43	I
Over-all Mean	2.54	F	2.59	A

Table 6 shows that the Level of Condition of instructional materials in schools situated in flooded areas as perceived by students is generally Functional (F). As to the Extent of Adequacy, the students rated them Adequate (A).

It also shows that the level of condition of instructional materials in schools situated in flooded areas is described by students as Functional (overall $\bar{X}=2.54$). All items listed under instructional materials were rated as Functional with charts ($\bar{X}=2.86$), self-testing exercise ($\bar{X}=2.83$) and dictionary ($\bar{X}=2.65$) getting the higher ratings. Three items were considered Fairly Functional. These are Overhead Projector ($\bar{X}=2.12$), television set ($\bar{X}=2.19$) and encyclopedia ($\bar{X}=2.47$).

The Table indicates that as to the extent of adequacy, the students in schools situated in flooded areas rated all the instructional materials Adequate except for television set ($\bar{X}=2.27$) and overhead projector ($\bar{X}=2.43$) which were rated Inadequate. Higher ratings were given to workbooks and charts (both mean $\bar{X}=2.74$) and computers ($\bar{X}=2.69$).

Table 7 shows that the Level of Condition of instructional facilities in schools situated in flooded areas as perceived by teachers is generally Fairly Functional (FF). As to the Extent of Adequacy, the students rated them Inadequate (I).

The Table also shows as to the Extent of Adequacy, the teacher found all instructional facilities as Inadequate (I) (over-all $\bar{X}=2.35$) except for Classroom ($\bar{X}=2.82$), Desks/Armchairs ($\bar{X}=2.64$) and the Library ($\bar{X}=2.56$) which got high marks and described as Adequate (A).

Table 7. Level of Condition and Extent of Adequacy of Instructional Facilities in Schools Situated in Flooded Areas as Perceived by Teachers

Instructional Materials	Level of Condition	VD	Extent of Adequacy	VD
Classroom	2.66	F	2.82	A
Library	2.50	F	2.56	A
Science Room	2.21	FF	2.27	I
Math Room	2.01	FF	2.25	I
History Room	1.99	FF	2.06	I
H.E. Bldg.	2.45	FF	2.36	I
Ind'l Arts Bldg.	2.17	FF	1.80	I
Desks/Armchairs	2.51	F	2.64	A
Over-all Mean	2.31	FF	2.35	I

Table 8. Level of Condition and Extent of Adequacy of Instructional Facilities in Schools Situated in Flooded Areas as Perceived by Teachers

Instructional Materials	Level of Condition	VD	Extent of Adequacy	VD
Classroom	2.94	F	2.83	A
Library	2.51	F	2.62	A
Science Room	2.42	FF	2.16	I
Math Room	2.38	FF	2.12	I
History Room	2.30	FF	2.06	I
H.E. Bldg.	2.61	F	2.49	I
Ind'l Arts Bldg.	1.96	FF	2.15	I
Desks/Armchairs	2.89	F	2.93	A
Over-all Mean	2.50	F	2.42	I

Table 8 shows that the Level of Condition of instructional facilities in schools situated in non-flooded areas as perceived by teachers is generally Functional (F). As to the Extent of Adequacy, the students rated them Inadequate (I).

The Table also shows the level of condition of instructional facilities in schools situated in non-flooded areas is perceived by teachers as generally Functional (F) (over-all \bar{X} =2.50). Getting high ratings as Adequate (A) are Classrooms (\bar{X} =2.94), Desks and Armchairs (\bar{X} =2.89), Home Eco. Bldg. (\bar{X} =2.61) and Library (\bar{X} =2.51). The teachers rated the Industrial Arts Bldg. (\bar{X} =1.96), History Room (\bar{X} =2.30) and Mathematics Room (\bar{X} =2.38) as Fairly Functional (FF).

As shown in the Table, only three items in the list of instructional facilities were rated by teachers as Adequate (A). These are Desks/Armchairs (\bar{X} =2.93), Classrooms (\bar{X} =2.83) and the library (\bar{X} =2.62). All the rest were rated Inadequate (I) with Math Room (\bar{X} =2.12) and Industrial Arts Bldg. (\bar{X} =2.15) getting the poorest ratings. Over-all \bar{X} =2.42 indicates that instructional facilities are generally Inadequate (I).

Table 9. Level of Condition and Extent of Adequacy of Non-Instructional Facilities in Schools Situated in Flooded Areas as Perceived by Teachers

Instructional Materials	Level of Condition	VD	Extent of Adequacy	VD
Office	2.67	F	2.96	A
Faculty Room	2.53	F	2.68	A
BEIS Room	2.40	FF	2.44	I
Guidance Room	2.40	FF	2.50	A
Canteen	2.69	F	2.70	A
Rest Room	2.65	F	2.61	A
Water System	2.72	F	2.91	A
Stage	2.24	FF	2.20	I
Over-all Mean	2.54	F	2.63	A

Table 9 shows that the Level of Condition of non-instructional facilities in schools situated in flooded areas as perceived by teachers is generally Functional (F). As to the Extent of Adequacy, the students rated them Adequate (A).

It also shows that the level of condition of non-instructional facilities is generally perceived by teachers as Functional (F) (over all \bar{X} =2.54). High ratings were given to Water System (\bar{X} =2.76), Canteen (\bar{X} =2.69) and Office (\bar{X} =2.67). Facilities described as Fairly Functional (FF) are Stage (\bar{X} =2.24) and BEIS Room (\bar{X} =2.40) and Guidance Room (\bar{X} =2.40).

As to the extent of adequacy as shown in the Table, only the Stage (\bar{X} =2.20) and BEIS Room (\bar{X} =2.44) were described by teachers as Inadequate (I). High ratings were given to Office (\bar{X} =2.96) Water System (\bar{X} =2.91), Guidance Room (\bar{X} =2.70) and Faculty Room (\bar{X} =2.68) indicating adequacy of the facilities. The over-all mean (\bar{X} =2.63) indicates that generally the non-instructional facilities are Adequate (A).

Table 10. Level of Condition and Extent of Adequacy of Non-Instructional Facilities in Schools Situated in Flooded Areas as Perceived by Teachers

Instructional Materials	Level of Condition	VD	Extent of Adequacy	VD
Office	3.0	F	2.43	I
Faculty Room	2.69	F	2.44	I
BEIS Room	2.42	FF	2.45	I
Guidance Room	2.61	F	2.52	A
Canteen	2.46	FF	2.34	I
Rest Room	2.67	F	2.61	A
Water System	2.73	F	2.69	A
Stage	2.55	F	2.23	I
Over-all Mean	2.64	F	2.46	I

Table 10 shows that the Level of Condition of non-instructional facilities in schools situated in non-flooded areas as perceived by teachers is generally Functional (F). As to the Extent of Adequacy, the students rated them Inadequate.

Teachers in non-flooded areas rated the non-instructional facilities of their schools as generally Functional (over-all \bar{X} =2.64) which can be gleaned in Table. High marks were given to Office

(\bar{X} =3.0), Water System (\bar{X} =2.73) and Faculty Room (\bar{X} =2.69) the level of condition of the Canteen (\bar{X} =2.46) and BEIS (\bar{X} =2.42) is described as Fairly Functional (FF).

The Table also shows that the over-all \bar{X} =2.46 indicates the extent of adequacy of the non-instructional facilities is generally Inadequate (I) as rated by Teachers. Poor ratings were given to Stage (\bar{X} =2.23) and Canteen (\bar{X} =2.34). Only three items listed under non-instructional facilities were rated Adequate (A) by the teachers' respondents. These are Water System (\bar{X} =2.69), Rest Room (\bar{X} =2.61) and Guidance Room (\bar{X} =2.52).

Table 11. Level of Condition and Extent of Adequacy of Instructional Materials in Schools Situated in Flooded Areas as Perceived by Teachers

Instructional Materials	Level of Condition	VD	Extent of Adequacy	VD
Textbooks	2.09	FF	2.15	I
Workbooks	2.14	FF	2.04	I
Reference Books	1.81	FF	1.90	I
Magazines/ Newspapers	1.86	FF	2.27	I
Map/Globe	2.27	FF	2.15	I
Encyclopedia	1.88	FF	1.79	I
Dictionary	1.94	FF	2.54	A
Charts	2.34	FF	2.61	A
Self-Testing Exercises	2.72	F	2.57	A
Computers	1.78	FF	1.78	I
Television Set	1.83	FF	2.09	I
Overhead Projector	1.50	FF	1.69	I
Over-all Mean	2.01	FF	2.13	I

Table 11 shows that the Level of Condition of instructional materials in schools situated in flooded areas as perceived by teachers is generally Fairly Functional (F). As to the Extent of Adequacy, the students rated them Inadequate (I).

In schools situated in flooded areas, the teachers generally perceived that the level of condition of their instructional materials. The Over-all Mean (\bar{X} =2.01) is only Fairly Functional (FF) as can be seen in Table 13. All items were rated low and only the Self-Testing Exercise (\bar{X} =2.72) was described as Functional (F).

Likewise, the extent of adequacy of the instructional materials is only described only as Inadequate (I) (over-all \bar{X} =2.13), although the teachers found the Charts (\bar{X} =2.61), Self-Testing Exercise (\bar{X} =2.57) and Dictionary as Adequate (A). All other items were described as Inadequate (I).

Table 12. Level of Condition and Extent of Adequacy of Instructional Materials in Schools Situated in Non-Flooded Areas as Perceived by Teachers

Instructional Materials	Level of Condition	VD	Extent of Adequacy	VD
Textbooks	2.20	FF	2.20	I
Workbooks	2.16	FF	2.06	I
Reference Books	2.37	FF	1.89	I
Magazines/ Newspapers	1.87	FF	1.92	I
Map/Globe	2.29	FF	2.41	I

Instructional Materials	Level of Condition	VD	Extent of Adequacy	VD
Encyclopedia	1.79	FF	2.13	I
Dictionary	2.21	FF	2.30	I
Charts	2.32	FF	2.39	I
Self-Testing Exercises	2.53	F	2.34	I
Computers	2.17	FF	2.32	I
Television Set	1.96	FF	2.06	I
Overhead Projector	1.90	FF	1.77	I
Over-all Mean	2.15	FF	2.15	I

Table 12 also shows that the extent of adequacy of instructional materials is only equivalent to an Over-all Mean of 2.15 indicating Inadequacy (I). All items got poor ratings with Charts ($\bar{X}=2.39$) as the highest but still Inadequate (I).

The teachers and students' perception of the Level of Condition and Extent of Adequacy of instructional facilities in schools situated in flooded and non-flooded areas has significant difference as shown in Table 13 on the next page.

Table 13. Difference Between Teachers' and Students' Perception on the Level of Condition and Extent of Adequacy of Instructional Facilities in Schools Situated in Flooded and Non-Flooded Areas

Instructional Facilities in Flooded Areas						
Variable	Teacher	Student	Computed Z-Value	Tabular Value at 5% Significance Level	Decision	Remarks
Level of Condition	X=2.31 FF	X=2.49 FF	8.975	1.96	Reject Ho	Significant
Extent of Adequacy	X=2.35 I	X=2.51 A	6.046	1.96	Reject Ho	Significant
Instructional facilities in Non-Flooded Areas						
Variable	Teacher	Student	Computed Z-Value	TV at 5% Significance Level	Decision	Remarks
Level of Condition	X=2.50 F	X=2.54 F	3.66	1.96	Reject Ho	Significant
Extent of Adequacy	X=2.42 I	X=2.65 A	9.428	1.96	Reject Ho	Significant

Table 13 also shows that the level of condition of the Instructional Facilities as perceived by teachers is significantly different from the student's perception in schools situated in flooded-areas and in schools situated in non-flooded areas. In both areas the computed Z-values (8.975 for flooded and 3.66 for the non-flooded) are greater than the tabular value of 1.96 at 5% significance level which indicate the rejection of the null hypothesis.

Table 14. Difference Between Teachers' and Students' Perception of the Level of Condition and Extent of Adequacy of Non-Instructional Facilities in Schools Situated in Flooded and Non-Flooded Areas

Non-Instructional Facilities in Flooded Areas						
Variable	Teacher	Student	Computed Z-Value	Tabular Value at 5% Significance Level	Decision	Remarks
Level of Condition	X=2.54 F	X=2.14 F	14.02	1.96	Reject Ho	Significant
Extent of Adequacy	X=2.63 A	X=2.70 A	3.43	1.96	Reject Ho	Significant
Non-Instructional Facilities in Non-Flooded Areas						
Variable	Teacher	Student	Computed Z-Value	Tabular Value at 5% Significance Level	Decision	Remarks
Level of Condition	X=2.64 F	X=2.69 F	3.66	1.96	Reject Ho	Significant
Extent of Adequacy	X=2.46 I	X=2.59 A	9.428	1.96	Reject Ho	Significant

There is significant difference in the teachers and students' assessment of the Extent of Adequacy of Instructional Materials in the schools situated in flooded and non-flooded areas. In both cases, computed z-values (6.046 for flooded and 9.428 for non-flooded) are greater than tabular value of 1.96 at 5% significance level which indicate the rejection of the null hypothesis.

It can be gleaned from Table 14 that there is significant difference between the teachers' and students' perception of the level of condition of non-instructional facilities in schools situated in flood areas as well as in those situated in non-flooded areas. Computed z-values of 14.02 for flooded areas and 4.39 in non-flooded are all greater than the tabular value of 1.96 and 5% significant level, thus, the null hypothesis is rejected.

The table also shows that there is significant difference between the perceptions of the two groups of respondents as to the Extent of Adequacy of non-instructional facilities. Computed Z values of 3.43 for flooded areas and 13.53 for the non-flooded areas are all greater than 1.96 tabular value at 5% significance level, thus, the null hypothesis is rejected.

Table 15. Difference Between Teachers' and Students Perception of the Level of Condition and Extent of Adequacy of Instructional Materials in Schools Situated in Flooded and Non-Flooded Areas

Instructional Materials in Flooded Areas						
Variable	Teacher	Student	Computed Z-Value	Tabular Value at 5% Significance Level	Decision	Remarks
Level of Condition	X=2.01 FF	X=2.54 F	19.60	1.96	Reject Ho	Significant

Extent of Adequacy	X=2.13 I	X=2.59 A	17.71	1.96	Reject Ho	Significant
Instructional Materials in Non-Flooded Areas						
Variable	Teacher	Student	Computed Z-Value	Tabular Value at 5% Significance Level	Decision	Remarks
Level of Condition	X=2.15 FF	X=2.42 FF	21.21	1.96	Reject Ho	Significant
Extent of Adequacy	X=2.15 I	X=2.44 I	20.79	1.96	Reject Ho	Significant

Table 15 shows that in schools situated in flooded and non-flooded areas significant difference between the teachers' and students' perception of the level of condition of Instructional Materials. Computed Z Values of 19.60 for flooded and 21.21 for non-flooded are both greater than the tabular value of 1.96 at 5% significance level which indicates the rejection of the null hypothesis.

It can also be seen from the Table that there is significant difference between the teachers and students' perception of the Extent of Adequacy of Instructional Materials in schools situated in flooded areas as well as those situated in non-flooded areas. The null hypothesis was rejected because in both areas the computed z values, 17.71 in flooded and 20.79 in non-flooded are greater than the tabular value of 1.96 at 5% significance level.

Table 16. Sophomore Students' Performance in the National Achievement Test in Schools Situated in Non-Flooded and Flooded Areas

Non-Flooded Area			
Schools	Raw Score	% Score	Verbal Description
Western Bicutan NHS	116.19	48.41	Low Mastery
Signal Village NHS	105.37	43.91	Low Mastery
Mean	110.78		
Flooded Area			
Schools	Raw Score	% Score	Verbal Description
Gen. Ricardo Papa NHS	104.78	43.66	Low Mastery
Bagumbayan NHS	98.27	40.95	Low Mastery
Mean	101.53		

Table 16 shows that the over-all performance of the sophomore students coming from schools situated in non-flooded area as shown in Table 18 is 110.78 interpreted as Low Mastery, while the Over-all Mean of the second-year students in the National Achievement Test from schools situated in flooded area is only 101.53 interpreted as Low Mastery. Computed at 5% significance level and it is still interpreted as Low Mastery, the Z value =42.61 which is greater than its tabular value of 1.96 at one tailed test. The null hypothesis is rejected. There is significant difference in the performance in the National Achievement Test of the sophomore students coming from the non-flooded and flooded schools.

Discussion

The over-all performance of the sophomore students coming from schools situated in non-flooded areas as shown in Table 1 is 110.78 interpreted as Low Mastery, while the Over-All Mean of the second-year students on the National Achievement Test from schools situated in flooded areas is only 101.53 interpreted as Low Mastery. Computed at 5% significance level and it is still interpreted as Low Mastery, the Z value =42.61 which is greater than its tabular value of 1.96 at one-tailed test. The null hypothesis is rejected. There is significant difference in the performance on the National Achievement Test of the sophomore students coming from the non-flooded and flooded schools.

The performance of the students on the National Achievement Test is significantly dependent on the level of Condition of Instructional Facilities since $\chi^2=39.306$ with Prob. =.034 which is less than .05 indicates the rejection of the null hypothesis. The NAT performance is not significantly affected by the Extent of Adequacy of Instructional Facilities. χ^2 value of 24.293 which has probability value of .146 which is greater when .05 indicates acceptance of the null hypothesis.

There is significant relationship between NAT performance and the Level of Condition of Non-Instructional Facilities since the null hypothesis is rejected. $\chi^2=56.542$ with .002 probability which is less than .05 indicates the acceptance of the alternative hypothesis. NAT performance is not significantly affected by the Extent of Adequacy of the Non-Instructional Facilities. Chi square value of 30.488 with .430 probability which is greater than .05 indicates acceptance of the null hypothesis.

The National Achievement Test performance is significantly affected by the Level of Condition of Instructional Materials. Chi Square value of 16.668 equivalent to a probability value of .002 which is less than .05 indicates rejection of the null hypothesis. There is no significant relationship between the students' performance in the National Achievement Test and the Extent of Adequacy of Instructional Materials. Chi square value of 18.417 with .101 probability value which is greater than .05 indicates acceptance of the null hypothesis.

From the data gathered, analyzed, and interpreted, the following findings were summarized:

1. Students' Perception of the Level of Condition and Extent of Adequacy of Instructional Facilities, Non-Instructional Facilities, and Instructional Materials.

The level of condition of instructional facilities in schools situated in flooded areas as perceived by students is Fairly Functional. As to the extent of adequacy, the students rated them Adequate.

The level of condition of instructional facilities in schools situated in non-flooded areas as perceived by students is Functional. As to the extent of adequacy, the students rated them Adequate.

The level of condition of non-instructional facilities in schools situated in flooded areas as perceived by the students is. As to the extent of adequacy, the students rated them Adequate.

The level of condition of non-instructional facilities in schools situated in non-flooded areas as perceived by the students is Functional. As to the extent of adequacy, the students rated them Adequate.

The level of condition of instructional materials in schools situated in non-flooded areas as perceived by students is Fairly Functional. As to the extent of adequacy, the students rated them Inadequate.

The level of condition of instructional materials in schools situated in flooded areas as perceived by the students is Functional. As to the extent of adequacy, the students rated them Adequate.

2. Teachers' Perception of the Level of Condition and Extent of Adequacy of Instructional Facilities, Non-Instructional Facilities, and Instructional Materials

The level of condition of the instructional facilities in schools situated in flooded areas as perceived by teachers is Fairly Functional. As to the extent of adequacy, the teachers rated them Inadequate.

The level of condition of instructional facilities in schools situated in non-flooded areas as perceived by teachers is Functional. As to the extent of adequacy, the teachers rated them Inadequate.

The level of condition of non-instructional facilities in schools situated in flooded areas as perceived by teachers is Functional. As to the extent of adequacy, the teachers rated them Adequate.

The level of condition of non-instructional facilities in schools situated in non-flooded areas as perceived by teachers is Functional. As to the extent of adequacy, the teachers rated them Inadequate.

The level of condition of instructional materials in schools situated in flooded and non-flooded areas as perceived by teachers is Fairly Functional. As to the extent of adequacy, the teachers rated them Inadequate.

3. Performance of Sophomore Students on the National Achievement Test (NAT)

The over-all performance on the National Achievement Test of the sophomore students coming from schools situated in non-flooded areas is 110.78 interpreted as Low Mastery, while the Over-all Mean of the second year students on the National Achievement Test from schools situated in flooded area is only 101.53 interpreted as Low Mastery, computed at 5% significance level. Although it has 5% significance level, it is still interpreted as Low Mastery. There is significant difference in the performance on the National Achievement Test of the sophomore students coming from the non-flooded and flooded schools. The null hypothesis is rejected.

The performance of the sophomore students in the National Achievement Test is significantly dependent on the level of Condition of Instructional Facilities, Non-Instructional Facilities, and Instructional Materials.

The NAT performance is not significantly affected by the Extent of Adequacy of Instructional Facilities, Non-Instructional Facilities and Instructional Materials.

Conclusion

Based on the findings of this study, the following conclusions are drawn:

The level of condition of instructional facilities, non-instructional facilities, and instructional materials were rated Fairly Functional by the teachers and students in schools situated in flooded and non-flooded areas. There were no significant differences in the students' and teachers' perception.

As to the extent of adequacy of instructional facilities, non-instructional facilities, and instructional materials in schools situated in flooded and non-flooded areas, the students and teachers rated them Inadequate. There were no significant differences in the students' and teachers' perceptions.

Generally, students coming from non-flooded areas performed better on the National Achievement Test (NAT) compared to students coming from flooded areas. There is a significant difference in the performance of students on the National Achievement Test (NAT) situated in flooded and non-flooded areas.

The NAT performance of the students is significantly dependent on the Level of Condition of Instructional Facilities, Non-Instructional Facilities, and Instructional Materials.

As to the Extent of Adequacy of Instructional Facilities, Non-Instructional, and Instructional Materials, the NAT performance of the students is not significantly affected.

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