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Congratulation!

Edmond

Hajrizi, Rector of UBT and Chair of IC - BTI 2021

An evaluation of EFL Textbooks used in Higher Education

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Abstract

In English as a Foreign Language/English as a Second Language (EFL/ESL) contexts, textbooks are simultaneously important. Indeed, textbooks contain the syllabus, which is being expected by teachers to follow more or less faithfully, with end-of-course exams being based exclusively on textbook content. In this study, we will investigate the selection of English language textbooks as tools used in public and private universities. We will look at the levels of content, and what textbooks include and exclude in terms of topic, linguistic information, pedagogy, and culture. We will also examine how teachers and learners use textbooks and the processes by which textbooks are shaped, authored, and distributed.

Keywords: EFL. ESL, textbooks, selection, learning,

Introduction

Nowadays, technological innovations have been a great help for teachers and have given them new ways how to reach their goals in the classroom, yet, published textbooks are still the most useful source when it comes to teaching a foreign language. In English Language teaching the situation is pretty much the same although as teachers we always try to find the right methods and instructions that can meet the needs of every student. As a result of this situation, it is important to figure out which are the right textbooks that can be useful for students in particular settings. Teaching materials have helped teachers to achieve their goals, yet, textbooks are still the most common materials used by teachers around the world. According to Radic- Bojanic and Topalov,2016 textbooks are essential in English as a Foreign Language (EFL) classrooms as they provide students with language skills as well as knowledge about English-speaking countries. (Radic-Bojanic, 2016)

A textbook is a book in which "the teacher and every student is provided with a copy of it and they are required to follow it systematically during the course " (Ur, 1996, p. 183). Textbooks have played an essential role in the improvement and quality maintenance of educational outcomes in many countries. (Oates, 2014)

Richards (2014) indicated that textbooks provide a central core for language teaching programs, as they lay out the structure of the lessons that provides coherence to the whole course. Therefore, these textbooks guide EFL teachers to achieve the goals of the syllabus. (Richards J. C., 2014)

However, these textbooks could also be deleterious to students' language learning. Sometimes textbooks do not bring authentic language learning. Students might be introduced to reading text and listening to the audio they might never have heard in real life.

According to Alshumaimeri and Alzyadi (2015), learners should be exposed to authentic materials that enable them to use the target language for the communicative purposes they might encounter in daily life situations. (Alshumaimeri, 2015)

Moreover, according to Bojanic and Topalov, teachers with less experience might use the textbook as a frame of reference without taking into consideration students' needs (Radic-Bojanic & Topalov, 2016).

Evaluation in general "is the judgment of how appropriate something is for a certain purpose". (Richards J. C., 2002)

Tomlinson states that materials evaluation is "a procedure that involves measuring the value of or the potential value of a set of learning materials, which involves making judgments about the effect of the textbooks people use" (Tomlinson, Materials evaluation. In B. Tomlinson (Ed.), Developing materials for language teaching. , 2003).

Due to the importance of textbook use in language learning classrooms, textbooks should be carefully monitored and evaluated. (Richards J. C., 2014)

Each EFL textbook must include activities related to four skills such as listening, speaking, reading, and writing together with a grammatical guide, vocabulary, and different language functions in use as in most cases, textbooks represent the curriculum of the language studies, therefore they play an important role for obtaining information in learning a foreign language.

Researchers claim that textbooks are created and designed usually for general courses to be used in different countries but they also can be designed according to specific requirements so-called English for specific purposes. But, although English language textbooks are widely used all over the world, they are often pointed out for inconsistencies between educational aspects and commercial roles, and between these two statements, there are different conflicting ideas in the process of their creation.

Therefore, it would be of great use to involve all the teaching team while the text decision process takes place although it might be difficult to find a book that is suitable for a particular group of students, it might not be for the other group of students and they may discover deficiencies.

Choosing the right textbook requires systematic work and evaluation as it requires reflecting the aims of the curriculum and at the same time, a lot of factors need to be taken into consideration. Among these features, teachers' observation and experiences are of great value when deciding for any textbook for a certain group or class as they are aware of the students' learning process as language learning requires a considerable amount of time.

To conclude, it is important to consider that in addition to the preparation process, the curriculum designers must give teachers an active role in the evaluation process of the textbooks used materials.

LITERATURE REVIEW

To reveal the insight into these issues, we will go through observation of applicable literature that addresses the previous studies in this field. Teachers in their positions can oversee, assess, regulate and administer the school program particularly instructing reading material. Therefore Cunningsworth state that, the assessment of the reading material needs the best and most successful methods to examine the course book users' perspectives. Since the significant users of the course books are the students and their instructors, their perspectives on reading material ought to be gathered and examined. Similarly, teachers in any language classroom need to utilize EFL course books to help their teaching. Adapting textbooks is a significant part of teachers' expert knowledge; Furthermore, the textbook is provided fundamentally to match the teachers' instruction; assessment of textbooks shows problems with the teaching materials, leading to the fact that the reading material should be taken into consideration.. (Cunningsworth, 1995)

Textbook reading evaluation gives the chance for the teachers, supervisors, administrators, and designers to make a decision about the textbooks and how to choose them according to students' needs. Evaluation is a critical enterprise for the development and organization of the language learning process. As indicated by Sheldon (1988), among different explanations about textbook evaluation, he has suggested that it is a fundamental need to assess and analyze the various ELT textbooks which exist in the markets to select a suitable English language textbook and find the pros and cons of them. It helps the instructors to adjust the appropriate textbooks. (Sheldon L. , 1988) The experienced teachers have the opportunity to reflect their understanding based on how useful the chosen textbooks are. textbooks must be reviewed by

experienced teachers to reflect on their strengths and deficiencies of the textbooks. Some researchers believe that textbooks and materials play an important role in every learning environment and assure teachers on their tasks. (Azizfar, 2009) (Dudley-Evans., 1998).

Textbooks have some advantages which were highlighted by Brown as follows: a source of language, learning support, motivation, stimulation, and reference. (Brown, Brown, J. D. (1995). The elements of language curriculum: A systematic approach to program development. , 1995) Textbooks are among the most important resources utilized to achieve the aims of a course which are based on the learners' needs. However, they should not become the point of the actual course themselves and set those points.

According to O'Neill, there are four explanations to utilize the use of course books. Firstly, course book materials are useful for students' requirements. Secondly, the students can have a course for their future learning and a review of the EFL textbooks they used to have. Thirdly, students can get significant and valuable materials. Finally, the teachers can have opportunities to change and alter the EFL textbooks according to students' needs. Again, the content or the substance of any English language course book impacts the teacher on how to teach and the students how to learn. (O'Neill, 1982).

To find out whether a textbook is applicable for an English homeroom, when should a course book can be changed, and how, the evaluation is essential and of great significance. This can support the teacher to present the material to his /her students better and more efficiently.

Finally, it is recommended that it will be useful for the curriculum designers and experienced teachers, to perform an investigation to investigate the newly-published textbooks to realize new ways to improve the learning quality while revising the textbook's content.

In conclusion, we can say that researchers may prefer to pay attention more to one particular content-related field of the textbook (such as the use of a specific grammar) or try an overall analysis and evaluation using a framework. One of the weaknesses of English textbooks is that they ‘focus on the pedagogy approach rather than on the didactic approach and this what different researchers have concluded that using textbooks for teaching should be a concern to be considered.

The Importance of Language Education Materials

Language materials reflect various aspects of the language, such as grammar, vocabulary, and pronunciation, in addition to presenting the written and verbal aspects of the language. Related materials include exercises that students can practice and communicate with, providing ideas for Class activities. Textbooks, in particular, provide a syllabus of language programs because they contain the objectives and objectives of a language learning situation in a particular context. For inexperienced teachers, textbooks are a useful source for them because they support teachers by offering a variety of teaching options. (Cunningsworth, 1995). The material has a controlling impact on classroom dynamics, as both students and teachers often use the data. All approaches that follow, methods, and techniques are described in the material, and the basic principles of language education are delivered to student learning in the classroom. Therefore, to meet the requirements of a particular language program and school syllabus, the material should include concise, accurate, informative, and functional content. (Richards C. J., The language teaching matrix. Cambridge: Cambridge , 1990) In the words of Richards and Rodgers (2001), the role of materials can be different based on different methodologies. The leading role of data from functional/communicative methodologies is to activate student interpretation, negotiation, and expression in the context of interaction. (Richards J. C., 2001) The idea of practicing grammar questions individually is rejected and gives an advantage in presenting meaningful, exciting, and motivational language items. Various choices of language activity practices and tasks are required, and these choices should be presented as "other sources/resources of education" (p.30). Personalized methodologies, on the other hand, require consideration of different learner styles. Since students have learning speeds and styles, the data should not limit the student's language learning process by specifying a particular level, and the composition of the content should provide opportunities for self-learning and evaluation.

English Language Teaching textbooks

Hutchinson (1987) about evaluation is “the problem of determining the suitability of something for a particular purpose” (Hutchinson, 1987). In considering the language teaching evaluation process, in most cases the initial analysis is done to understand whether the textbook is suitable. Official curriculum or language program of your choice. Textbooks must also meet the needs of students by addressing their interests and abilities so that teachers’ pedagogy must also match (Grant, 1987). Various scholars are calling this the first stage of analysis Practical Considerations Key Considerations, Evaluation for Choice, and External Evaluation. The main purpose of the main consideration is to gather information about the general features of textbooks to choose the most appropriate for a particular language program. At this point, some authors share the same opinion by considering their first observation, but many authors and researchers reflect different thoughts or opinions by considering priorities when choosing and evaluating textbooks.

Many scholars focus on the price rationality of textbook packages as a priority when selecting and evaluating textbooks. (Cunningsworth, 1995) (Sheldon L. , 1988)

According to Cunningsworth (1995), the evaluation of a textbook should take into account several practical considerations, including the durability and attractiveness of the appearance of the textbook and the accessibility of the textbook package in the short term. . Also, consider the essential equipment in the package (eg, foreign language lab, Chongchuwisil, video player) and acknowledge that the importance of the place on availability and reliability. O’Malley (2013) provides an external analysis of the textbook, which begins with a review of the textbook student and teacher cover information and the introduction and information displayed in the table. (O'Malley, et al., 2013) It also provides specifications for external assessment, the main purpose of which is to understand whether a particular textbook ( ) is used as a primary textbook or as a supplementary source. Therefore, it is to determine the actual function of a particular textbook, a teacher's book is required, and if not available, the textbook contains a vocabulary list. The other purpose of external assessment is to investigate clear layouts, culturally relevant materials, and appropriate representations of other countries and societies. The material may also reflect the negative attitudes of women and minorities and should be thoroughly checked. It is also important to investigate what types of tests (diagnosis, progression, or achievement) are included in the material, and these tests need to be appropriate and useful in a particular language setting.

The design of ELT textbooks

The textbook design describes many issues such as physical appearance, layout, format, and other features like illustrations, tables, and diagram representations of the textbook. On the other hand, some scholars associate the design features with the composition of the textbook content and also focus on the internal features of the content. Also, to narrow the design concept, many authors focus on the design of textbook modules. From another perspective, several practical criteria are also generally proposed to test the adequacy of textbook materials in terms of classroom use. The physical appearance of the textbook can be evaluated for the durability and cover of the cover, and the appearance of the page can be evaluated for the attractiveness of the textbook elements such as bookbinding. (Sheldon L. E., 1988) On this issue, Sheldon (1988) believes in the benefits of the durable textbook, as it is not focused on the cover and is used multiple times by students. She also emphasizes the need to label textbook bindings, suggesting that there is ample space for students to write during class. Also, is the size and weight of the textbook suitable for students to handle (Sheldon 1988) or is the font size suitable for the intended audience. (Sheldon L. E., 1988)

Illustrations can be the most important aspect of design in EFL textbooks. A variety of attractive video selections are effective for the term, which is of interest to students in the process of language learning (Sheldon L. E., 1988) However, in most cases, the artwork is criticized for its attraction and poor quality (color and transparency). It also does not reflect the actual scenes shown in the relevant reading poems, listening scenarios, tasks, and practices. Graves (2000) criticizes textbook illustrations with visual priorities assigned to a particular gender, class, race or culture. In most cases, the information in the relevant material is sent using images, so the transparency of the illustration is very important.

Language Skills, Grammar, and Vocabulary in ELT textbooks

Regarding the specific methodology of language education, there have been fundamental changes since the 1980s, unlike grammar-translation and phonetic language law, etc. It has recently become important to create textbooks that focus on the improvisation of language skills according to the principles of communication while ignoring the diversity of poetry according to different approaches (content-based, task-based, or skill-based). In this regard, it would be helpful to review scholars' suggestions for evaluating textbook language skills. According to Byram, the first thing to consider is to evaluate the skills of a textbook and see what practical guidance is provided, to consider the duration of the course and at the same time see if the techniques are performed successfully. (Byram M. , 2009)Considering the last aspect, the basic purpose of practicing the technique is clear, and the textbook evaluates the technique to find out if it provides a way for students to carry out activities in terms of language development. It is important to do. Cunningsworth (1995) considers the integration of abilities in addition to the improvisation of the four major language abilities of language learning as the "fifth ability" and proposes six criteria for assessing linguistic competence in textbooks. (Cunningsworth, 1995) Are the goals and curriculum considerations listed in properly highlighted for all language technologies? Does the textbook contain materials that integrate language proficiency? Does the reading poetry and activity meet the student's level expectations? Is the number of articles read appropriate for students? Is the listening material on the cassette a high-quality recording and is the genuine? The material provides background information to help students understand, the questions, does the activity provide? Sheldon (1988) has specified important aspects to consider when assessing the four language proficiencies of data. With reading comprehension in mind, teachers need to analyze the material to find out where problems related to reading and discourse are presented. Another purpose is to retrieve useful texts above the sentence level. (Sheldon L. E., 1988) You also need to ensure that all language skills from the teacher to are properly emphasized. More importantly, the textbook is examining how to strengthen the practice of those skills to some extent. As well as reading, listening is also receptive, and when evaluating the effectiveness of this skill, where listening is emphasized in textbooks, and how authenticity is shown in this document and dolphins should be taken into account. Speaking skills in particular are essential to ensure that the content of the speaking material is consistent with real-world reflections. Because such usage enhances natural communication. The effectiveness of pronunciation practice in textbooks should be investigated as another skill that needs to be improved. In the pronunciation section, phonological aspects such as voice tone, touching words, word accents, sentence accents and intonation should be applied evenly. The terms used to describe the phonological aspect are confusing in many sources, so the definitions and terms should be simple enough so that the learner can fully understand the input. Also, to know if the pronunciation is based on the conversation in the interview material or is presented separately, it is necessary to consider the relevant textbook. You need to use the phoneme alphabet because it is associated with other notations to teach pronunciation. Therefore, students must be educated in textbooks to understand that each sound or combination of sounds in the audio sample is referenced (Cunningsworth, 1995)

You need to find a logical order between sentences and paragraphs. More importantly, it needs to provide a meaningful context to enable student understanding and ensure assimilation and integration. In addition to the author's reflection, O'Neill, suggested that multiple verbs, such as paradigm utilization, should be presented in summary form, which should be presented in student books. One of the teachers' goals in teaching grammar is to ensure that language learners ensure formal-centric, accurate and fluent learning. (O'Neill, 1982) Therefore the bridge should be constructed as follows:

- Is the Vocabulary Learning Material included by itself? Then how prominent?
- Is it the center of the course or peripherals?
- How many vocabularies do you teach?
- Is there a principle basis for choosing a vocabulary?
- Is there a distinction between active vocabulary, passive vocabulary, and classroom vocabulary?
- Is the vocabulary presented systematically and purposefully?
- Do learners react sensitively to pre-structure through vocabulary learning exercises based on semantic relationships, formal relationships, and situation-based word-groups?
- Will the data allow students to expand their vocabulary by helping them develop their learning strategies? (P.46)

In this chapter, through literature review, we surveyed textbook evaluation studies conducted in the field of English education. In general, material assessments can be programmed to allow designers and material creators to consider important aspects when designing a language course. In addition, evaluation research is indispensable in terms of reconsidering the inadequacies and corrections of existing materials. In the process of rating, teachers are direct users of the textbook and have a direct impact on classroom management and use of the textbook, so suggestions with teacher rating criteria should be considered.

METHODOLOGY

This study investigated three different issues with the ELT textbook used in private and public universities in Kosovo. The first step is to collect detailed information about the process of making the ELT textbook "in private and public universities". The second step is to learn the attitude of an ideal textbook teacher designed for university students. The questionnaire item for assessment is based on specific criteria consistent with Ref. (Sheldon L. E., 1988); (Cunningsworth, 1995); (Grant, 1987)

The study focused on the following research question:

1. What are teachers' impressions regarding the English textbooks in Kosovo's private and public universities?
2. Do English textbooks provide a balance of activities to meet the teachers' expectations for a model textbook?
3. To what extent do activities in the ELT textbook encourage students in communicative and meaningful practice in learning EFL?

Participants and Settings

ELT TEXTBOOKS

Before we go to the need of supplementary material allow me to provide a detailed explanation of the ELT course book. This section provides general and detailed explanations of the textbook, which are fair enough to circumvent value judgments. The answers provided by teachers and students through questionnaires and interviews will be more meaningful compared to the general explanations provided in this section. The ELT textbooks used at the university level depend on the teachers' choice, often they make this decision based on previous courses and any combination model of traditional methods of learning and teaching English with methods to make learning English more encouraging and motivating in a right way. Its proven methodology, with an emphasis on the work of grammar, clear vocabulary, and integrated skills, provides truly functional classroom instruction.

DATA ANALYSIS AND FINDINGS

Introduction

In this section, the results of the students' questionnaire and teachers' questionnaire are presented. The presented data are obtained from the questionnaire evaluation. The results of each school are explained through Statistical Package for the Social Sciences. The questions on the students' questionnaire required students to answer in an alternative way with closed questions. After, the answers are analyzed and presented through graphs. Teachers' questionnaire is closed questions. Teachers" answers are also analyzed at the end of each section. Finally, a comparison between the two universities is made, and also the summary of results between teachers of private and public schools has been analyzed and discussed.

Students and Teachers' Perceptions toward Textbooks

The way teachers use textbooks is likely to influence their attitudes regarding them. McGrath (2006) investigated teachers' and students' attitudes regarding course books, claiming that our perspectives and ideas are shaped by the language we use. It should be feasible to gain some insight into English-language teachers' prospects.

The purpose of the questionnaire is to understand teachers' beliefs about English teaching materials and the extent to which their beliefs exist in actual teaching practice. The questionnaire observations included 10 teachers who were selected based on their teaching experience and teaching activities in one private and one public school. According to the results, we can say that locally published materials are not available to teachers every year, they have to find it online and print it. However, the availability of such texts forces teachers to think about other sources. Therefore, EFL professionals need to develop plans or courses that focus on materials designed for local teachers and have a reasonable price or are available for teachers. The collection of data has been done descriptively.

The methodology of this study is quantitative, so the results of the questionnaires for students and teachers are analyzed in one way-ANOVA, as a conference statistical method to compare the average of 4 variables (Textbooks_model, Teacher_suggestion, Textbooks_selection, and Teacher_authenticity). The reason that one-way- ANOVA is chosen as a method is the reason that the data sets for these variables because have normal distributions. As we use the Wallis Kruskal Test as a non-parametric approach to compare the means between Books and Models.

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.166	1.377	5.169	3.792	3.755	.577	10

Table 1: Summary Item Statistics

This table shows a summary of item statistics and here's where we have the item means, so this is the mean for all items in our scale as well as the minimum and maximum in the range now is the maximum minus minimum value and we have got the variance in the number of items so we already know there are ten items in this scale and here we have the mean and standard deviation as well as the sample size for each of items on our scale. The average value above 3.0 is considered good, so 3.166 is considerably very good.

Research questions

Question 1: What are teachers' impressions regarding the English textbooks in Kosovo in private and public universities?

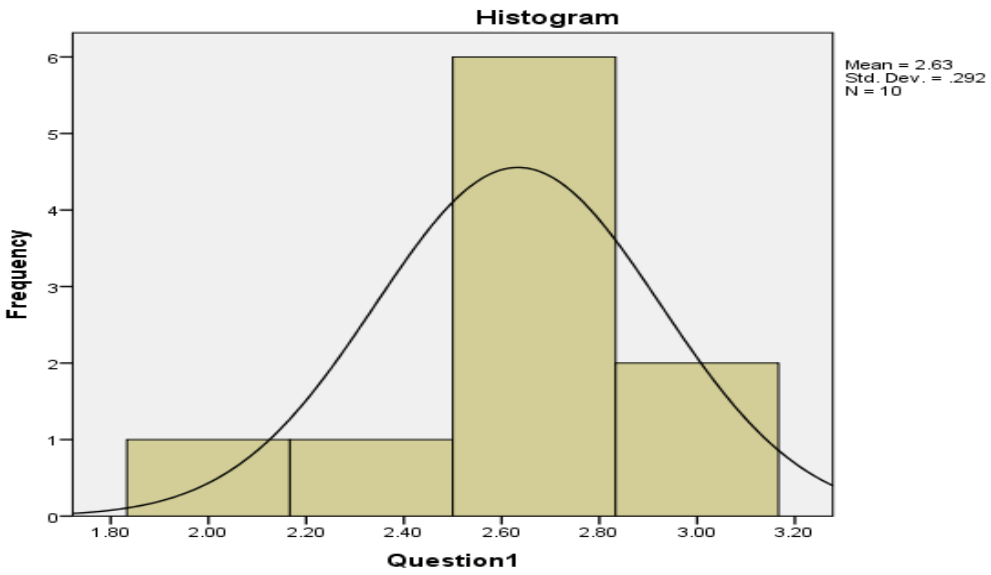

Figure 1

	N	Minimum	Maximum	Mean	Std. Deviation
question1	10	2.00	3.00	2.6300	.33747
Valid N (listwise)	10				

Table 2: Descriptive Statistics

Regarding research question under 1: What are teachers' impressions regarding the English textbooks in Kosovo in private and public universities, from the histogram and the table above, we see that the average distribution is 2.63 so the impression is around 52.6%.

Question 2: Do English textbooks provide a balance of activities to meet the teachers' expectations for a model textbook?

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Question2	.220	10	.185	.920	10	.353

Table 3: Tests of Normality a. Lilliefors Significance Correction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.33	1	10.0	10.0	10.0
	2.67	2	20.0	20.0	30.0
	3.00	1	10.0	10.0	40.0

	3.17	1	10.0	10.0	50.0
	3.50	2	20.0	20.0	70.0
	3.67	2	20.0	20.0	90.0
	3.83	1	10.0	10.0	100.0
	Total	10	100.0	100.0	

Table 4: Question2

	N	Minimum	Maximum	Mean	Std. Deviation
Question2	10	2.33	3.83	3.2000	.51400
Valid N (listwise)	10				

Table 5: Descriptive Statistics

Regarding research question 2: Do English textbooks provide a balance of activities to meet teachers' expectations for a model textbook, from the table above we notice that there is a normal distribution because siq = 0.185> 0.05. From the descriptive data, we notice the average is 3.2 out of 5, therefore the impression is 64%.

Question 3: To what extent do activities in the textbooks encourage students in communicative and meaningful practice in learning EFL?

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Question3	40	100.0%	0	0.0%	40	100.0%

Table 6: Case Processing Summary

			Statistic	Std. Error
Question3	Mean		2.3286	.04376
	95% Confidence Interval for Mean	Lower Bound	2.2401	
		Upper Bound	2.4171	
	5% Trimmed Mean		2.3333	

	Median	2.2857	
	Variance	.077	
	Std. Deviation	.27678	
	Minimum	1.57	
	Maximum	2.86	
	Range	1.29	
	Interquartile Range	.25	
	Skewness	-.248	.374
	Kurtosis	.666	.733

Table 7: Descriptive

Regarding question 3: To what extend do activities in the text books encourage students in communicative and meaningful practice in learning EFL, from the table above we notice that mean is 2.3286 out of 5, consequently the impression is 46.572% with 95% confidentiality.

To see how much Teacher_authenticity affects the efficiency of Textbooks_selection,we will do this through linear regression.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.973[a]	.948	.941	.16259

a. Predictors: (Constant), Teacher_authenticity

Table 1: Model Summary

So from Model Summary we see how much Teacher_authenticity reflects 94.8% of Textbooks_selection. Over 30% is acceptable.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.002	.368		-2.725	.026
	Teacher_authensiton	1.239	.103	.973	12.020	.000

Table 2: Coefficients

Dependent Variable: textbook_selection

Linear equation: y = 1.239 x + 0.103 (y- Textbooks_selection, x-Teacher_authenticity)

Then from the table above we can assume the linear equation when the implementation of Teacher_authenticity is zero units, we have:

$$y = 1.239 * 0 + 0.103 = 0.103$$

So for 0 units of Teacher_authenticity, then Textbooks_selection is 0.103 units.
Whereas, with the increase for 1 unit of Textbooks_selection, we have:

$$y = 1.239 * 1 + 0.103 = 1.239 + 0.103 = 1.342.$$

So with increasing by 1 unit of Teacher_authenticity, then Textbooks_selection increases by 1,857 units.

Teachers suggest working together to create a model ELT textbook that is used in universities in Kosovo

The findings of the analysis suggested that the EFL textbook used in public and private universities are ineffective in terms of content selection and structure. Both students and teachers agreed that books are not organized in a clear and logical sequence. This could indicate that students are unaware of how the materials are organized and graded. This emphasizes the importance of informing and orienting students on the textbook's organization and connections. All EFL Learners should be aware that skills, tasks, and activities are evaluated on a scale of difficulty. Meanwhile, there are lots of unknown words in the text, they find it hard to follow the clear conversation when they listen from the tape recorder when it is available, the layout is not as attractive and the topics and events are not updated.

Content selection and structure are important factors in the materials review process, and most creators of teaching materials do it regularly.

Authors, Grant (1987), (Cunningsworth, 1995) incorporated items related to the arrangement, sequencing, connection, and continuity of the materials or units in a textbook. It's also worth noting that the results for the associated item are similar to those of Azizmar's (2009) study. The results demonstrated that the teachers were considerably more aware of the sequencing and continuity of the materials and units of instruction, similar to this study. (Azizfar, 2009)

CONCLUSION

According to this study, the Kosovo universities select EFL to some degree to meet the needs of the students according to the field of study. As a result, because there is a limited edition on English for Specific Purposes, it becomes difficult for teachers to use general English textbooks to teach in the university level as students already have gone through general English courses As a result, teachers must select the EAP textbooks, based on their judgment.

There are several key questions to ask ourselves about each EFL textbook’s characteristics: First of all, we must pay attention to the purpose and the objectives of the book. Availability is another concern in our country as we have to import them. We must see if it is easy to obtain sample copies and similar supporting materials and if we can reach the publisher in case we need more information about the content, approach, and didactic details. We also must see if there is clear information about the target language and its culture and learning outcomes. Since it affects students learning, we must look at the layout and graphics if there is an optimum density and mix of the text so students can have a clear view of the progress made and how much they need to work to cover it. Vocabulary lists as a great instrument to perform better in the English language must be effectively exploited. Each unit and exercise must connect to the situation in the topic, the pattern of skill development, or grammatical/lexical ‘progression’ so the textbook coheres both internally and externally. We have to see if different and appropriate religious and social topics are catered for, both in terms of the topics/situations so students' expectations in terms of content, methodology, and format are successfully accommodated. Our EFL textbook must be in tune with broader educational outcomes for instance the nature and role of learning skills, concept development in younger learners, the function of 'knowledge of the world', the exploitation of sensitive issues, and the value of metaphor as a powerful cognitive learning device. EFL textbooks must have available audiovisual equipment, pictorial material, and listening material. Finally, perhaps there is more to think about and write about how to choose an appropriate EFL textbook, but when it comes to Kosovo, first of all, we must consider new editions of EFL books so our students can find them interesting to learn and discuss through topics.

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Awareness and Implementation of Solid Waste Management (SWM) Practices

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Abstract.This research used the descriptive-correlational method to determine the level of respondents' awareness and extent of implementation of Solid Waste Management (SWM) Practices in District 2, Bayawan City Division, Negros Oriental, Philippines for SY 2018-2019 in terms of the areas of segregation, reduce, reuse, recycle, and disposal. The quantitative data were gathered from 81 teachers and 189 students. Also, a survey questionnaire was utilized by the researcher. The statistical tools used in the analysis of the data were weighted mean, mean, and spearman rank correlation. The results revealed that the level of respondents' awareness on SWM Practices as both perceived by the teachers and students were very high and the extent of implementation of these practices were very great. In addition to this, a significant relationship was noted between the levels of awareness and extents of implementation of SWM Practices. It can be concluded that the level of awareness greatly influenced the extent of implementation of SWM Practices by the teachers and students in District 2, Bayawan City Division.

Keywords: Solid Waste Management (SWM) Practices, Level of Awareness, Extent of Implementation

I. INTRODUCTION

Section 55-56 of Republic Act 9003 or The Ecological Solid Waste Management Act stipulates that the Philippine National Government in coordination with Department of Education (DepEd) and other educational institutions should conduct a continuing education and information campaign on Solid Waste Management (SWM) Practices and strengthen the integration of environmental concerns in school curricula at all extents, with particular emphasis on the theories and practices of waste management principles like segregation at source, reduction, recycling, reuse and composting, in order to promote environmental awareness and action among the citizenry. This in turn promotes growing awareness on SWM Practices by that of the general public.

Solid Waste Management (SWM) is the collection, transport or disposal and treatment of waste materials (Paghasian, 2017). It relates to materials produced through human activities, and the process generally undertaken to endure its effects on health, environment and aesthetics. Recognizing the effects of improper management, garbage crisis can be prevented by practicing waste characterization and segregation at source, proper collection and transfer, recycling, and composting as mandated by the law (Aquino, et al., 2013). In view thereof, like growing awareness, proper implementation should be given equal focus and attention.

Moreover, as our ecological environment from local setting to the global village has been facing waste crisis due to a number of factors attributed to it, Solid Waste Management (SWM) practices should be strengthened (Pham, 2014; Choi, 2016).Further, awareness of Solid Waste Management (SWM)practices created change on how people look at garbage (Sarino, 2014). Awareness accompanied by participation is the key for people to be involved in the waste management programs of the community where effective and sustainable implementation of the proper waste management practices could be achieved (Punongbayan, 2014).

In the same manner, it is important for our learners to be highly aware and to properly implement SWM practicesas the future citizens of this planet as well actively participate in solving environmental related problems as this isregarded a global concern. They foster potential roles in addressing environmental problems as agents of change, future custodians of the planet, and environment managers and developers

(Niekerk, 2014). Hence, waste prevention and public participation through proper education with correct information are important factors for future generations (Villanueva, 2013; Marello & Helwege, 2014).

In this connection, the researcher has decided to pursue this study with the aim to determine the level of respondents' awareness and extent of implementation of Solid Waste Management (SWM) Practices in District 2, Bayawan City Division. In addition, this study attempted to find out whether or not Solid Waste Management (SWM) Practices positively contributed to the community and the city as a whole.

II. METHODOLOGY

Research Design

The study used the descriptive-correlational research design. The researcher determined the level of respondents' awareness and the extent of implementation of Solid Waste Management (SWM) Practices. Thus, the descriptive and correlational methods were the appropriate designs for the study.

Research Respondents

The respondents of the study for both the level of awareness and the extent of implementation of Solid Waste Management (SWM) Practices were the 81 out of a total of 101 teachers and 189 out of a total of 359 Grade VI Pupils of the different Public Elementary Schools of District 2, Bayawan City Division during the school year 2018-2019.

Research Procedure

The researcher asked permission from the concerned authorities, and secure the necessary endorsements before administering the questionnaires to gather the needed data. A letter of permission to conduct the study was given to the Schools Division Superintendent of the Division of Bayawan City requesting permission to allow the researcher to conduct the study in the different Public Elementary Schools of District 2. Upon approval, copies of the approved letter were given to the assigned Public Schools District Supervisor and also to the school heads, SWM Coordinators, and teachers of the participating schools to allow the researcher to administer the questionnaire to the identified research respondents.

Plan for Data Analysis

The data gathered were processed statistically using the Statistical Package for Social Science (SPSS). These were statistically analysed to answer the specific objectives of the study such as mean to determine the level of awareness on Solid Waste Management (SWM) Practices and Spearman Rank Correlation to determine whether or not significant relationship exists between the level of respondents' awareness and extent of implementation of Solid Waste Management (SWM) Practices.

III. RESULTS AND DISCUSSION

This section presents the result of the study and provides in-depth analysis and interpretation of data.

Table 1

Profile of the Respondents in Terms of the Variables

Variables	Categories	Teachers		Students	
		n	%	n	%
1. Sex	Male	5	6.2	87	46

	Female	76	93.8	102	54
2. Size of School	Smaller	44	54.3	91	48.1
	Bigger	37	45.7	98	51.9
3. School Location	Banga	41	50.6	94	49.7
	Malabugas	19	23.5	56	29.6
	Nangka	9	11.1	15	7.9
	Pagatban	12	14.8	24	12.7

The first objective of this study was to present the profile of the respondents according to selected variables. Table 1 presents the profile of the teachers and the students according to the selected variables, namely: sex, size of school, and school location.

With regards to sex, male and female respondents were included in the study. Of the 81 teacher-respondents, 5 are male teachers who comprise the 6.2 percent of the population while 76 are female which comprise the 93.8 percent of the population. It can be gleaned from the results that there are more female respondents than the males. The findings only prove that the females outnumber the males sex simply because of the nature of the work of the teaching profession. On the other hand, of 189 student respondents, 87 are male students who compose the 46 percent while 102 are female which comprise the 54 percent of the population. In these findings, it can be gleaned that the male respondents are of almost the same percentage of the female respondents.

Size of school, meanwhile, was categorized into smaller and bigger schools. For teacher-respondents, 44 teachers or 54.3 percent of the population are teaching in smaller schools while 37 teachers or 45.7 percentage delivering instructions in bigger schools. Also, for student-respondents, 91 or 48.1 percent of the population are studying in smaller schools while 98 or 51.9 percent of the students are attending bigger schools. This simply suggests that like some schools, districts or divisions, nearly 50 percent of the research respondents, teachers and students, represent both the smaller and bigger sizes of schools of the population.

For the school location, it was arranged through barangays or geographical locations. The table shows that 41 teacher-respondents or 50.6 percent are teaching in schools situated in Brgy. Banga while 94 or 49.7 percent of the students are attending the same schools. Also, 19 teachers or 23.5 percent of the respondents are delivering instructions and 56 students or 29.6 percent of the respondents are studying in schools located in Barangay Malabugas. Furthermore, 9 or 11.1 percent of the teacher-respondents and 15 or 7.9 percent of the student-respondents are attending school within Barangay Nangka. Moreover, for the school located in Brgy. Pagatban, 12 or 14.8 percent are teacher-respondents while 24 or 21.7 percent of the population are students.

Table 2

Level of Respondents' Awareness on Solid Waste Management (SWM) Practices in terms of the Areas

Areas	Teachers		Students	
	Mean	Interpretation	Mean	Interpretation
Segregation				
1. Segregation of biodegradable (paper, banana peels, cardboard, food wastes, leaves, twigs, and vegetables) and non-biodegradable (plastic toys, glass, steel, rubber) wastes at school.	4.88	Very High Level	4.90	Very High Level
2. Separation of recyclable wastes (paper, cardboard, plastic bottles) from non-recyclable or residuals which have no potential for reuse and recycling (sando bags, napkins, diapers, ball pens, etc.)	4.83	Very High Level	4.81	Very High Level
3. Separation of non-harmful wastes from toxic and hazardous wastes such as pentel pens, laboratory chemicals, ink, cell batteries and others.	4.85	Very High Level	4.77	Very High Level

4. Separation and segregation of garbage in different containers.	4.91	Very High Level	4.85	Very High Level
5. Segregation of recyclable items for collection.	4.85	Very High Level	4.65	Very High Level
Mean	4.86	Very High Level	4.80	Very High Level
Reduce				
1. Borrowing, sharing, and/or renting things that are needed occasionally.	4.27	Very High Level	3.93	High level
2. Buying only what is needed so that one will not end up throwing away extra food.	4.65	Very High Level	4.43	Very High Level
3. Packing lunch in reusable lunchbox so that one cannot buy wrapped/packed food at school	4.73	Very High Level	4.70	Very High Level
4. Bring water in reusable water bottles than buying water in one used plastic bottles at the school.	4.88	Very High Level	4.61	Very High Level
5. Being cautious and responsible to every waste one produce.	4.79	Very High Level	4.72	Very High Level
Mean	4.66	Very High Level	4.48	Very High Level
Reuse				
1. Reusing old materials than buying a new one.	4.52	Very High Level	4.79	Very High Level
2. Keeping those unfilled papers and using it as scratch.	4.58	Very High Level	4.72	Very High Level
3. Reusing grocery bags.	4.68	Very High Level	4.77	Very High Level
4. Reusing washable food containers.	4.65	Very High Level	4.92	Very High Level
5. Reusing scrap paper into memo pads.	4.59	Very High Level	4.64	Very High Level
Mean	4.60	Very High Level	4.77	Very High Level
Recycle				
1. Redesigning waste materials into a new product.	4.31	Very High Level	4.54	Very High Level
2. Making decors out of plastic wrappers and other colorful waste materials.	4.30	Very High Level	4.58	Very High Level
3. Promoting the importance of recycling.	4.72	Very High Level	4.80	Very High Level
4. Initiating income-generating activities out of waste materials.	4.41	Very High Level	4.66	Very High Level
5. Using recycled products out of redesigned waste materials.	4.43	Very High Level	4.56	Very High Level
Mean	4.43	Very High Level	4.63	Very High Level
Disposal				
1. Throwing and leaving of garbage anywhere.	3.81	High Level	4.06	High Level
2. Burning of waste materials.	3.94	High Level	3.79	High Level
3. Throwing of waste materials in common open dumps.	4.20	High Level	3.58	High Level
4. Disposal of biodegradable wastes into a compost pit.	4.89	Very High Level	4.88	Very High Level
5.Disposal of hazardous/ toxic/special wastes such as laboratory leftover (chemicals) or electronic waste in any garbage container.	3.99	High Level	3.69	High Level
Mean	4.17	High Level	4.00	High Level
Overall Mean	4.55	Very High Level	4.53	Very High Level

The level of respondent' awareness on Solid Waste Management (SWM) Practices according to the areas as perceived by teachers and students respectfully resorted to the overall mean scores of 4.55 and 4.53 interpreted as "very high" level.

When items were taken individually, area of segregation obtained the highest mean score with 4.86 for teachers and 4.80 for students categorized as "very high" level. There is only a slight difference of 0.06 with the teachers' awareness with that of the students. The result simply suggests that there is a high transfer of learning from the teachers to the students on the area of segregation as an SWM practice. The results further simply proven the importance of the subjects taken by the students like science and other environmental courses which include topics of the environment and solid waste management in its curricular aspects to further intensify environmental consciousness (Ahmad et al., 2015).

On the area of reduce, both teachers and students demonstrated “very high” level of awareness with overall mean scores of 4.66 and 4.48 respectively. However, from among the indicators in the area of reduce, students demonstrate only “high” level of awareness on indicator 1 on “borrowing, sharing, and/or renting things that are needed occasionally” as compared to “very high” level of awareness on the rest of the practices. This can be attributed to the situations needed occasionally where students find it hard to borrow from others or share things to others as well as rent things themselves due to being economically-challenged or the lack of financial resources (Arevalo & Comighud, 2020).

On the area of reuse, on the other hand, both of the respondents displayed “very high” level of awareness with 4.60 and 4.77 mean respectively for the teachers and students. For recycle, both of the respondents also displayed “very high” level of awareness with 4.43 for the teachers and 4.63 for the students. A slight difference of 0.17 on reuse and 0.20 on recycle can be noted between the respondents as the students displayed higher level of awareness on both areas than the teachers. This can be attributed that the students realize more its value as they have the greater needs to reuse and recycle things for future use or to be economically-wise and highly aware on the importance of these resources to aid their daily school needs (Comighud & Arevalo, 2020; Arevalo & Comighud, 2020; Lalamonan & Comighud, 2020).

Meanwhile, for the area of disposal, the respondents both demonstrate “very high” level of awareness with 4.17 for the teachers and 4.00 for the students. Hence, educating people to waste management will help them understand of the indiscriminate disposal of waste to the environment and human health and empower them to act accordingly (Madrigal & Oracion, 2018).

Table 3

Extent of Respondents’ Implementation of Solid Waste Management (SWM) Practices in terms of the Areas

Areas	Teachers		Students	
	Mean	Interpretation	Mean	Interpretation
Segregation				
1. Segregation practice is evident in classrooms, offices and canteen.	4.81	Very Great Extent	4.86	Very Great Extent
2. Waste is segregated into at least two types.	4.86	Very Great Extent	4.89	Very Great Extent
3. Receptacle for special waste is necessary wherever applicable.	4.68	Very Great Extent	4.65	Very Great Extent
4. No unmanaged waste receptacles outside the classrooms.	4.68	Very Great Extent	4.50	Very Great Extent
5. MRF is available.	4.73	Very Great Extent	4.62	Very Great Extent
Mean	4.75	Very Great Extent	4.70	Very Great Extent
Reduce				
1. Avoidance of use of plastics in canteen.	4.10	Great Extent	4.40	Very Great Extent
2. No more plastics used as secondary packaging material.	4.00	Great Extent	4.17	Very Great Extent
3. Most foods are packed using biodegradable materials.	4.15	Great Extent	4.29	Very Great Extent
4. Orient school canteen vendors on plastic avoidance policy.	4.60	Very Great Extent	4.72	Very Great Extent
5. Implement DepEd-Bayawan City’s policy on plastic avoidance in canteens.	4.68	Very Great Extent	4.80	Very Great Extent
Mean	4.31	Very Great Extent	4.48	Very Great Extent
Reuse				
1. Composting of biodegradable waste.	4.62	Very Great Extent	4.62	Very Great Extent
2. Actual application of compost in gardening.	4.54	Very Great Extent	4.52	Very Great Extent
3. Reuse used tires as decorative flower pots.	4.72	Very Great Extent	4.70	Very Great Extent
4. Use of compost products or soil from the compost pit were used in the garden.	4.69	Very Great Extent	4.53	Very Great Extent
5. Re-use practices are evident.	4.65	Very Great Extent	4.71	Very Great Extent
Mean	4.64	Very Great Extent	4.61	Very Great Extent
Recycle				
1. Recover and recycle papers (pots, charcoal, etc).	4.56	Very Great Extent	4.52	Very Great Extent

2. Plastic waste turned into pillows as one of the examples.	4.58	ery Great Extent	.72	ery Great Extent
3. Drinking straws and popsicle sticks made into tiny houses among others.	4.30	ery Great Extent	.66	ery Great Extent
4. Products out of recyclable materials show promise (profit, utility, etc).	4.58	ery Great Extent	.51	ery Great Extent
5. MRF is available.	4.65	ery Great Extent	.67	ery Great Extent
Mean	4.53	ery Great Extent	.62	ery Great Extent
Disposal				
1. Proper disposal of special wastes.	4.84	ery Great Extent	.87	ery Great Extent
2. On site establishment of composting facilities for biodegradable wastes (any of these: compost pit, vermin compost, etc.)	4.74	ery Great Extent	.64	ery Great Extent
3. Proper observance of collection schedules for specific category of segregated solid wastes.	4.93	ery Great Extent	.93	ery Great Extent
4. Designate drop-off center/ MRF (ideal, sturdy, labeled, actual sales on recyclable waste).	4.81	ery Great Extent	.85	ery Great Extent
5. Residual waste due for collection is inside sacks to facilitate collection by the LGU.	4.81	ery Great Extent	.93	ery Great Extent
Mean	4.83	ery Great Extent	.84	ery Great Extent
Overall Mean	4.61	ery Great Extent	.65	ery Great Extent

Table 3 indicates the extent of respondents' implementation of Solid Waste Management (SWM) Practices in terms of the areas such as segregation, reduce, reuse, recycle, and disposal.

The table shows the overall mean scores obtained by the teachers and students are 4.61 and 4.65 respectively. These are interpreted to have "very great" extent. This implies a positive transfer of learning from the teachers to the students who are regarded as the key agent of change to work towards a more sustainable future through improving their knowledge on waste management (Niekerk, 2014).

The findings of this study is further reinforced by the research of Ahmad et al. (2015) on how curricular aspect further intensity environment consciousness as a response of teachers and students to waste problems in the school setting. In addition, as a learning institution, it is then the nature of the school to provide transformational learning experiences that promote environmental sustainability within and across school contexts to put forward educators' role in helping students gain experience that protect the environment from the classroom to the extended community and along its similarities, promote environmental programs that are integral the to school's educational mission. Active participation of the members of the academic community is important for the implementation of its institutional programs and for environmental protection and sustainable development in order to foster new generation of environmental leaders (Madrigal & Oracion, 2018).

Table 4. *Differences between the Level of Awareness of Solid Waste Management (SWM) Practices on the Area of Segregation when Respondents are Grouped and Compared According to Selected Variables*

Variables	Categories	Mean	U- or H-values	Level of Significance	*p*-value	Significance
Sex	Male	4.79	7181.5	0.05	0.59	Not Significant
	Female	4.83				
Size of School	Smaller	4.82	8951	0.05	0.774	Not Significant
	Bigger	4.81				
School Location	Banga	4.86	18.98	0.05	0.000	Significant
	Malabugas	4.70				
	Nangka	4.91				
	Pagatban	4.83				

Table 4 shows the significant difference between the level of awareness on SWM Practices on the area of segregation when respondents are grouped and compared according to selected variables of sex, size of school and school location.

When grouped and compared according to sex, the results showed that the computed p-value of 0.59 is higher than the level of significance at 0.05. Thus, the hypothesis of no significant difference is not rejected. This simply means that the sex is not a determining

factor in the level of respondents' awareness in the area of segregation. It makes a lot of sense to say that the respondents, whether male or female, demonstrate similar level of awareness on segregation aspect. This is contrasted by the findings of Malabarbas (2014) that there was significant relationship between the level of awareness of the respondents on SWM Practice in terms of sex.

When grouped according to the size of school, the computed p-value of 0.774 is also higher than the level of significance of 0.05. The hypothesis of no significant difference on the level of awareness of respondents on the area of segregation is therefore not rejected. This implies that whether small or big, it is not an intervening factor to display high level of awareness on segregation. Both displays higher level of knowledge and awareness on segregation as a SWM Practices. Regardless of the size of the school, teachers perform the same roles and functions on orienting their students for the effective practice on the segregation of waste materials. This is affirmed by Massive et al. (2014) that regardless of the size of school, it is still the level of education that served as good indicators to the willingness and participation of the people.

When grouped according to the school location, the computed p-value of 0.000 which is depicted as significant. This implied that the different degree of regulations of barangay locations of the different schools is a contributory factor in the area of segregation of waste such as biodegradable and non-biodegradable.

Table 5. *Differences between the Level of Awareness of Solid Waste Management (SWM) Practices on the Area of Reduce when Respondents are Grouped and Compared According to Selected Variables*

Variables	Categories	Mean	U- or H-values	Level of Signifi-cance	*p*-value	Significance
Sex	Male	4.51	7736	0.05	0.45	Not Significant
	Female	4.55				
Size of School	Smaller	4.56	8875	0.05	0.707	Not Significant
	Bigger	4.51				
School Location	Banga	4.69	65.68	0.05	0.000	Significant
	Malabugas	4.20				
	Nangka	4.64				
	Pagatban	4.57				

Table 5 signifies the comparative statistics on the significant differences between the level of awareness on SWM Practices on the area of reduce when the respondents are grouped and compared according to the selected variables of sex, size of school and school locations.

As to sex variable, the male respondents perceived a mean rank of 4.51 while the female respondents perceived a mean rank of 4.55. This indicates that male respondents are almost of the same manner with their female counterparts towards the area of reduce. Based on the findings, there is no significant difference in the level of awareness of the respondents on SWM practice o the area of reduce. Hence, this implies that sex does not affect the level of respondents' awareness in the area of reduce as an SWM practice.

Table 5 alsodescribes the statistics of the computed p-value to determine the significant difference in the level of awareness on the area of reduce when grouped according to the size of the school. The computed p-value is 0.707 which is bigger than 0.05 significant levels implied that the difference between the compared groups is not significant. Based on the findings, there is no significant difference on the level of awareness on the area of reduce as perceived by smaller and bigger schools. This implies that the size of schools does not affect the level of awareness on SWM Practice on the area of reduce. This finding in the abovementioned, both of the variables of sex and size of school can be attributed to the study of Barloa et al. (2014) that the inclusion of relevant topics in the curriculum with emphasis on SWM is the one considered important to promote growing awareness on Solid Waste Management issues regardless of the sex and size of school.

The statistics p-value is also presented to determine the significant difference on the level of awareness on SWM Practice on the area of reduce when group according to school location. The p-value is 0.000 and is considered significant. Based on the findings, there is significant difference in the level of respondents' awareness in the area of reduce when grouped and compared according to the aforementioned variables. As Villanueva (2013) noted, education is an important confinement of solid waste management that should be present to establish a good program in the community as a setting of different school locations.

Table 6. *Differences between the Level of Awareness of Solid Waste Management (SWM) Practices on the Area of Reuse when Respondents are Grouped and Compared According to Selected Variables*

Variables	Categories	Mean	U- or H-values	Level of Signifi-cance	*p*-value	Significance
Sex	Male	4.75	8157	0.05	0.957	Not Significant
	Female	4.70				
Size of School	Smaller	4.62	6504	0.05	0.000	Significant
	Bigger	4.82				
School Location	Banga	4.75	10.16	0.05	0.017	Significant
	Malabugas	4.71				
	Nangka	4.71				
	Pagatban	4.64				

Table 6 displays the significant difference on the level of respondents' awareness on SWM Practice on the area of reuse when respondents are grouped and compared according to variable of sex, size of school and school location.

On sex variable, the computed p-value is 0.957 which is higher than the level of significance of 0.05. Thus, the hypothesis of no significant difference on the level of awareness on the area of reuse according to male and female teachers and students is not rejected as they have almost the same level of awareness on this SWM practice. This is in contrast to the findings of Amit and Malarbarbas (2014) who noted that there is a significant difference on the level of awareness on SWM Practices in terms of sex.

When the size of school is taken as a variable, the computed p-value is 0.000 and is considered significant. Hence, there is a significant difference in the area of reuse on smaller and bigger schools. From this, there is an indication that the size of school, especially the number of student population given education on solving environment issues is a determinant factor on the rate of transfer of learning to students to develop good practices and improve attitude towards solid waste management (Abella & Balla, 2013).

As for the school location, the computed p-value of 0.017 is also considered significant. This implies that there is significant difference on the level of awareness when respondents are grouped and compared according to school locations. From this result, it is obvious that the level of education of the people in different school locations is a good indicator for their degree and willingness of participation (Massave et al. 2014; Comighud, 2019; Arevalo & Comighud, 2020).

Table 7. *Differences between the Level of Awareness of Solid Waste Management (SWM) Practices on the Area of Recycle when Respondents are Grouped and Compared According to Selected Variables*

Variables	Categories	Mean	U- or H-values	Level of Signifi-cance	*p*-value	Significance
Sex	Male	4.63	7272.5	0.05	0.139	Not Significant
	Female	4.54				
Size of School	Smaller	4.50	7217	0.05	0.003	Significant
	Bigger	4.64				
School Location	Banga	4.60	4.708	0.05	0.194	Not Significant
	Malabugas	4.48				
	Nangka	4.68				
	Pagatban	4.56				

Table 7 presents the comparative statistics on the significant differences between levels of awareness on SWM Practices on the area of recycle when the respondents are grouped and compared according to the selected variables of sex, size of school, and school locations.

As to sex variable, the male respondents perceived a mean rank of 4.63 while the female respondents perceived a mean rank of 4.54. This indicates just a slight difference with the level of awareness of male and female respondents in the area of recycle. Based on the findings, there is no significant difference in the level of awareness of the respondents on SWM practice o the area of recycle. This implies that sex does not affect the level of respondents' awareness in the area of recycle as an SWM practice. This is contrasted by the study of Adelou, Enesi and Adelou (2014) that like students' age and class, students' sex influenced their level of SWM awareness, knowledge and practice.

Table 7 also presents the statistics of the computed p-value to determine the significant difference in the level of awareness on the area of recycle when grouped according to the size of school. The computed p-value is 0.003 which is lower than 0.05 significant level, thus, the difference between compared groups is considered significant. Based on the findings, there is a significant difference on the level of awareness on the area of recycle as perceived by smaller and bigger schools when grouped according to the size of school. This implies that size of schools affect the level of awareness on SWM Practice on the area of recycle. This is supported by the findings of Pham (2014) that the size of school is said to be significant since the number of student population receiving orientation on environmental issues and its corresponding solutions affects the respondents' level or degree of focus.

The statistics p-value is also presented to determine the significant difference on the level of awareness on SWM Practice on the area of recycle when group according to school location. The p-value is 0.194 and is considered not significant as it is higher than the significant level of 0.05. Based on the findings, there is no significant difference in the level of respondents' awareness in the area of recycle when grouped and compared according to selected variables. This is supported by Niekerk (2014) that children were obviously aware with waste and waste management practices in their school settings and local environment regardless of the fact that they are situated in different places.

Table 8. *Differences between the Level of Awareness of Solid Waste Management (SWM) Practices on the Area of Disposal when Respondents are Grouped and Compared According to Selected Variables*

Variables	Categories	Mean	U- or H-values	Level of Significance	*p*-value	Significance
Sex	Male	3.91	6738	0.05	0.017	Significant
	Female	4.12				
Size of School	Smaller	3.68	4023.5	0.05	0.000	Significant
	Bigger	4.42				
School Location	Banga	4.09	29.505	0.05	0.000	Significant
	Malabugas	4.31				
	Nangka	3.58				
	Pagatban	3.67				

Table 8 reflects the significant difference on the level of respondents' awareness on SWM Practices on the area of disposal when respondents are grouped and compared according to selected variables of sex, size of school, and school location.

On sex variable, the computed p-value is 0.017 which is lower than the level of significance of 0.05. Thus, the hypothesis of no significant difference on the level of awareness on the area of disposal according to male and female teachers and students is rejected as they have almost the same level of awareness on this SWM practice. This is substantiated by the findings of Amit and Malarbarbas (2014) that significant relationship exists between the level of awareness of the student-respondents in solid waste management in terms of sex. Also, the finding is affirmedby Adelou, Enesi & Adelou (2014) that students' sex significantly influenced their level of awareness, knowledge and practice of waste management.

When the size of school is taken as a variable, the computed p-value is 0.000 and is considered significant. Hence, there is a significant difference in the area of disposal on smaller and bigger schools. From this, there is an indication that the size of school, especially the number of student population given education on solving environment issues is a determining factor on the rate of transfer of learning to students to develop good practices and improve attitude towards solid waste management (Abella & Balla, 2013). This is further supported by Niekerk (2014) that children were obviously aware with waste and waste management practices in their schools and local environment.

Also when the school location is taken as a variable, the computed p value is 0.000 and is considered significant. This is the reason why Licy et al. (2013) noted that as parents and community members comprise the school location where students are educated and concepts of SWM are delivered, there is a need for them to be made aware to improve practice on solid waste management. Hence, parents and community members should be given environmental education during parent-teaching meetings or community-based programs to further strengthen and increase level of awareness on SWM Practices.

Table 9. *Differences between the Level of Awareness of Solid Waste Management (SWM) Practices on All Areas when Respondents are Grouped and Compared According to Selected Variables*

Variables	Categories	Mean	U- or H-values	Level of Signifi-	*p*-value	Significance

				cance		
Sex	Male	4.52	7476.5	0.05	0.271	Not Significant
	Female	4.55				
Size of School	Smaller	4.44	4888.0	0.05	0.000	Significant
	Bigger	4.64				
School Location	Banga	4.60	9.362	0.05	0.25	Not Significant
	Malabugas	4.48				
	Nangka	4.50				
	Pagatban	4.45				

Table 9 signifies the significant difference on the level of awareness on Solid Waste Management (SWM) Practices on all Areas when respondents are grouped and compared according to variables of sex, size of school and school location.

On sex variable, the computed p-value is 0.271 which is higher than the level of significance of 0.05. Thus, the hypothesis of no significant difference on the level of awareness on all areas when respondents are grouped according to male and female is therefore not rejected. Hence, teachers and students have almost the same level of awareness in this aspect. This is affirmed by the findings of Martin and Tillotson (2015) who indicated that regardless of sex or who are engaged in SWM practice, what is important is why the management is implemented and what the management accomplishes.

When the size of school is taken as a variable, the computed p-value is 0.000 and is considered significant. Hence there is a significant difference on the level of awareness on all areas when respondents are grouped according to size of schools, smaller and bigger. In affirmation, Ahmad et al. (2015) put forward the essence of reinforcing curricular aspect and further intensifying institutional initiatives aimed at forming all members of the academic community as "advocates of sustainable development".

The statistics p-value is also presented to determine the significant difference on the level of awareness on SWM Practice on all areas when respondents are grouped and compared according to school location. The p-value is 0.25which is considered not significant. Based on the findings, it affirmed the statement of Villanueva (2013) that it is not the school location but the level of education which should be present to establish a good program for the community on environmental issues for sustainable future.

Table 10. *Differences between the Extent of Implementation of Solid Waste Management (SWM) Practices on the Area of Segregation when Respondents Are Grouped and Compared According to Selected Variables*

Variables	Categories	Mean	U- or H-values	Level of Significance	*p*-value	Significance
Sex	Male	4.75	7687	0.05	0.372	Not Significant
	Female	4.70				
Size of School	Smaller	4.79	7373.5	0.05	0.003	Significant
	Bigger	4.65				
School Location	Banga	4.81	57.349	0.05	0.000	Significant
	Malabugas	4.47				
	Nangka	5.00				
	Pagatban	4.71				

Table 10 presents the significant difference on the extent of implementation of SWM Practices on the area of segregation when respondents are grouped and compared according to variable of sex, size of school and school location. On sex variable, the computed p-value is 0.372 which is higher than 0.05 level of significance. Hence, the extent of implementation of SWM Practices on the area of segregation according to male and female teachers and students is not significant. This is in contrast to the findings of Amit and Malarbarbas (2014) that there is a significant difference on the level of awareness on SWM Practices in terms of sex.When the size of school is taken

as a variable, the computed p-value is 0.003 which is considered significant. Hence, there is a significant difference in the area of segregation on smaller and bigger schools. Thus, the size of school is a determining factor in integrating school's educational mission. Moreover, active participation of the members of the academic community is important in its institutional programs for environmental protection and sustainable development (Madrigal & Oracion, 2018). As for the school location, the computed p-value of 0.000 is also considered significant. This implies that there is a significant difference on the extent of implementation when respondents are grouped and compared according to school location. Niekerk (2014) further indicated that regardless where the school is located, school children are obviously aware on concerns with waste and waste management practices.

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Table 11. *Differences between the Extent of Implementation of Solid Waste Management (SWM) Practices on the Area of Reduce when Respondents Are Grouped and Compared According to Selected Variables*

Variables	Categories	Mean	U- or H-values	Level of Significance	*p*-value	Significance
Sex	Male	4.49	7082.5	0.05	0.65	Not Significant
	Female	4.39				
Size of School	Smaller	4.48	8357	0.05	0.232	Not Significant
	Bigger	4.37				
School Location	Banga	4.47	29.488	0.05	0.000	Significant
	Malabugas	4.25				
	Nangka	4.80				
	Pagatban	4.39				

Table 11 indicates the significant difference on the extent of implementation of SWM Practices on the area of reduce when respondents are grouped and compared according to variable of sex, size of school, and school location. On sex variable, the computed p-value is 0.65 which is higher than 0.05 level of significance. Hence, the extent of implementation of SWM Practices on the area of reduce according to male and female teachers and students is not significant. Karre (2013) on the other hand put more emphasis on the importance of how SWM was introduced and the accomplishment of its results regardless of the sex. When the size of school is taken as a variable, the computed p-value is 0.232 which is considered not significant. As Barloa et al. (2014) noted, that it is not the size of school but the inclusion of relevant topics with emphasis on proper SWM and other solid waste issues in the curriculum that matters in order to promote awareness on environmental issues and improve attitude towards environmental sustainable solutions. As for the school location, the computed p-value of 0.000which is considered significant. This implies that there is a significant difference on the extent of implementation of SWM Practices on the area of reduce when respondents are grouped and compared according to school location. Given the context, educating people will help them understand proper solid waste management for sustainable environmental practices (Madrigal & Oracion, 2018).

Table 12. *Differences between the Extent of Implementation of Solid Waste Management (SWM) Practices on the Area of Reuse when Respondents Are Grouped and Compared According to Selected Variables*

Variables	Categories	Mean	U- or H-values	Level of Significance	*p*-value	Significance
Sex	Male	4.62	7955.5	0.05	0.806	Not Significant
	Female	4.62				
Size of School	Smaller	4.60	8285.5	0.05	0.219	Not Significant
	Bigger	4.65				
School Location	Banga	4.77	54.844	0.05	0.000	Significant
	Malabugas	4.44				
	Nangka	4.58				
	Pagatban	4.48				

Table 12 displays the significant difference on the extent of implementation of SWM Practices on the area of reuse when respondents are grouped and compared according to variable of sex, size of school and school location. On sex variable, the computed p-value is 0.806 which is higher than 0.05 level of significance. Hence, the extent of implementation of SWM Practices on the area of reuse according to male and female teachers and students is not significant. It has been indicated that what's more important is how SWM was introduced and the accomplishment of its results regardless of the sex (Hulman, 2013). When the size of school is taken as a variable, the computed

p-value is 0.219 which is considered not significant. As Niekerk (2014) noted that regardless of the size of school, children should work towards sustainable future. Furthermore, regardless of the size of school, education is provided to improve knowledge and contribute to increase environmental awareness. As for the school location, the computed p-value of 0.000which is considered significant. This implies that there is significant difference on the extent of implementation of SWM Practices on the area of reduce when respondents are grouped and compared according to school location. This is supported by the study of Choi (2016) who worked into the concept of environmental effectiveness as to structural indicator.

Table 13. *Differences between the Extent of Implementation of Solid Waste Management (SWM) Practices on the Area of Recycle when Respondents Are Grouped and Compared According to Selected Variables*

Variables	Categories	Mean	U- or H-values	Level of Signifi-cance	*p*-value	Significance
Sex	Male	4.65	7344.0	0.05	0.150	Not Significant
	Female	4.56				
Size of School	Smaller	4.66	8049	0.05	0.086	Not Significant
	Bigger	4.52				
School Location	Banga	4.80	93.445	0.05	0.000	Significant
	Malabugas	4.17				
	Nangka	4.73				
	Pagatban	4.62				

Table 13 reflects the significant difference on the extent of implementation of SWM Practices on the area of recycle when respondents are grouped and compared according to variable of sex, size of school, and school location. On sex variable, the computed p-value is 0.150which is higher than 0.05 level of significance. Hence, the extent of implementation of SWM Practices on the area of recycle according to male and female teachers and students is not significant. This is contrasted by the findings of the study of Amit and Malabarbas (2014) when they indicated that significant relationship exists on the level of participation of the respondents to SWM practices in terms of sex. When the size of school is taken as a variable, the computed p-value is 0.086 which is also considered not significant. Regardless of the size of schools, academic area component is promoted to integrate environmental areas on all subject areas especially implementing SWM properly in school (Arabaca et al., 2013). As for the school location, the computed p-value of 0.000which is considered significant. This implies that there is significant difference on the extent of implementation when respondents are grouped and compared according to school location. This is supported by the study of Licy et al. (2013) that parents as part of the community should therefore be given environmental education.

Table 14. *Differences between the Extent of Implementation of Solid Waste Management (SWM) Practices on the Area of Disposal when Respondents Are Grouped and Compared According to Selected Variables*

Variables	Categories	Mean	U- or H-values	Level of Signifi-cance	*p*-value	Significance
Sex	Male	4.87	7352.0	0.05	0.125	Not Significant
	Female	4.82				
Size of School	Smaller	4.85	8318.0	0.05	0.167	Not Significant
	Bigger	4.83				
School Location	Banga	4.92	95.855	0.05	0.000	Significant
	Malabugas	4.69				
	Nangka	5.00				
	Pagatban	4.76				

Table 14 shows the the significant difference on the extent of implementation of SWM Practices on the area of disposal when respondents are grouped and compared according to variable of sex, size of school, and school location. On sex variable, the computed p-value is 0.125which is higher than 0.05 level of significance. Hence, the extent of implementation of SWM Practices on the area of segregation according to male and female teachers and students is not significant. Abas and Wee (2014) indicated that regardless of sex, it is good governance practices that will contribute positively for effective implementation of solid waste management.When the size of school is taken as a variable, the computed p-value is 0.167 which is also considered not significant. Massawe et al. (2014) emphasized that regardless of

the size of school, it is the level of education that served as good indicators for the degree of willingness and extent of participation. As for the school location, the computed p-value of 0.000which is considered significant. This implies that there is significant difference on the extent of implementation when respondents are grouped and compared according to school location. Abocejo and Vivar (2015) indicated that there are a lot of human activities that contribute to waste generation. These waste materials if failed to be disposed in the proper manner and in the proper place can create a serious problem to humans and threat to nature.

Table 15. *Differences between the Extent of Implementation of Solid Waste Management (SWM) Practices on All Areas when Respondents Are Grouped and Compared According to Selected Variables*

Variables	Categories	Mean	U- or H-values	Level of Significance	*p*-value	Significance
Sex	Male	4.67	7399.5	0.05	0.246	Not Significant
	Female	4.62				
Size of School	Smaller	4.68	8207.5	0.05	0.188	Not Significant
	Bigger	4.60				
School Location	Banga	4.75	88.254	0.05	0.000	Significant
	Malabugas	4.40				
	Nangka	4.82				
	Pagatban	5.59				

Table 15 presents the significant difference on the extent of implementation of Solid Waste Management (SWM) Practices on all Areas when respondents are grouped and compared according to variables of sex, size of school, and school location.

On sex variable, the computed p-value is 0.246 which is higher than the level of significance of 0.05. Thus, the hypothesis of no significant difference on the extent of implementation on all areas when respondents are grouped according to male and female is not rejected. Hence, teachers and students have almost the same extent of implementation in this aspect. This is affirmed by the findings of Martin and Tillotson (2015) who indicate that regardless of sex or who are engaged in SWM practice, what is important is why the management is implemented and what the management accomplishes. This is however contrasted by the findings of Amit and Malabarbas (2014) as they shared the findings that significant relationship exists in the level of participation of the respondents in terms of sex.

When the size of school is taken as a variable, the computed p-value is 0.188 which is not considered significant. Hence, there is no significant difference on the extent of implementation on the area of disposal of smaller and bigger schools. Regardless of the size of schools, the significant role of education in solid waste management, RA 9003 mandates Philippine learning institutions to integrate into their educational activities the awareness and practices of solid waste management practices of solid waste management for the environmental education of all members of the educational institutions.

The statistics p-value is also presented to determine the significant difference on the extent of implementation on SWM Practice on all areas when respondents are grouped and compared according to school location. The p-value is 0.000 and is considered significant. This is supported by the notion made by Abocejo and Vivar (2015) that R.A. 9003 regardless of the location mandated LGUs to implement policies to promote proper solid waste management program within their jurisdiction, and provide the necessary institutional mechanisms to attain the objectives like minimizing waste by using techniques of recycling, resource recovery, reuse, and composting.

Table 16. *Relationship between the Levels of Awareness and Extents of Implementation of Solid Waste Management (SWM) Practices*

Variables	Mean	rho	Level of Significance	*p*-value	Significance
Levels of Awareness	4.54	0.394	0.05	0.000	Significant
Extents of Implementation	4.64				

Table 23 shows the significant relationship between the levels of awareness and extents of implementation of Solid Waste Management (SWM) practices.

Since the r-computed value is 0.394 which is greater than the p-value of 0.000 at 0.05 level of significance, the null hypothesis which states that there is no significant relationship between the levels of awareness and extents of implementation is rejected. The result of the study shows that there is a significant relationship between the level of respondents' awareness and extent of implementation of Solid Waste Management (SWM) Practices.

The result further implied that as educational practitioners promote growing awareness on Solid Waste Management (SWM) Practices to the general public (Aquino, 2013; Paghasian, 2017), proper waste management is also highly implemented and strengthened (Pham, 2014; Choi, 2016).

Furthermore, awareness on SWM Practices created change on how people look at garbage (Sarino, 2014) and as it is accompanied by participation, waste management programs became more effective and sustainable implementation has been achieved (Punongbayan, 2014). Moreover, teachers' and students' "very high" level of awareness through proper education of correct information leads to waste prevention (Marello & helwege, 2014) as it also increases public participation as these respondents foster potential roles in addressing environmental issues for both present and future generations toward a sustainable future (Niekerk, 2014).

IV. CONCLUSIONS

On the bases of the foregoing findings of the study, the researcher arrived at the following conclusions:

The level of respondents' awareness on Solid Waste Management (SWM) Practices as both perceived by the teachers & students in terms of the areas of segregation, reduce, reuse, recycle, and disposal were very high. It means that both the teachers and students demonstrated very high level of awareness on Solid Waste Management (SWM) concepts and practices as educational practitioners continue to promote growing awareness of the general public.

The level of respondents' awareness on Solid Waste Management (SWM) Practices in terms of the areas when they are grouped according to sex, size of school, and school location were very high. It can be concluded that teachers and students who comprised as sample of the population regardless of the size of their school and different school locations showed very high level of awareness on environmental issues like waste management as well as sustainable solutions to these problems for SWM programs to be effective and for sustainable future to be achieved.

The extent of respondents' implementation of Solid Waste Management (SWM) Practices in terms of the areas of segregation, reduce, reuse, recycle and disposal were very great. It can be concluded that both teachers and students have very great extent of SWM implementation through proper education and increasing community participation.

The extent of respondents' implementation of Solid Waste Management (SWM) Practices in terms of the areas where they are grouped according to sex, size of the school, and school location were very great. It means that regardless of their sex, whether male or female, size of school as to smaller or bigger, and as to school locations namely Brgy. Banga, Malabugas, Nangka and Pagatban, respondents have very great extent of Solid Waste Management (SWM) Practices implementation for a sustainable ecological solutions as well as active public participation focusing on how SWM is introduced, how it is implemented in different locations, and the how can it accomplished its desired results.

There was no significant difference between the level of awareness on Solid Waste Management (SWM) Practices for all areas when respondents are grouped and compared according to sex and school location but a significant difference exists in the size of the school. This means that regardless of sex and school location, what is important is the inclusion of relevant topics on the curriculum on proper SWM management and other solid waste issues. However, the size of school which corresponds to smaller or bigger number of and serves as a determining factor for the integration of schools' educational mission for the academic community's active participation.

There was no significant difference between the extent of implementation of SWM Practices in all areas when respondents are grouped and compared according to sex and size of the school while a significant difference exists in the school location. Hence, schools across different locations should instil the culture of responsible solid waste management among its children and citizens as the success of any SWM plan rest on the people of the community especially on the degree of willingness and extent of participation.

A significant relationship was noted between the levels of awareness and extents of implementation of Solid Waste Management (SWM) Practices. It can be concluded that the level of awareness greatly influenced the extent of implementation of SWM Practices by the teachers and students in District 2, Bayawan City Division. Hence, as it is awareness on the individual level which can develop into attitudes that will guide schools and communities to sustainable development solutions, it should be strengthened for SWM proper implementation and increase public participation.

V.RECOMMENDATIONS

In the light of the findings and conclusions of the study, the following recommendations are advanced.

The level of respondents' awareness and extent of implementation of Solid Waste Management (SWM) Practices are respectively very high and very great according to all areas. It is therefore recommended that educational institutions just like District 2 and other districts of Bayawan City Division as well as schools and districts of other divisions of the Department of Education should continue to conduct information campaign on Solid Waste Management (SWM) Practices and further strengthen the integration of environmental concerns in school curricula at all extents, with particular emphasis on the theories and practices of waste management principles like segregation at source, reduction, recycling, reuse and composting, in order to promote environmental awareness and action among the citizenry. This in turn promotes growing awareness on SWM Practices by that of the general public.

The level of respondents' awareness and extent of implementation of Solid Waste Management (SWM) Practices when they are grouped according to sex, size of school, and school location were very high. It is therefore recommended that growing awareness on SWM Practices by that of the educational practitioners, teachers and students, should further be increased for the welfare of the general public which in turn shall help strengthen SWM extent of implementation ensuring active public participation for the program to accomplish desired results.

As significant difference exists in the level of respondents' awareness in SWM Practices in terms of size of the school, it is therefore recommended that for SWM Programs and Advocacies to be more effective, awareness on waste management issues as well as sustainable solutions to these problems should be sought for the integration of the school's educational mission and community's active participation regardless of the number of teacher and student population.

As significant difference exists in the extent of implementation of Solid Waste Management (SWM) Practices in terms of school location, it is further recommended that education as an important component of SWM should be further intensified to establish a good program in the community. In the same manner, regardless of the school location, it is the attitude that should be positively developed as deemed needed on SWM execution and implementation.

As significant relationship exists between the level of respondents' awareness and extent of implementation of Solid Waste Management (SWM) Practices, it is therefore recommended that like growing awareness, proper implementation should be given equal focus and attention. Therefore, awareness accompanied by participation served as a key for people to be involved in the waste management programs of the community for its effective and sustainable implementation.

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APPENDICES

Survey Instrument on
Awareness and Implementation of Solid Waste Management (SWM) Practices

Part I. Profile of the Respondents

Name(Optional) _____

Name of School: _____

Sex: Male ☐ Female Size of School: Smaller Bigger ☐ ☐

School Location: _____

Barangay	Schools	
☐ Banga	Banga Central Sch	☐
	☐ BCSTEC Elementary School	
	☐ Buli-Buli Elementary School	
	☐ Cansig-id Elementary School	
Malabuga	☐ Telesforo Gargantiel MES	☐
Nangka	☐ Dean Felix Gaudiel MES	☐
☐ Pagatban	H.Bido Jordan ME	☐

Part II. Questionnaire Proper

A. Level of Respondents' Awareness on Solid Waste Management (SWM) Practices

Instruction: Please check the number that corresponds to the level of your awareness in the following items. It is important that you honestly answer each item. Please do not leave any item unchecked. Rest assured that your individual information will be treated with strict confidentiality. Please refer to the guide below in choosing your option.

Code	Interpretation
5	very high
4	high
3	moderate
2	low
1	very low

A. **SWM Practice (Segregation)**	5	4	3	2	1
What is your level of awareness on the following:					
1 Segregation of biodegradable (paper, banana peels, cardboard, food wastes, leaves, twigs and vegetables) and non-biodegradable (plastic toys, glass, steel, rubber) wastes at school.					
2 Separation of recyclable wastes (paper, cardboard, plastic bottles) from non-recyclable or residuals which have no potential for reuse and recycling (sando bags, napkins, diapers, ball pens, etc.)					
3 Separation of non-harmful wastes from toxic and hazardous wastes such as pentel pens, laboratory chemicals, ink, cell batteries and others.					
4 Separation and segregation of garbage in different containers.					
5 Segregation of recyclable items for collection.					

B. SWM Practice (Reduce)	5	4	3	2	1
What is your level of awareness on the following:					
Borrowing, sharing, and/or renting things that are needed occasionally.					
Buying only what is needed so that one will not end up throwing away extra food.					
Packing lunch in reusable lunchbox so that one cannot buy wrapped/packed food at school.					
Bring water in reusable water bottles than buying water in one used plastic bottles at the school.					
Being cautious and responsible to every waste one produce.					

C. SWM Practice (Reuse)	5	4	3	2	1
What is your level of awareness on the following:					
Reusing old materials than buying a new one.					
Keeping those unfilled papers and using it as scratch.					
Reusing grocery bags.					
Reusing washable food containers.					
Reusing scrap paper into memo pads.					

D. SWM Practice (Recycle)	5	4	3	2	1
What is your level of awareness on the following:					
Redesigning waste materials into a new product.					
Making decors out of plastic wrappers and other colorful waste materials.					
Promoting the importance of recycling.					
Initiating income-generating activities out of waste materials.					
Using recycled products out of redesigned waste materials.					

E. SWM Practice (Disposal)	5	4	3	2	1
What is your level of awareness on the following:					
Throwing and leaving of garbage anywhere.					
Burning of waste materials.					
Throwing of waste materials in common open dumps.					
Disposal of biodegradable wastes into a compost pit.					
Disposal of hazardous/ toxic/special wastes such as laboratory leftover (chemicals) or electronic waste in any garbage container.					

B. Extent of Implementation of Solid Waste Management Practices

Code	Interpretation
5	always
4	often

3	sometimes
2	rarely
1	almost never

a. SWM Practice (Segregation)	5	4	3	2	1
To what extent is your implementation of the following:					
Segregation practice is evident in classrooms, offices and canteen.					
Waste is segregated into at least two types.					
Receptacle for special waste is necessary wherever applicable.					
No unmanaged waste receptacles outside the classrooms.					
MRF is available.					
b. SWM Practice (Reduce)	5	4	3	2	1
To what extent is your implementation of the following:					
Avoidance of use of plastics in canteen.					
No more plastics used as secondary packaging material.					
Most foods are packed using biodegradable materials.					
Orient school canteen vendors on plastic avoidance policy.					
Implement DepEd-Bayawan City's policy on plastic avoidance in canteens.					
c. **SWM Practice (Reuse)**	5	4	3	2	1
To what extent is your implementation of the following:					
1 Composting of biodegradable waste.					
2 Actual application of compost in gardening.					
3 Reuse used tires as decorative flower pots.					
4 Use of compost products or soil from the compost pit were used in the garden.					
5 Re-use practices are evident.					
d. SWM Practice (Recycle)	5	4	3	2	1
To what extent is your implementation of the following:					
1 Recover and recycle papers (pots, charcoal, etc).					
2 Plastic waste turned into pillows as one of the examples.					
3 Drinking straws and popsicle sticks made into tiny houses among others.					
4 Products out of recyclable materials show promise (profit, utility, etc).					
5 MRF is available.					

e. SWM Practice (Disposal)	5	4	3	2	1
To what extent is your implementation of the following:					
Proper disposal of special wastes.					
On site establishment of composting facilities for biodegradable wastes (any of these: compost pit, vermicompost, etc.)					
Proper observance of collection schedules for specific category of segregated solid wastes.					
Designate drop-off center/MRF (ideal, sturdy, labeled, actual sales on recyclable waste).					
Residual waste due for collection is inside sacks to facilitate collection by the LGU.					

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Interrelation of Mathematics within the STEM

Duli Pllana

Abstract. Methodically inspecting mathematics in STEM educational programs participates with a percentage of twenty five percent. Interaction of mathematics in science, technology, and engineering is inevitable. Science, technology, and engineering acquire tools of mathematics to observe, describe and predict natural phenomena. Science pays a huge attention to natural phenomena that surrounds us; in addition, mathematics comes up with the structures and logical relationships to its scope. Technology uses mathematics extensively; in general, mathematics is a powerful tool to find any solution in technology. Engineering is based on scientific concepts to sketch, plan, or design a construction. Engineering uses mathematics throughout any workflow in its domain. Application of mathematics in real world situations does not require the necessary use of engineering, science, or technology. Mathematics is less dependent on other subjects, as a result, mathematics participates in STEM educational programs with a greater percentage than twenty five percent. Nevertheless, combining four subjects on analyzing a natural phenomena generates high quality results with a higher accuracy.

Key Words: Science, technology, engineering, mathematics, mathematical science, interaction.

Introduction

Mathematics is in a close relationship with Technology, Engineering, and Science. Technology does not involve elements of mathematics considerably like science; however, mathematical modeling of technology has a great influence with programing computer languages. Engineering models technical drawings, schema, projects, plans, with the services of mathematics. Engineers use mathematical tools steadily, but they do not need extremely high accuracy. As a result, engineers round their results to the point that it does not affect the practical work. Mathematics is the language of science. All scientific observations, predictions, and analysis need validation. Mathematics verifies any value of a scientific work by using its modeling strategies in harmony with the specific sample. Three academic subjects recon on mathematics.

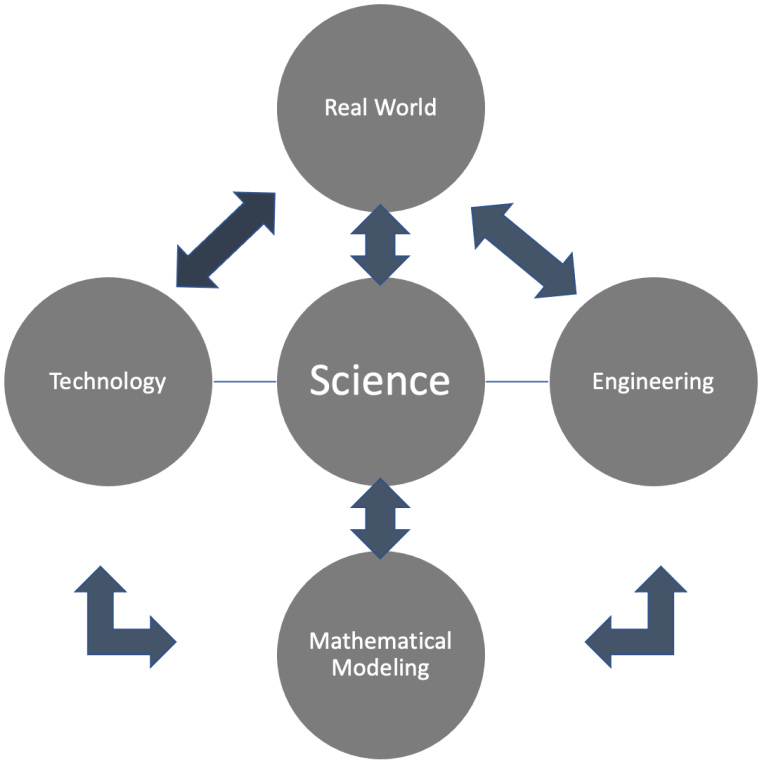
Technology and mathematics follows an interactive process; mathematics applies several fields in programming computers, and technology influences teaching and learning mathematics in education. The article, What Kind of Math is used in Computer Programming, says,"There are five major types of math used in computer programming" (n.d). The most important mathematical field in programming includes: binary mathematics, college algebra, statistics, calculus and discrete mathematics. On the other hand, technology enhances teaching and learning strategies greatly. For instance, teaching geometry with figures in the scale, graphing functions accurately, computing examples with huge numbers or numbers with long decimal numbers, verifying complex derivatives of antiderivatives results, etc. Integrated technology in mathematics emerges from elementary to higher education. Technology prompts mathematics and mathematics sophisticates technology.

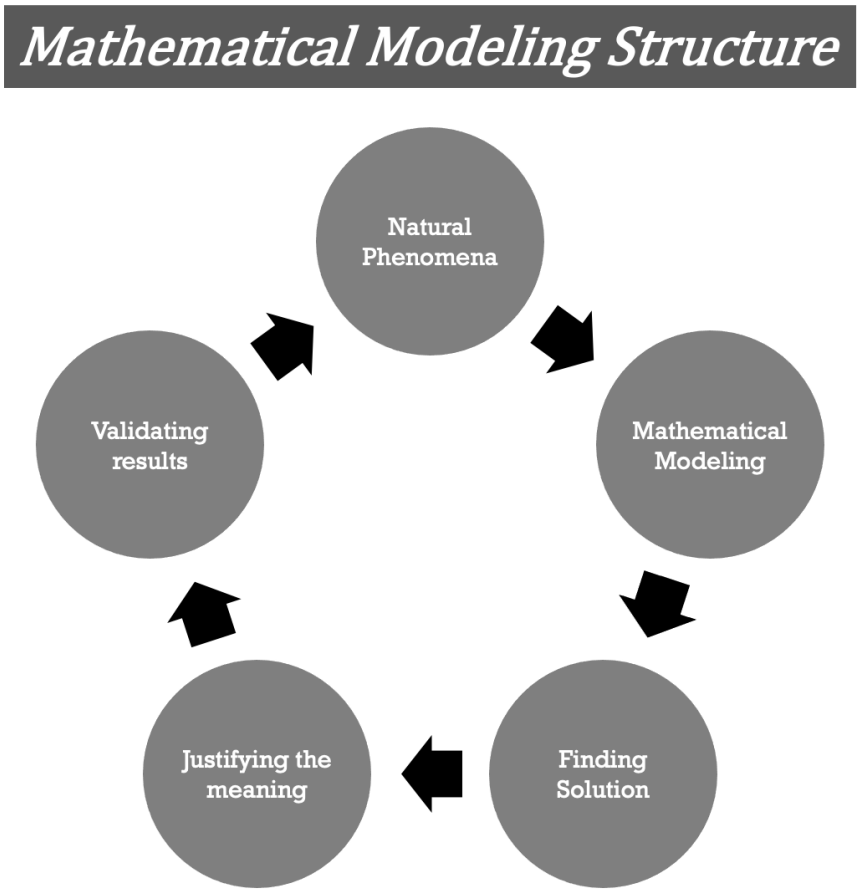
Engineering utilizes mathematics as a tool to explore its application inside its scope. Mathematics relies heavily on precision measurements, while engineering rounds measurements to a certain degree of accuracy. However, engineers use mathematics as a powerful tool throughout their work. The article, The Role of Mathematics in Engineering Practice and in the Formation of Engineers, claims, "Engineers' use of mathematics is considered in three parts: curriculum mathematics, mathematical thinking, and engaging with mathematics"(Goold,2012). Engineering education curriculum incorporates mathematics from middle school up to higher education. In higher education the curriculum contains mostly courses of applied mathematics. Every field makes logical sense in their methods or datas, especially, technical and natural sciences think mathematically in their entire domain. Engineers engage mathematics when they draft a project, predict data, finalize the project, verifying their findings, etc. Mathematics affiliates all branches of engineering.

Science predicts, explains, verifies evidence through mathematics; moreover, mathematics enhances teaching science to a great degree. Any scientific fact that cannot be explained mathematically, science does not accept as truth. Science verifies all facts mathematically. Even teaching science demands mathematical application. The article, The Mathematics and Science Integration Argument: A stand for Teacher Education, says "There is optimism for improving science teaching through integration with mathematics" (Furner and Kumar, 2007). Science is an exact field that requires lots of deep and strategic learning. The huge domain of science with the focus on various academic subjects makes it a complex field. Nonetheless, mathematics supplements teaching science with practical simplification, consequently, math connects science with logic. Integration of mathematics with the science or mathematical science anticipates, checks, and verifies scientific truth in any field of the science.

Mathematical science engages in a large variety of disciplines such as: pure mathematics, applied mathematics, statistics, computer science, biology, physics, engineering, etc. Also, communication as a part of social studies and humanities engages mathematical science utterly. The number of the disciplines that apply mathematical science increases with respect to progress of science, technology, and engineering. Mathematics is a constituent part of science, technology and engineering, and imparts a vigorous gravity to them.

Method


Real World
Technology
Science
Engineering
Mathematical Modeling



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What Kind of Math is used in Computer Programming, retrieved from Related to "What Kind of Math is Used in Computer Programming?"

Factors on Memory Retention: Effect to Students' Academic Performance

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Abstract. This paper examined the factors contributory to memory retention affecting the academic performance in Mathematics of Grade 7 students of Kalumboyan High School, Bayawan City Division for SY 2019–2020. The study made use of the descriptive-correlational research design. The questionnaire covered five areas: motivational practices and experiences, goal setting and accomplishments, personalized learning, teaching strategies and learning activities, and educational resources and learning devices. The respondents of the study were the 160 Grade 7 students. The study utilized percentage, mean, weighted mean, and Spearman's rank correlation coefficient. The salient findings revealed that the extent of students' perception on factors contributory to memory retention were "high" in terms of motivational practices and experiences, goal setting and accomplishments, and personalized learning, while they perceived the use of teaching strategies and learning activities and the utilization of educational resources and learning devices to be "very high". Moreover, the overall academic performance rating of the students in Mathematics is at a fairly satisfactory level. Also, it can be concluded that the extent to which students perceived the factors contributory to memory retention is "very high" and has a moderate and significant relationship to their academic performance in mathematics.

Keywords: Memory retention, Academic performance, Effect, Mathematics

Introduction

Memory retention plays a paramount importance in the academic life of the students. However, students who have a problem in retention may have difficulty in remembering class lectures.They may also have troubles in solving mathematical problems that involve series of steps.In order to solve those problems, they need to access information about math facts from long-term memory while remembering what they have just finished and what they need to do.

Radvansky (2017) defines memory as mental processes which are used to acquire, store, or retrieve information. Its processes are acts of using information in specific ways to make the information available later or to bring that information back into the current stream of processing. According to Wang and Hou (2016), sharing personal memories online facilitates memory retention.

Memory and concentration are being considered as sisters, and in previous researches, it was found out that10% of students had poor concentration and 46% had average concentration (Lamba et al., 2014, Podila, 2019). Hence, students can hardly memorize without classroom concentration. Even when their concentration is good, it may not be useful without memory.Specifically, enhancing students' motivation in the classroom is an important concern for educators and researchers, due to its relation to students'achievement. The importance of students' memory retention is reflected in the vast amount of related research focusing on the teaching and learning process (Pantziara&Philippou, 2015).

It is in this context that the researcher wants to identify what are the factors that might be contributory to students' memory retention and its effect to academic performance in mathematics.These factors include motivational practices and experiences, goal setting and accomplishments, personalized learning, teaching strategies and learning activities, and educational resources and learning devices.

These factors are being identified through intensive reading of related studies and looking into variables that are effective in other subject areas as well as the one not made mentioned in Mathematics to fill in the gap of existing related literature most especially looking into its effect to students' academic performance. Moreover, these factors are being considered by the researcher based on her observations and experiences. No previous research was found regarding the relationship between the aforementioned factors and students' academic performance. It is for this reason that the researcher conducted this study for the students to better able to solve mathematical problems and ensure more effective learning by keeping good memory retention skills.

Research Design

The research utilized the descriptive-correlational survey. It is descriptive in the sense that this study gathered information about the factors that are contributory to memory retention aspect and described the nature of the situation. It is also correlational because this study determined the relationship of variables such as extent of students' perception on the contributory factors to memory retention and students' extent of perception and their academic performance.

Research Environment

The study was conducted in Barangay Kalumboyan, Bayawan City. The said barangay is 21 kilometers away from the city. The study would specifically focus on the secondary school of Kalumboyan. Kalumboyan High School is one of the big schools within the Division of Bayawan City. The classrooms are well-ventilated and have basic facilities such as water supply and electrical connection. Moreover, they have laboratories with laboratory equipment and computer laboratory with internet connections.

Research Respondents

The respondents of the study were the Grade 7 students of Kalumboyan High School. Of the 255 total population, only 160 were the representatives. These students were chosen through systematic random sampling wherein every second of the list was part of the respondents.

Research Instruments

The study utilized researcher-made questionnaire which is an amalgamation of the modified standardized questionnaires combined with the researcher's readings from the related literature and studies. The whole questionnaire was presented to three experts in the field of Mathematics for content validity and cross checking if the items are aligned with the specific problems of the study.

A dry run was conducted to ensure item reliability. There were 30 selected students who served as the respondents. Through Cronbach's alpha test, the items were tested for its reliability. This test is considered as the most suitable type for survey research where items were not scored right or wrong and where each item could have different answers (McMillan and Schumacher, 2010). A value of 0.70 is considered acceptable, and higher values of alpha are more desirable. The results were the following: 0.738 for motivational practices and experiences, 0.864 for goal setting and accomplishments, 0.703 for personalized learning, 0.716 for teaching strategies and learning activities, and 0.701 for educational resources and learning devices. This implies that all of these found in the test were considered reliable since 0.70 is the cut-off rating.

Research Procedure

The researcher integrated all the corrections and suggestions of the panel members after the design hearing. A letter of request to conduct the study was sent to the Schools Division Superintendent of Bayawan City and District Supervisor (PSDS) upon the endorsement of the Vice Chancellor for Academic Affairs of Foundation University. Then, the signed and approved request was presented to the school principal and respective advisers as well as subject teachers of the students. During the distribution, the researcher explained to the students the purpose and importance of the research as well as the questionnaire itself. The students who served as the respondents were asked if they are willing to participate in the study and were also informed that the answered questions will not be revealed to anyone and that it will be safely kept for confidentiality. The retrieval of the questionnaires was done right after the students have answered the questions. The results were tallied using MS Excel and Megastat software, analyzed, and interpreted.

Findings

Table 1.1 Extent of Students' Perception on Motivational Practices and Experiences

	Indicators	$w\bar{x}$	Verbal Description	Extent of Perception
1.	I participate in the given learning activities.	4.42	Strongly Agree	Very High
2.	I answer given tests and accomplish my assignments.	4.33	Strongly Agree	Very High
3.	I enjoy the teaching strategies employed by the teacher.	4.32	Strongly Agree	Very High
4.	I communicate with my peers in collaborative group activities.	4.31	Strongly Agree	Very High
5.	I demonstrate awareness with the lesson objectives.	4.27	Strongly Agree	Very High
6.	I engage myself in class discussion and motivational strategies.	4.13	Agree	High
7.	I solve assigned tasks like word problems.	4.03	Agree	High
8.	I listen to my classmates on the experiences they shared.	4.03	Agree	High
9.	I connect presented concepts to real-life setting.	3.95	Agree	High
10.	I ask questions and clarifications for different concepts.	3.48	Agree	High

Composite	**4.13**	**Agree**	**High**

Legend: Scale Verbal Description Extent of Perception

4.21–5.00	Strongly Agree	Very High
3.41–4.20	Agree	High
2.61–3.40	Moderately Agree	Moderate
1.81–2.60	Disagree	Low
1.00–1.80	Strongly Disagree	Very Low

The extent of students' perception in motivational practices and experiences is presented in Table 1.1. As depicted in the table, the extent of students' perception on motivational practices and experiences is high as reflected in the composite mean of 4.13.

Item number 1, "I participate in the given learning activities," obtained the highest weighted mean of 4.42 verbally interpreted as "very high" extent of motivational practices. This means that students foster active participation in given class activities during learning sessions. Similar result also surfaced in the study of Field (2018) which pointed out that students are more likely to engage in learning when they can relate with the activities, procedures, and processes. In affirmation, Curtis (2012) supports this idea, putting emphasis on how instructional practices should take place in important context so that students could share something in the conduct of learning activities demonstrating their ownership of learning in the quest of knowledge.

Meanwhile, items on task assignments accomplished, teaching strategies used, and collaborative group activities implemented obtained the next highest weighted means of 4.33, 4.32, and 4.31, respectively. It could be implied that, of particular importance, teaching strategies, learning activities alongside lesson objectives, and tasks accomplishments have all shown to influence students' engagement. On the other hand, the item which obtained the least weighted mean is item number 10 on asking questions and clarifications on different concepts. It implies that students demonstrate inhibitions in asking teachers or peers for better lesson conceptualization. Teachers are supposed to create a non-threatening atmosphere, where every student is motivated to actively participate and exchange or even challenge others' views. In the words of Field (2018), motivational practices and experiences are important for academic success. This premise also put emphasis on how teachers should consider the practices that support students' experiences and encourage them to be motivated. In general, student motivation served as one of the significant factors playing a vital role for memory retention.

Table 1.2 Extent of Students' Perception on Goal Setting and Accomplishment

	Indicators	$w\bar{x}$	**Verbal Description**	**Extent of Perception**
1.	I participate in the activities needed for the goal accomplishment.	4.31	Strongly Agree	Very High
2.	I demonstrate awareness on the things I must achieve and develop.	4.19	Agree	High
3.	I review and reflect on the processes for goal achievement.	4.13	Agree	High
4.	I utilize strategies and techniques to accomplish the objectives.	4.11	Agree	High
5.	I take part in setting the learning goals and objectives.	4.09	Agree	High
6.	I use self-evaluation to know that set goals have been accomplished.	4.08	Agree	High
7.	I employ in my practices the values I develop.	4.04	Agree	High
8.	I monitor the progress I attain in the given lesson.	3.97	Agree	High
9.	I establish enhancement activities that paved way for goal manifestation.	3.93	Agree	High
10.	I see connection between the goals and its implications.	3.86	Agree	High
	Composite	**4.07**	**Agree**	**High**

Legend: Scale Verbal Description Extent of Perception

4.21–5.00	Strongly Agree	Very High
3.41–4.20	Agree	High
2.61–3.40	Moderately Agree	Moderate
1.81–2.60	Disagree	Low
1.00–1.80	Strongly Disagree	Very Low

Table 1.2 shows the extent of students' perceptions on goal setting and accomplishment considered as another factor of memory retention. This area has an overall composite mean of 4.07 verbally translated as "high" extent.

Item number 1, "I participate in the activities needed in goal accomplishment," obtained the highest weighted mean of 4.31 interpreted as "very high." This means that students actively take involvement in different activities that could contribute to attain the lessons' goals and objectives. In support, Susak (2016) noted that participation allows students to build knowledge, demonstrate skills, develop confidence, and apply theory into practice. Moreover, items on demonstrating awareness, reflecting on processes, and utilizing teachings strategies and techniques obtained the next highest weighted means of 4.19, 4.13, and 4.11, respectively, all denoting verbal equivalent of "high" extent. This runs parallel to the findings of Abe et al. (2014), Zohud (2015), and Francis (2017) on the conduct of learning activities and the utilization of teaching strategies and techniques to better support inclusionary education as well as enhance student motivation leading to memory retention.

On the other hand, item on seeing connection between the goals and its implications is interpreted as "high" with a weighted mean of 3.86. This signifies the need for students to establish connection between goals and its implications through real-life applications. Hunt (2015) also indicated the importance of setting specific and challenging goals to establish connection between goals and real-world connections.

In general, in the extent of students' perception on goal setting and accomplishment, students agree on the use of learning activities, utilization of teaching strategies, and reflecting on classroom processes among others as essential components playing vital roles for memory retention and paving to higher test scores. In this regard, it has been emphasized how goal setting has the potential to positively impact learning through teachers and students' clear understanding of specific targets (Bray & Mc Claskey, 2015; Dotson, 2016; Curtis, 2017, Comighud, 2019; Comighud & Arevalo, 2020).

Table 1.3 Extent of Students' Perception on Personalized Learning

	Indicators	$w\bar{x}$	Verbal Description	Extent of Perception
1.	I am responsible and in control with my own learning.	4.38	Strongly Agree	Very High
2.	I work well at my own pace in different activities.	4.36	Strongly Agree	Very High
3.	I participate well in hands-on and motivational strategies.	4.35	Strongly Agree	Very High
4.	I demonstrate excitement when the lessons suit my interest.	4.28	Strongly Agree	Very High
5.	I join activities that motivate me well.	4.27	Strongly Agree	Very High
6.	I engage myself in exploration and discoveries.	4.26	Strongly Agree	Very High
7.	I work with activities needed to be individually accomplished.	4.15	Agree	High
8.	I use own techniques in solving set of problems.	3.99	Agree	High
9.	I express my views and activities that address my needs.	3.93	Agree	High
10.	I make choices depending on my strengths and weaknesses.	3.84	Agree	High
	Composite	**4.18**	**Agree**	**High**

Legend: **Scale** **Verbal Description** **Extent of Perception**

4.21–5.00	Strongly Agree	Very High
3.41–4.20	Agree	High
2.61–3.40	Moderately Agree	Moderate
1.81–2.60	Disagree	Low
1.00–1.80	Strongly Disagree	Very Low

As indicated in Table 1.3, the extent of students' perceptions on personalized learning obtains composite mean of 4.18 verbally interpreted as "high."

Item number 1, "I am responsible and in control with my own learning," obtained the highest weighted mean of 4.38 verbally interpreted a "very high" extent. This means that students retain information presented better if they are practicing personalized learning. As students demonstrate personalized learning, they are likely to develop mastery through their own choices. In line with this, it is suggested for students to write learning goals of what they already know which serves as action plan that students strive for and realize accomplishments along the way (Fernchild, 2013; Pipkin, 2015; Comighud, 2019).

In addition, the items which obtained the next highest weighted means deal with working well with one's own pace in different activities, demonstrating excitement when lessons suit one's interests, and engaging oneself in exploration and discoveries. In support to this, students generally felt autonomous, competent, and related in their personalized learning environments, which contributed to their

intrinsic motivation, engagement, and well-being within these settings (Netcoh, 2017) through tailoring to their specific needs and interests (Huchens, 2014).

Also, the shift to personalization encourages educators to be open and flexible, so that learners become more invested in the design of their own learning path (Bray & Mc Claskey, 2015). Personalized learning requires more than a shift in thinking; it requires bringing in modern technology. Hence, developing evidence that student-centered learning promotes higher-order skills like critical thinking and problem solving, there are difficulties insupporting students to successfully complete activities. Further, Grant and Basye (2014) found that personalized learning is an incitement for educators to construct opportunities.

In general, as to the aspect of personalized learning, students are pushed from one content to another and one grade to another in a linear step-by-step process (Zmuda, Ullman, & Curtis, 2015). Our students need to invest in their own learning and passions. This paradigm shift takes the state- and teacher-prescribed educational plan and transfers the actions to the learner. When students take charge of personalizing their own learning, they dictate their pacing for instructional needs and utilize multiple methods and strategies to meet their own learning (Bray & Mc Claskey, 2015; Comighud & Arevalo, 2020).

Table 1.4 Extent of Students' Perception on Teaching Strategies and Learning Activities

	Indicators	$w\bar{x}$	**Verbal Description**	**Extent of Perception**
1.	My teacher employs strategies that developed learners' numeracy.	4.49	Strongly Agree	Very High
2.	My teacher employs interesting activities that encourage me to participate in the classes.	4.41	Strongly Agree	Very High
3.	My teacher applies strategies that develop critical and creative thinking skills.	4.39	Strongly Agree	Very High
4.	My teacher encourages me to ask questions and clarifications on the concepts presented.	4.38	Strongly Agree	Very High
5.	My teacher uses strategies that enhance learners' achievement.	4.36	Strongly Agree	Very High
6.	My teacher relates the lesson in real-life situations and practices.	4.35	Strongly Agree	Very High
7.	My teacher applies knowledge of content within and across curriculum teaching areas.	4.34	Strongly Agree	Very High
8.	My teacher assists and supports me to attain development and progress.	4.33	Strongly Agree	Very High
9.	My teacher allows me to collaborate with my peers to help me learn better.	4.33	Strongly Agree	Very High
10.	My teacher utilizes strategies that promote higher-order thinking abilities.	4.26	Strongly Agree	Very High
	Composite	**4.36**	**Strongly Agree**	**Very High**

Legend:	**Scale**	**Verbal Description**	**Extent of Perception**
	4.21–5.00	Strongly Agree	Very High
	3.41–4.20	Agree	High
	2.61–3.40	Moderately Agree	Moderate
	1.81–2.60	Disagree	Low
	1.00–1.80	Strongly Disagree	Very Low

As shown in Table 1.4, the extent of students' perceptions on classroom teaching strategies and learning activities resorted to an overall composite mean of 4.36 which indicated that they strongly agreed with all of the items, thereby translated into "very high" extent in its verbal equivalent.

Further, findings reveal that the use of teaching strategies which involve the development of learners' numeracy as well as critical and creative skills that enhance learners' achievement all contributes to better student engagement and higher memory retention rate. This

pertains to the vital element on building strong foundation in strengthening learners' ability. Hence, the findings of this study affirms the recommendations of Angeles (2018) that in this millennial era where individual differences are displayed by the learners, teachers are encouraged to implement varied techniques, methods, and approaches in order to advance student learning through the development of creative and critical thinking skills.

In addition to the previously mentioned, empirical evidence to well-established theory on the multidimensional nature of teaching and student learning has also been taken into consideration (Blazar, 2016). Over the past decade, research has confirmed that teachers have substantial impacts on their students' academic and lifelong success (Chetty, Friedman, & Rockoff, 2014; Jackson, 2012). Recent investigations also have uncovered some characteristics of effective classroom environments, including teachers' organizational skills and interactions with students (Loeb, Cohen, & Wyckoff, 2015; McCaffrey, Miller, & Staiger, 2015).

As to learning activities, the crucial tasks of fostering developmentally sequenced teaching and learning processes encourage teachers to be mindful of effective instructional planning which also includes successfully managing and implementing lessons. In affirmation, Marco-Bujosa and Levy (2016) shared the findings that teachers utilize the curriculum in many different ways for diverse reasons, and manifestations should be made to achieve the learning goals. Also, Kulasegaram and Rangachari (2017) indicated how learning depends on context, the application of developmentally sequenced process decided by the teachers and the learners' interactions in a set framework.

Table 1.5 Extent of Students' Perception on Educational Resources and Learning Devices

	Indicators	$w\bar{x}$	**Verbal Description**	**Extent of Perception**
1.	The school has a library with accessible resources.	4.63	Strongly Agree	Very High
2.	The school has laboratory equipment like computers.	4.63	Strongly Agree	Very High
3.	The teacher uses books for references.	4.56	Strongly Agree	Very High
4.	The teacher utilizes materials like learning workbooks.	4.44	Strongly Agree	Very High
5.	The teacher utilizes educational television.	4.44	Strongly Agree	Very High
6.	The teacher employs realia to integrate real-life concepts.	4.36	Strongly Agree	Very High
7.	The teacher utilizes PowerPoint presentation in the delivery of the lesson.	4.32	Strongly Agree	Very High
8.	The school has mathematics subject center.	4.29	Strongly Agree	Very High
9.	The teacher uses videos to deepen the concept understanding.	4.27	Strongly Agree	Very High
10.	The teacher uses ICT resources to present given mathematical concepts.	4.23	Strongly Agree	Very High
	Composite	**4.42**	**Strongly Agree**	**Very High**

Legend: **Scale** **Verbal Description** **Extent of Perception**

4.21–5.00	Strongly Agree	Very High
3.41–4.20	Agree	High
2.61–3.40	Moderately Agree	Moderate
1.81–2.60	Disagree	Low
1.00–1.80	Strongly Disagree	Very Low

Table 1.5indicates the extent of students' perception on educational resources and learning devices. It depicts the extent of students' perceptions on educational resources where an overall composite mean of 4.42 is verbally interpreted as "very high" extent. This means that educational resources have been seen a recent widespread integration into daily life, where access to vast amounts of information is now

available with ease. Today's generation of students has grown up with educational resources all around them in an ever-increasing manner. In addition, to create an effective 21st century classroom that meets the needs of the students, a modern teacher must factor student's motivation to learn and the effects technology has on inclusionary education (Francis, 2017). In line with this, updating teaching techniques better support inclusionary education, enhance student motivation, and improve memory retention.

Among the indicators, item on the availability of school library with accessible resources, laboratory equipment with computers, and use of books as references among others obtained the highest weighted means of 4.63, 4.63, and 4.56 all resorted to "very high" extent in their corresponding verbal equivalent. It means that in the modern information era, the wealth of the world's information can be accessed through a variety of educational resources and learning devices. Students have grown up with technology all around them, and teachers must adapt to these new ways of learning. Francis (2017) contends that teachers adapting to these new ways find methods of incorporating and utilizing these new forms of technology in class both in motivational and instructional levels. Hence, students who find themselves supported with ways of which they are used to will be more motivated to learn and feel included.

Moreover, the students of today are surrounded by technology, where access to an adequate collection of information is only a fingertip away. Technology supports the need for divergent learning approaches, helping to create a sense of community as well as a meaningful experience. Appropriate use of technology can serve the regular education classroom by motivating students in all disciplines like mathematics (Liu et al., 2016; Housand & Housand, 2012; Francis, 2013; Francis, 2017).

Table 1.6 Summary Table on the Extent of Students' Perception on Factors Contributory to Memory Retention

	Variables Correlated to Students' Academic Performance	$w\bar{x}$	**Verbal Description**	**Extent of Perception**
1.	Motivational practices and experiences	4.13	Agree	High
2.	Goal setting and accomplishment	4.07	Agree	High
3.	Personalized learning	4.18	Agree	High
4.	Teaching strategies and learning activities	4.36	Strongly Agree	Very High
5.	Educational resources and learning devices	4.42	Strongly Agree	Very High
	Overall	**4.23**	**Strongly Agree**	**Very High**

Legend:	**Scale**	**Verbal Description**	**Extent of Perception**
	4.21–5.00	Strongly Agree	Very High
	3.41–4.20	Agree	High
	2.61–3.40	Moderately Agree	Moderate
	1.81–2.60	Disagree	Low
	1.00–1.80	Strongly Disagree	Very Low

Table 1.6 displays the extent of students' perceptions on factors contributory to memory retention. Among the given variables, teaching strategies and learning activities as well as educational resources and learning devices obtained the highest weighted means of 4.36 and 4.42, respectively. This shows that the learners strongly agree that teachers' teaching strategies and learning activities as well as educational resources and learning devices greatly influence their ability to recall information. This result conforms to Bray (2012), who emphasized that when students are given the responsibility to take charge of their own learning, the better is the degree of their understanding and mastery of the concepts learned.

Foremost, as to learning activities, literature supports made mention on how recent years have seen an upsurge of interest in learner-centeredness which has marked a paradigm shift in the world of education (Quinonez, 2014). Taking into account, learner characteristics, engaging students in the learning process, and promoting collaboration among students have been brought into the forefront. Keeping in sight the rising popularity of learning, comprehending what it encompasses appear to be of high significance (Ross, 2017; Kosar & Bedir, 2018).

Additionally, Blazer's (2011) ideas on Mathematical discourse in the classroom were used to facilitate students' deeper understanding of the material. Mathematics should have high interest appeal as it offers learners a challenge, the opportunity to choose strategies, pose questions, use logic, and interpret conclusions. As to the use of educational resources, with mathematics becoming more important in

the growing technological world, teachers need to focus on how to create school environments that are more Mathematics friendly (Taylor, 2018).

Furthermore, items on motivational practices and experiences, goal setting and accomplishments, and personalized learning are among the indicators which obtained "high" extent of students' perceptions on factors contributory to memory retention. As to motivational practices, Vibulphol (2016) contends that while autonomy controlling strategies were commonly used in these classes, autonomy-support strategies were found only in highly motivated and high-performing classrooms.

With regard to goal setting and accomplishment, Dotson (2016) put emphasis that goal setting should serve as the process of establishing a direction for learning. In view thereof, it is recommended for students to develop a plan of action. Simply writing down a goal does not impact student learning. It is the activities that the student will participate in during the learning process that have the potential to positively influence student achievement. In collaboration with the teacher, the student will need to brainstorm different possibilities beyond core instruction that could increase achievement.Additionally, as student ownership is a critical piece in goal setting, progress monitoring provides a system to ensure that students value and own their learning. And as to personalized learning, Ramos (2015) revealed that the students exposed to the personalized learning environment had more positive perceptions.

Table 2 Performance of the Students in Mathematics

Rating	Verbal Description	Frequency	Percent
90%–100%	Outstanding	5	3.12
85%–89%	Very Satisfactory	14	8.75
80%–84%	Satisfactory	38	23.75
75%–79%	Fairly Satisfactory	103	64.38
Below 75%	Did Not Meet Expectations		
Total		160	100
Average	**79.05 (Fairly Satisfactory)**		
Sd	**4.25**		

Table 2 shows the performance of the students in Mathematics where the respondents of the study obtained an average of 79.05 verbally interpreted as fairly satisfactory. A closer look on the data presented would reveal that 5 or 3.12% of the students got outstanding rating and 14 or 8.75% were at very satisfactory level, while 38 or 23.75% garnered satisfactory rating and 103 or 64.38% were at fairly satisfactory level. Based on the findings, it could be inferred that majority of the students are at fairly satisfactory level in their performance in mathematics.

Based on DO No. 8, s. of 2015, the Policy Guidelines on Classroom Assessment for the K to 12 Basic Education Program, classroom assessment is an integral part of curriculum implementation which allows teachers to track and measure learners' progress and to adjust instruction accordingly. Also, based on the current findings, the students obtained a fairly satisfactory verbal equivalent which means that students on average got a rating of 79.05. Hence, teachers and students are encouraged to work together to increase students' academic performance in mathematics considering more factors of memory retention.

Table 3 Relationship between the Profile of the Students and the Extent to which They Perceived the Factors Contributory to Memory Retention

Factors	Comp. Value	p-value	Decision	Remark
1. Motivational practices and experiences				
Age	r_s =0.111	0.161	Do not reject H_{o1}	Not significant
Sex	x^2 = 21.07	0.000	Reject H_{o1}	Significant
	Male:$w\bar{x}$= 4.08			
	Female:$w\bar{x}$= 4.57			
Income	r_s = 0.138	0.082	Do not reject H_{o1}	Not significant
2. Goal setting and accomplishments				
Age	r_s =0.097	0.224	Do not reject H_{o1}	Not significant
Sex	x^2 = 23.58	0.000	Reject H_{o1}	Significant

	Male:$w\bar{x}$= 3.98 Female:$w\bar{x}$= 4.49			
Income	r_s = 0.147	0.064	Do not reject H_{o1}	Not significant
3. Personalized learning				
Age	r_s = 0.101	0.206	Do not reject H_{o1}	Not significant
Sex	x^2 = 20.30	0.000	Reject H_{o1}	Significant
	Male:$w\bar{x}$= 4.14 Female:$w\bar{x}$= 4.61			
Income	r_s =0.205	0.009	Reject H_{o1}	Significant
4. Classroom teaching strategies and learning activities				
Age	r_s = 0.145	0.059	Do not reject H_{o1}	Not significant
Sex	x^2 = 7.06	0.029	Reject H_{o1}	Significant
	Male:$w\bar{x}$= 4.47 Female:$w\bar{x}$= 4.71			
Income	r_s = 0.123	0.123	Do not reject H_{o1}	Not significant
5. Educational resources and learning devices				
Age	r_s = 0.081	0.305	Do not reject H_{o1}	Not significant
Sex	x^2 = 3.04	0.081	Do not reject H_{o1}	Not significant
Income	r_s = 0.007	0.928	Do not reject H_{o1}	Not significant

Level of significance = 0.05

Legend: **Value of r** **Strength of Relationship** (Statistical Correlation, 2009)

Between	± 0.50	and ± 1.00	± strong relationship
Between	± 0.30	and ± 0.49	± moderate relationship
Between	± 0.10	and ± 0.29	± weak relationship
Between	± 0.01	and ± 0.09	± very weak relationship

Table 3 presents the data on the relationship between the profile of the students and the extent to which they perceived the different factors contributory to memory retention. Their perceptions are based on their participation and what occurred in the classroom.

In terms of age, all p-values are greater than the level of significance (0.05). This finding will not warrant rejection of the null hypothesis. This means that there is no significant relationship between the age of the students and the 5 factors contributory to memory retention. This may imply that regardless of age, students may have the same level of memory retention. The said finding is in consonance to the study of Catinas (2017) revealing no significant relationship between the age of students and factors contributing to memory retention rate. However, it negates the findings of the study of Navarro, Rubio, and Olivares (2015) which states that the differences in the experiences and maturation of older students involve a relatively better performance in academic settings, which is known as the relative age effect.

Considering the sex of the students, the p-values in the following factors are less than the level of significance (0.05): (a) motivational practices and experiences, (b) goal setting and accomplishments, (c) personalized learning, and (d) classroom teaching strategies and learning activities. This finding allows rejection of the null hypothesis. This means that a relationship exists between the sex of the students and the aforementioned factors. Based on the values of the weighted means, results indicate that female students have higher perceptions on (a) motivational practices and experiences, (b) goal setting and accomplishments, (c) personalized learning, and (d) classroom teaching strategies and learning activities than malestudents. Since their perceptions are based on their participation or experiences in school, this signifies that female students participate more than male students on activities that are contributory to memory retention.

In support to the findings shown in the table, Becirovic (2017) revealed that in his study, the results demonstrate a statistically significant relationship between sex and motivation where female students are more successful at than male students at each group/grade level. Also, as to goal setting, the findings showed that there is a significant sex difference in students' memory retention rate with female participants recording a higher mean score than males. Moreover, as to personalized learning, the findings run parallel to the results showed where female students used metacognition more than male students in both math and social studies and that male and female students both adopt a domain-general approach to metacognition, meaning they use the same skills to help them learn in both school subjects. It was also found that male and female students are both motivated to learn in math and social studies. Specifically, in math, males and females both believed that they could enhance their abilities through time and effort. These results suggest that female students are more likely than male

students to use metacognitive skills to help them learn across school subjects and that male and female students are usually motivated to the same degree, except female students are higher in engagement and ability beliefs than male students (Jenkins, 2018).

With regard to family monthly income, it is only in the area of personalized learning that a relationship exists ($p = 0.009 < \alpha = 0.05$). This means that students with higher family monthly income tend to practice better personalized learning than those with lower family monthly income. This further implies that those students who came from family with high earnings could more likely be provided with basic educational needs and could purchase more supplemental resources working well with their own pace suiting into their interest (Hiuchens, 2014).

Table 4 Relationship between the Extent to which Students Perceived the Factors Contributory to Memory Retention and Their Academic Performance

	Variables Correlated to Students' Academic Performance	Comp. r_s	p-value	Decision	Remark
1.	Motivational practices and experiences	0.300	0.000	Reject H_{o2}	Significant
2.	Goal setting and accomplishments	0.301	0.000	Reject H_{o2}	Significant
3.	Personalized learning	0.344	0.000	Reject H_{o2}	Significant
4.	Classroom teaching strategies and learning activities	0.317	0.000	Reject H_{o2}	Significant
5.	Educational resources	0.021	0.795	Do not reject H_{o2}	Not significant
	Overall	**0.340**	**0.000**	**Reject H_{o2}**	**Significant**

Level of significance = 0.05

Legend: **Value of r** **Strength of Relationship** (Statistical Correlation, 2009)

Between	± 0.50	and ± 1.00	± strong relationship
Between	± 0.30	and ± 0.49	± moderate relationship
Between	± 0.10	and ± 0.29	± weak relationship
Between	± 0.01	and ± 0.09	± very weak relationship

Table 4 indicates that the following factors are moderately and significantly related to the students' academic performance: (a) motivational practices and experiences, (b) goal setting and accomplishments, (c) personalized learning, and (d) classroom teaching strategies and learning activities (p-values $< \alpha = 0.05$). This implies that the higher the perceptions (based on their participation/experiences) of the students, on the mentioned factors, the better is their academic performance in math.

Foremost, as to motivational practices and experiences, this finding corroborates that of Arulmoly and Arulmoly (2017) who stressed that successful students have significant higher motivation for achievement than unsuccessful students. In similar way, the study reveals how academic achievement is highly correlated with student's motivation which lends a good support to the present findings. Learning mathematics can be arduous but motivation can energize children to invest the effort and utilize the strategies necessary to be successful (Froiland, Oros, Smith, and Hirchert, 2012 ; Comighud & Arevalo, 2020). Many researchers have also revealed that in mathematics education, student motivation plays a key role, and mathematical achievement is related to both intrinsic and extrinsic motivational factors. Also, motivation leads to high self-esteem, indicating a clear predictor of students' academic performance in mathematics. In addition, a study by Güvendir (2013) found that students should have high motivation in order to achieve a high standard of mathematical education. The findings of Phuntsho (2017) also indicated that students' motivation toward learning mathematics was mostly influenced by reinforcements, and a significant difference in the students' motivation toward learning mathematics was also observed that ultimately determined students' academic achievement results.

Secondly, as to goal setting and accomplishment, the finding corroborated with that of Abe et al. (2013) stating that goal-setting intervention was recommended as a strategy to enhance students' academic performance. Moreover, Dotson (2016) noted that goal setting also establishes a direction for learning can increase student motivation and higher academic achievement. In the same manner, Clift (2015) in her study combined two separate activities into a single intervention.

Thirdly, in drawing the relationship between personalized learning and students' academic achievement in mathematics, students' choice is considered to have a similar set of benefits to those associated with personalized learning. In particular, by empowering students to exercise a degree of autonomous decision making, students' choice makes students active participants in their educations, thereby increasing levels of engagement (Hanover Research, 2014). Notably, researchers highlight the fact that such autonomy is generally associated with greater personal well-being and satisfaction in educational environments, as well as in terms of academic performance. Studies have found that students given a degree of choice about their learning showed improvement on standardized tests (Wolf, 2010; Patrick et al, 2013, Hanover Research, 2014). Moreover, the results of the study of Sereno (2018) confirmed previous findings which had indicated the use of

personalized learning practices which also supported previous research which indicate that high-quality teacher professional development supports teachers' implementation of personalized learning practices leading to higher students' academic achievement

Fourthly, in teaching strategies and its relationship with students' academic performance in mathematics, Blazar (2016) contends that teachers through the teaching strategies they used in classroom processes have large effects on a range of students' attitudes and behaviors in addition to their academic performance. These teacher effectestimates have moderate to strong predictive validity. Further, student outcomes arepredicted by teaching practices most proximal to these measures (e.g., between teachers' math errors and students' math achievement and between teachers' classroom organization and students' behavior in class) all leading to increase memory retention. Hence, over the past decade, research has confirmed that teachers have substantial impacts on their students' academic and lifelong success (Chetty, Friedman, &Rockoff, 2014; Jackson, 2012). Recent investigations also have uncovered some characteristics of effective classroom environments, including teachers' organizational skills and interactions with students (Loeb, Cohen, & Wyckoff, 2015; McCaffrey, Miller, &Staiger, 2013).

In addition, having good strategies of reinforcement can attract the attention and boost the interest of the students in learning. Hence, it is important that teacher must make instruction interesting using various strategies and materials. That way, it will make the learning of mathematics not only interesting butalso engaging and motivating and investigative and adventurous. Also, in the study of Clift (2015), the results provide statistical evidence in support of the inclusion of teaching strategies and learning activities into instructional routines to improve academic achievement. Further, it has been indicated that expanding mathematics practice for enrichment on a computer and setting different goals for individual student had a positive impact on student achievement.

Finally, as to the relationship between educational resources and the students' academic achievement, it is regarded that students of today are surrounded by technology, where access to a vast collection of information is only a fingertip away. Many in the field of pedagogy state that technology integration is helpful, meaningful, and necessary for a school to function successfully. Appropriate use of educational resources and learning devices can serve the regular education classroom by motivating students (Housand&Housand, 2012; Francis, 2013; Liu, 2016; Francis, 2017).

Generally, the students'perception on the different factors is very high, and their overall academic performance is in fairly satisfactory level. It implies that students with higher perceptions on the different factors tend to obtain better academic performance than those students with lower perceptions. Students' perception is based on their participation or experiences, and having high perception indicates better engagement to the lesson. Hence, this results to better academic performance.

On the other hand, there are some other factors that could contribute to their academic performance. It could be the subject itself assome students claimed that mathematics is difficult (complex), scary, and not enjoyable to learn (Hayati &Ulya, 2019).

Conclusions

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

1. The extent of students' perception on factors contributory to memory retention is "high" in terms of (a) motivational practices and experiences, (b) goal setting and accomplishment, and (c) personalized learning. Likewise, it is "very high" in terms of (a) teaching strategies and learning activities and (b) educational resources and learning devices.
2. The academic performance of the students is in the fairly satisfactory level.
3. There is a significant relationship between the following:
   (a) Sex of the students and the following factors contributory to memory retention: (i) motivational practices and experiences, (ii) goal setting and accomplishment, (iii) personalized learning, and (iv) teaching strategies and learning devices. The results are in favor of the female students.
   (b) Family monthly income of the students and personalized learning in favor of the higher income.
4. There is a significant and moderate relationship between the following factors and students' academic performance: (a) motivational practices and experiences, (b) goal setting and accomplishment, (c) personalized learning, and (d) teaching strategies and learning activities.

   In general, it can be concluded that the extent to which students perceived the factors contributory to memory retention is "very high" and has a moderate and significant relationship to the academic performance in mathematics.

Recommendations

In light of the conclusions drawn, the researcher arrived to the following recommendations:

1. Teachers are encouraged to increase the use of motivational strategies, goal setting practices, personalized learning techniques, teaching strategies, learning activities, and educational resources in the conduct of teaching–learning process to facilitate instructional process and enhance learners' achievement.

2. The utilization of motivational practices and experiences, goal setting and accomplishments, personalized learning, teaching strategies and learning activities, as well as educational resources and learning devices may be strengthened in the delivery of classroom instruction to increase memory retention.
3. The results of this study may be further incorporated in peer professional discussions like Learning Action Cell (LAC) sessions to develop awareness among teacher–educators and incorporate its practice in classroom instruction.
4. For the future researchers, similar studies may be conducted to a wider scope using increased samples or an entire population to promote generalizability of the results. It is also advised to utilize qualitative data collection and examine more variables for a much more comprehensive output.

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Appendix

Questionnaire

Factors on Memory Retention: Effect to Students' Academic Performance in Mathematics

This questionnaire aims to identify the factors which are contributory to memory retention affecting students' academic performance in mathematics. Kindly answer the following questions honestly. It is assured that the information you share will be treated with utmost confidentiality observing the ethical standards of research. Thank you so much for your time and cooperation.

Part I:
Name: _____

Age: _____ Family Monthly Income: _____

Gender: M☐e Femal☐

Part II:
Direction: 1. Read each statement. Please respond truthfully as you can.
2. Place a check mark (/) on the column of your choice. Be guided by the following scale.

Verbal Description	**Scale**	**Explanations**
Strongly Agree (SA)	4.21–5.00	The feeling/behavior is felt/manifested by the students81%–100% of the time.
Agree (A)	3.41–4.20	The feeling/behavior is felt/manifested by the students 61%–80% of the time.
Moderately Agree (MA)	2.61–3.40	The feeling/behavior is felt/manifested by the students 41%–60% of the time.
Disagree (D)	1.81–2.60	The feeling/behavior is felt/manifested by the students 76%–100% of the time.
Strongly Disagree (SD)	1.00–1.80	The feeling/behavior is felt/manifested by the student's76%–100% of the time.

	Strongly Agree (5)	Agree (4)	Moderately Agree (3)	Disagree (2)	Strongly Disagree (1)
Motivational Practices and Experiences					
1. I demonstrate awareness with the lesson objectives.					
2. I enjoy the teaching strategies employed by the teacher.					
3. I engage myself in class discussion and motivational strategies.					
4. I participate in the given learning activities.					
5. I ask questions and clarifications for different concepts.					
6. I solve assigned tasks like word problems.					
7. I communicate with my peers in collaborative group activities.					
8. I listen to my classmates on the experiences they shared.					
9. I connect presented concepts to real-life setting.					
10. I answer given tests and accomplish my assignments.					
Goal Setting and Accomplishments					

1. I take part in setting the learning goals and objectives.					
2. I utilize strategies and techniques to accomplish the objectives.					
3. I participate in the activities needed for the goal accomplishment.					
4. I review and reflect on the processes for goal achievement.					
5. I monitor the progress I attain in the given lesson.					
6. I demonstrate awareness on the things I must achieve and develop.					
7. I establish enhancement activities that paved way for goal manifestation.					
8. I see connection between the goals and its implications.					
9. I employ in my practices the values I develop.					
10. I use self-evaluation to know that set goals have been accomplished.					
Personalized Learning					
1. I am responsible and in control with my own learning.					
2. I demonstrate excitement when the lessons suit my interest.					
3. I make choices depending on my strengths and weaknesses.					
4. I work with activities needed to be individually accomplished.					
5. I use own techniques in solving set of problems.					
6. I join activities that motivate me well.					
7. I express my views and activities that address my needs.					
8. I work well at my own pace in different activities					
9. I engage myself in exploration and discoveries.					
10. I participate well in hands-on and motivational strategies.					
Teaching Strategies and Learning Activities					
1. My teacher applies knowledge of content within and across curriculum teaching areas.					
2. My teacher applies strategies that develop critical and creative thinking skills.					
3. My teacher utilizes strategies that promote higher-order thinking abilities.					
4. My teacher uses strategies that enhance learners' achievement.					
5. My teacher employs strategies that developed learners' numeracy.					
6. My teacher employs interesting activities that encourage me to participate in the classes.					
7. My teacher assists and supports me to attain development and progress.					
8. My teacher encourages me to ask questions and clarifications on the concepts presented.					
9. My teacher allows me to collaborate with my peers to help me learn better.					
10. My teacher relates the lesson in real-life situations and practices.					

Educational Resources and Learning Devices					
1. The school has a library with accessible resources.					
2. The school has laboratory equipment like computers.					
3. The school has mathematics subject center.					
4. The teacher uses books for references.					
5. The teacher utilizes materials like learning workbooks.					
6. The teacher employs realia to integrate real-life concepts.					
7. The teacher utilizes PowerPoint presentation in the delivery of the lesson.					
8. The teacher uses videos to deepen the concept understanding.					
9. The teacher utilizes educational television.					
10. The teacher uses ICT resources to present given mathematical concepts.					

Part III. What is the academic performance of the student as depicted in his/her Mathematics grade average?

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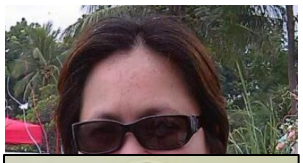

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Impact of the Covid-19 Pandemic on Development and Research of Students in Kosovo

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Abstract: The object of this research will be to identify and explain the impact that the global pandemic Covid-19 has had on the development and scientific progress of students in the Republic of Kosovo.

To achieve this objective, we will conduct a questionnaire to a sample of 1000 subjects, who will be students of different fields and different Universities in Kosovo, from which we will collect the necessary data.

The collected data will be processed to achieve the overall results and conclusions of the research.

The theoretical basis literature will also be used, which will be more in the field of psychology and scientific practice, to see and interpret more accurately the psychological and personal factors that have developed as a result of the presence of Covid-19, which have the opportunity to directly influence the progress and scientific development of students during this period.

Keywords: Study, pandemic, research progress, students, scientific research etj

1 Introduction

In this paper we will highlight the problems and shortcomings that the process of academic and scientific development of students has had during the period of the global pandemic Covid - 19.

With the help of theoretical literature, research and considerable materials that refer to this topic, we will be able to make a presentation of the issue in terms of general clichés and external causes that have influenced this development. This paper also aims to analyze and interpret the influence of psychological and mental factors in the realization of scientific works. Therefore, according to us, this short scientific paper is an initial effort to understand the process of scientific development and advancement of students in the Republic of Kosovo during this special period.

2 Methods to be used

The methods that we will use for conducting research, data collection and their interpretation will be mainly quantitative and comparative methods, accompanied and used according to need and appropriateness.

Of course, such processes will also be part of: resources, Literature review, data collection, data analysis, interpretation of results, implication of our study and deriving the meaning of our research.

3 Expected results

We hope that through this article, we will help highlight and understand the difficulties, problems, shortcomings and defects that have been caused by the isolation situation and the existence of the global pandemic, which has greatly changed the approach to knowledge, study and development of scientific works, but we can say that it has also changed our view of life and the future. We believe that it is a topic of interest for a closer acquaintance with the problems, results and scientific progress of students, so that we can also reflect on possible improvements in the realization of a more qualitative teaching and scientific process. We also believe that its results will drive attention to the importance of online books and literature, but also to the physical presence and practical and bodily experiments in some fields.

4 Theoretical framework

The first measures from the declaration of the world pandemic

The proclamation of the world pandemic, of course, was a blow to all people and to all walks of life, but we can say that the first to react and take over the continuation of their activity, were precisely the universities and schools. After the global closure as a result of the increasing spread of the disease[1] education of all levels shifted to another space and reality, the virtual one.

Then consolidated reactions have been state and institutional international, as we understand from the reaction of the Council of Europe where it states that:: "The Council of Europe's Department of Education has developed a special section with valuable information on how the CoE is responding to the crisis, good practices from member states, including new and existing learning resources addressing current challenges, and that can be used by teachers, other education professionals and the general public." [2] Giving us to understand that the countries of the region such as Albania are included in these sections, making it possible to cope as easily as possible with this new situation of teaching. An argument which is confirmed by the fact that in the same year we see that in Montenegro Uniceff joins to help the progress of teaching[3] in schools there. So the whole of Europe took steps to continue teaching and develop it generally online.

Even in the case of Kosovo, despite the presence of a large number of pupils [4] and students and conditions not comparable to European countries, we also notice that there has been an immediate reaction from MASHT[5] and private universities.

Thus, according to the Kosovo Education Center, "the educational authorities at the central and local level envisaged the organization of the learning process according to three scenarios: Scenario A - school learning; Scenario B - combined learning and scenario C - distance learning, defined in the general guide of MEST for the organization of the school year 2020/213 in the conditions and circumstances created by the pandemic COVID-19." [6]

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[1] UNESCO: United nations educational, scientific and cultural organization. COVID19 educational disruption and response. UNESCO, Paris, France (2020) Available at: https://en.unesco.org/themes/education-emergencies/coronavirus-school-closures. Accessed 17 Nov 2020.

[2] Concil of Europe: Edukimi digjital gjatë pandemisë së Covid-19 – përvojat e shteteve anëtare. (14 / 05/ 2020.) Available: https://www.coe.int/sq/web/tirana/-/digital-education-under-covid-19-pandemic-experiences-from-member-states

[3]Crna Gora: Ne do të mbështesim tejkalimin e sfidave në arsim gjatë pandemisë COVID-19. (14/11/ 2020)

Available at: https://www.unicef.org/montenegro/sq/histori/ne-do-t%C3%AB-mb%C3%ABshtesim-tejkalimin-e-sfidave-n%C3%AB-arsim-gjat%C3%AB-pandemis%C3%AB-covid-19

[4] MASHT: Statistical notes. Data on pre-university education. Education Information Management System. Kosovo. Prishtinë (2020c). p. 2. Available at: https://masht.rks-gov.net/uploads/2020/02/shenime-statistikore-2019-2020-arsimi-parauniversitar-2.pdf

[5] Note: we are referring here to the Ministry of Education, Science and Technology in the Republic of Kosovo.

[6] KEC: Arsimi në Kosovë gjatë pandemisë Covid – 19. http://kec-ks.org/ëp-content/uploads/2021/04/Editorial_Arsimi-n%C3%AB-Kosov%C3%AB-gjat%C3%AB-pandemis%C3%AB-COVID-19-FINAL.pdf , p.1

Scenarios that are accompanied by the use of the necessary tools that were supposed to be put to work. Therefore, in order to achieve this, the MASHT of Kosovo has given instructions to use different video recordings for the realization of teaching, suitable platforms such as; Zoom, Google Meet, Skype, and Google Classroom, where the latter have had the opportunity to share homework and other learning materials. We should also say that "during the same period, MASHT in cooperation with donors such as UNICEF and Save the Children launched two online platforms, namely, the platform for early childhood education for the age group 0-6 years and the platform for inclusive education ."[7]

Both of these platforms, the first [8] and the second [9], mentioned above, together with the general guide of MEST for the organization of the school year 2020/213 [10] are the efforts for the realization of an easy transition from reality to virtuality, from physical education with all its conditions and tools, to the online one with brand new and other tools.

5 Hypothesis and development
Research and challenges during the pandemic

As we saw from the information presented in the above issue, the conditions were created for a new state and situation. Teaching and knowledge transfer will already be done, in most cases virtually and this will include assignments, seminar papers, conferences, articles and publications, etc. The questions that have arisen for us have to do with the process of accomplishing these tasks and the nature of the many obstacles that students may have faced. One of them is that of fatigue, stress and the problem of adapting to a new change, with a different reality[11], such as the virtual one in learning realization. Because, according to researchers, this reality can cause a decrease in the productivity of teachers, but also in their performance and job satisfaction. [12] Since this change, to which each individual, according to researchers, reacts according to his way and his mental ability, so we have different reactions, has a negative impact on the performance and satisfaction of teachers, but what about students? How much does the change of reality, resistance to change, stress and other obstacles affect their scientific progress and their performance?

6 Procedure

In order to discover this problem and answer the questions posed above, but also taking into account all the factors that may affect the process of scientific research in these new conditions, we have built a questionnaire that contains questions of many aspects of student academic and scientific development. The questionnaires were constructed using Google forms and were distributed via email. Students have been informed their data will be confidential. The questionnaires were sent to 7 universities in the Republic of Kosovo, namely in; University of Business and Technology, University of Prizren "Ukshin Hoti", University "Fehmi Agani" - Gjakova, University "Kadri Zeka" - Gjilan, University "Haxhi Zeka" - Peja and the University "Isa Boletini" - Mitrovica. This questionnaire was attended by a total of 500 students from various fields such as; Albanian language and literature, Journalism, Nursing, Business Management and

[7]KEC: Arsimi në Kosovë gjatë pandemisë Covid – 19. http://kec-ks.org/ëp-content/uploads/2021/04/Editorial_Arsimi-n%C3%AB-Kosov%C3%AB-gjat%C3%AB-pandemis%C3%AB-COVID-19-FINAL.pdf, p.1

[8] MASHT: Edukimi në Distancë: Kujdesi, Zhvillimi dhe Edukimi në Fëmijërinë e Hershme për Moshën 0-6 vjeç. Kosovë (Prill 2020.) Available at: https://edukimihershem.rks-gov.net/

[9] MASHT: Mësimi në distance për Fëmijët me Nevoja të Veçanta Arsimore – Arsimi Gjithëpërfshirës. Kosovë (Prill 2020.) Available at: http://arsimigjitheperfshires.rks-gov.net/

[10]MASHT: Udhëzues për Organizimin e Mësimit në Vitin Shkollor 2020/21 në Kushtet e Pandemisë COVID-19. Kosovë (Gusht, 2020.) Available at: https://masht.rks-gov.net/uploads/2020/08/udhezuesi-final-file-10-09-2020_1.pdf

[11] Palmer., I., Dunford., R., & Akin., G: Managing organizational change: A multiple perspective approach (3nd ed.). McGraw-Hill, London (2017) 249 – 272.

[12] Hyseni Duraku., Zamira: Ndikimi i COVID-19 në arsim, mirëqenien e mësimdhënësve, prindërve dhe nxënësve: Sfidat e ndërlidhura me mësimin në distancë (online) dhe mundësitë për përmirësimin e cilësisë së arsimit. Prishtinë (April, 2020) p. 21 Available at: https://www.researchgate.net/publication/353038765_Ndikimi_i_pandemise_COVID19_ne_arsim_dhe_mireqenie_Implikime_praktike_dhe_mesime_per_te_ardhmen

Economics, Nutrition, Food Sciences and biotechnology, Law, etc. Also from different levels of studies, mainly Bachelor and Master. The data were collected after the end of the exam period in July - August 2021, the time at which we undertook and conducted this study and which was appropriate because the students had no other commitments and were able to respond to our questionnaire. The completion of this questionnaire was done online and through it we have collected data which we will present below.

7 Discussion and interpretation

From the variables that we have raised we have managed to obtain results for various aspects of the research process, as we have raised them in accordance with our investigative interests. Therefore, we have managed to have data on the process of academic development, concrete obstacles and external aspects of this process, such as the mental, emotional and psychological state of students during this process.

We have taken the data and compiled it into tables to make it more accessible and easier to understand, so we can see each of them below.

Questions	Not at all	Only a little	Rather much	Vary much
Question 1 - Have you had seminar works and conferences?	**5 %**	**11 %**	**49 %**	**35 %**
Question 3 - Has the internet helped you in your research?	**5%**	**16%**	**61 %**	**21%**
Question 4 - What hindered you the most in your research during the pandemic?	***Lack of literature***	***Impossibility of conducting experiments***	***Lack of discussion with others***	***Lack of tools and inability to move***
	12 %	**18%**	**24 %**	**46 %**

Questions	Not at all	Only a little	Rather much	Vary much
Question 5 - How much has the lack of materials affected your work?	**7 %**	**42 %**	**46 %**	**5 %**
P Question 6 - Did you have the will to carry out your work during the pandemic?	**7 %**	**55%**	**29 %**	**9 %**
Question 7 - How much has the fear of the pandemic affected your concentration and research work?	**26 %**	**47 %**	**23%**	**4 %**

Question 8 - How much has the closure (physical isolation) affected your scientific development and work?	**10 %**	**44 %**	**42 %**	**4 %**
Question 9 - How much has online learning affected your academic and scientific progress?	**10 %**	**35 %**	**50 %**	**5%**
Question 10 - How much has the pandemic affected the results and evaluation of your research?	**8 %**	**44 %**	**43 %**	**5 %**

Therefore, as we notice from these results, the students during this period have been busy with papers, activities and conferences, as the largest percentage of them say that they have had many and extremely.

We have also come to realize that the internet has been the main helper for conducting research. So, despite the new conditions, students have managed to adapt and use the accessible resources they have had.

In terms of obstacles for students and their research process, however, a higher percentage remains "lack of tools and inability to move", a factor that is important for the realization of works of an experimental, practical nature and those which requires physical presence for their realization.

During the analysis of the answers we notice that despite the fact that the Internet has been a major helper in the realization of works or research of students they have been most hindered in this process by the lack of materials, of course including the theorical literature.

The other group of variables raised focuses on aspects related to the volition, preparedness and condition of students to work in these completely new conditions and which moreover are unexpectedly installed. The results tell us that students have had very little willpower to work during this period, although more time has been available.

Students, on the other hand, say that fear has had little effect on their concentration and academic performance. So we are dealing with a state of laziness and lack of willpower to walk normally within this reality, not a feeling of fear towards it.

Meanwhile, in terms of their academic results and progress, they think that online teaching has greatly influenced their evaluation and development, an issue which has been addressed in more detail in the free questions addressed to students.

Question 11 - Do you think that some scientific research can be better done only online without the need for physical presence?	Online only	Physiccally
	40 %	**60 %**
Question 13 - If you had the opportunity to choose, for your academic and research progress, would you choose teaching and research online or physically and why?	**20 %**	**80 %**

Pyetjet	Not at all	Only a little	Rather much	Vary much

Question 12 - Do you think that the pandemic has also affected the work of professors and the seriousness of the evaluation of your work?	**20 %**	**40 %**	**30 %**	**10 %**
Question 14 - How much do you think you have gained from the research experiences you have had during this period?	**2 %**	**34 %**	**52 %**	**12 %**

Their familiarity with research processes and types of studies has led students to express that some research cannot be fully accomplished well without physical presence.

And likewise in terms of academic progress and teaching development if they would have the choice to determine how to do it online or physically, 80% of them said they would choose the physical one as more practical, comfortable, easy, understandable and feasible.

As for the evaluation and seriousness by the professors in these new conditions, the students answered that the pandemic has had little effect and that the impartiality and seriousness of the professors is not questioned regardless of the conditions.

As for the acquisition from this period of studies realized in a new reality, the students show that they have benefited a lot from the research experiences. So, focusing only on online tools and the internet has made them know in more detail the programs, ways and techniques of conducting research that they had not previously tried.

Question 2: Question with comments How did you find the materials you needed?	-	-	-	-
Question 15 - Questions with comments What personal comment do you have about individual research and the impact of the pandemic?				

In the completed questionnaire we also directed questions with comments, longer, in which students were able to give their opinion. The first thing that stands out in these types of questions is that not everyone likes to answer or give a comment about the question posed, but from those who answered (60 %) we noticed that the most used tool for finding the materials you needed has been the internet, online libraries and less libraries.

While the personal comments on the topics covered by the entire research questionnaire have been very different, some of them even very opposite to each other, a fact which is understood because each person has seen the adaptation to a new reality. and experienced in his own way. However, most of them think that there have been more negative effects and consequences than the positive ones, of the pandemic in their scientific development and their academic progress.

In some it has influenced motivation, in some in the great lack of materials, in some in the non-realization of experiments, in others lack of will and concentration and many other consequences, but the general thing is that the comments that define it prevail. as a period that despite its positive sides, has had a more negative impact on them as individuals and on their academic and professional development.

8 Implication of the study

The data collected in this study were of a transverse nature due to which it is difficult to establish the causal relationship between the variables. Any future research can do a more detailed study and capture information that due to the online survey may have escaped. Then another factor is that the data were collected only by one type of respondents, i.e. students. Therefore, the results of the study can not be used to generalize in relation to other subjects. Future research may also include the perspectives of teachers and professors and thus we may have the opportunity for a broader generalization of results. Our study is only for students in the Republic of Kosovo; thus, if in the future data will be collected from different countries in the region or the world, we could achieve an even more general and valuable study. This study is limited to highlighting the academic development and advancement of students, so in the future, the scientific advancement and career of teachers can be studied in similar ways.

9 Conclusions

From this scientific research undertaken to understand the factors that have influenced the academic development and scientific and professional progress of students during the period of the global pandemic Covid - 19 we have reached some conclusions that we will present as follows:

Students have used the internet as their main source for conducting research and finding literature, although it has not always been enough.

Their main and most important obstacle is the inability to move and the lack of tools.

The pandemic period was accompanied by a lack of willingness on the part of students to carry out research work and assignments. Fear has not been a disturbing element.

Students' academic results and progress has been greatly influenced by online teaching.

Students think that a large part of research can only be done physically. Also in terms of teaching most choose physically realized teaching and not online.

The pandemic has not affected the evaluation of their work by professors, but has had a very negative impact on them as individuals and on their academic and professional development.

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Instructional Supervision and Performance Evaluation: A Correlation of Factors

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Abstract. The study aimed to determine the correlation between instructional supervision and performance evaluation in the Public Elementary Schools of Bayawan City Division. The survey was descriptive and correlational in nature. It utilized the percentage, mean, weighted mean, and spearman rank correlation coefficient. The study found out that the extent of implementation of instructional supervision as perceived by the experienced teachers was "very high" in terms of the following aspects:(a) concept and purpose of instructional supervision; (b) planning and preparations for instructional supervision; and (c) organization and implementation of instructional supervision; (d) dialogue and discussion in post-instructional supervision; and (e) satisfaction with and evaluation of instructional supervision. Likewise, the extent of implementation of instructional supervision as perceived by the novice teachers was also "very high" based on how they rated their instructional supervisors in terms of the first three areas. In addition, a moderate relationship was found to exist between the teachers' job performance evaluation and the extent of implementation of instructional supervision in the following aspects: (a) concept and purpose of instructional supervision; (b) planning and preparations for instructional supervision; and (c) satisfaction with and evaluation of instructional supervision.

Keywords: Instructional Supervision, Job Performance Evaluation, Correlation Study

Introduction

The teachers' instructional effectiveness is considered a key to achieve optimum gains in the teaching-learning process. In order to ensure this, teachers' efficiency in the educational environment must be sustained as this is an important aspect that promotes student achievement and professional development. In support to this, supervision of teachers must be constant as this has been one of the most important functions of our educational system. As cited in Tyagi (2010), instructional supervision provides guidance, support and empowerment of teachers for their professional development in the teaching-learning process. Supervision provides teachers the support, knowledge and skills that enable them to succeed. Moreover, the quality of instructional supervision develops among teachers good perceptions and positive attitudes towards the practice (Choy, 2011). Hoffman and Tesfaw (2012) added that teachers were convinced on the need of instructional supervisory engagements. Teachers welcome supervision if it is done in the right spirit with the aim of improving the learning process. It is also regarded that the quality of supervision practice is a key factor in determining school success (Hamzah, 2013).

Kuizon and Reyes (2014) further noted that quality education depends on the extent of implementation of instructional supervision especially in the public elementary and secondary schools as part of the duties and functions of instructional supervisors. In addition, Limon (2015) mentioned that instructional supervisors perform varied roles for the improvement and development of curriculum instruction. Instructional supervisors, both the internal and external to the school, are tasked to do supervisory works and carry out supervisory functions to help teachers improve learning conditions. As a result, there were improvements in the quality of instruction and academic performance in learning institutions. In this connection, Babalola and Hafsatu (2016) emphasized that the improvement of students' academic achievement is the measure of effective supervision.

In line with the abovementioned, this study was designed to examine the Extent of Implementation of Instructional Supervision as perceived by the Novice and Experienced Teachers of the Department of Education-Bayawan City Division. It also revealed the correlation between factors such as teachers' perceptions and job performance evaluation.

Research Design

The study used the descriptive and correlational method of research in the sense that the extent of implementation of instructional supervision was surveyed and the results were related to teachers' job performance evaluation results.

Research Environment

The locale of the study is the public elementary schools of Bayawan City Division. Generally, the public elementary schools of Bayawan City Division are assigned with elementary school principals, head teachers, and teachers-in-charge who served as both school administrators and school-based supervisors. In addition, the division is administered and headed by a Schools Division Superintendent with the assistance of the Assistant Schools Division Superintendent, Curriculum Implementation Division Chief Supervisor, Division Education Program Supervisors, and Public Schools District Supervisors who used to constantly monitor the public elementary and secondary schools especially in the area of curriculum implementation and teaching instruction.

Research Respondents

The respondents of the study were the 70 novice teachers and 230 experienced teachers of the 30 public elementary schools of Bayawan City Division.

Research Instruments

The researcher used self-made questionnaires which were organized into three parts. Part one contained the profile of the teachers both the novice and experienced. Part two sought the data on the extent of implementation of instructional supervision. Part three was designed to seek data on the connection between the perceived extent of implementation of instructional supervision and job performance evaluation. The researcher-made questionnaire was constructed after a careful and thorough reading of books, articles, journals and electronic sources related to the topic. The modifications of the survey instrument were based on the review of related literature and the specific context of the study.

Research Procedure

A written letter was sent to the Schools Division Superintendent of Bayawan City requesting permission to allow the researcher to conduct the study on the different public elementary schools. Upon the approval of the request, copies of the approved letter have been given to the teachers-in-charge, head teachers and school principals of the participating schools to allow the researcher to administer the questionnaire to the identified novice and experienced teachers and to have access on their official records. The research instruments were retrieved as soon as the respondents have answered all the required information.

Findings

Table 1. Length of Teaching Experience of the Teachers

Number of Years	F	%
1 – 2	70	23.33
3 – 4	47	15.67
5 – 6	25	8.33
7 – 8	27	9.00
9 – 10	37	12.33
11 – 12	28	9.34
13 and above	66	22.00
Total	**300**	**100.00**

Table 1 indicates that 23.33% of the teachers have been in the service for 1-2 years referred to as novice teachers while 76.67% are teachers who have three or more years of working experience that ranges from 3-4 years and additional categories leading up to teaching experience of more than 13 years then considered as experienced teachers. Teaching experience in the classroom does matter. As what Gardner (2013) emphasized, experience is considered as the most important factor in predicting effectiveness. It also plays several important roles in education policies. Experienced is believed to bridge the gap between theory and practice as cited in Mariñas (2013).The variant core idea of "long years of teaching" as conceived to be a manifestation of an effective teaching echoed one of the findings that teaching experience had a positive effect on teacher effectiveness (Abulon,2014).

Table 2. Highest Educational Attainment of the Teachers

Number of Years	F	%
Bachelor's Degree	100	33.33
With MA units	178	59.34
With MA	19	6.33
With Doctoral units	1	0.33
With Doctoral degree	2	0.67
Total	**300**	**100.00**

Table 2 shows that 33.33% of the teachers are bachelor degree holders and 59.34% are teachers with master's degree units. However, only 6.33% have been found to complete an MA and 1.00% pursued doctoral studies. It is apparent in the findings that most of the teachers have only master's degree units and only few of them are full-fledge master degree holders or have pursue further doctoral studies. This finding is supported by Mariñas (2013), Secong (2014), and Pescuela (2015) that most of the teachers pursue further studies to improve their craft, however only few of them were predicted to finish their degrees. In public schools, teachers are encouraged to finish completely their postgraduate studies as professional career advancement is one of the major requirements for promotion to higher position in educational agencies and higher salary rate for increased job responsibilities in addition to the enhancement of teacher's theoretical and technical knowledge. As cited in Mariñas (2013), professional teacher development is a recommended method to improvement of not only skill, but performance in the classroom environment as well. It also establishes expert teachers and increases their job opportunities in addition to the benefits it will bring to their learners. Schools need highly qualified, expert teachers to improve the quality of education, and an advanced degree tells a school you are valuable, knowledgeable teacher that will have most impact on your students (Rosier, 2016).

Table 3. Teaching Position Held of the Teachers

Number of Years	F	%
Teacher I	191	63.67
Teacher II	70	23.34
Teacher III	37	12.33
Master Teacher I	1	0.33
Master Teacher II	1	0.33
Total	**300**	**100.00**

The findings in Table 3 reveal that majority of the teachers are in Teacher I positions representing 63.67%. The data imply that longer teaching experience and higher educational attainment come together as major requirements for promotion to higher position in educational agencies. Advance degree in teaching incorporate experience (Fushell &Tucker, 2013). Even 76.67% are considered experienced teachers and 66.67% pursue post-graduate studies as reflected in the previous tables, the combination of number of years of working experience and advancement of career opportunities really matter and make a difference. In affirmation, many occupations recognize employees' years of experience as a relevant factor in human resource policies, including compensation systems, benefits packages, and promotion decisions (Rice, 2010). The idea is that experience, gained over time, enhances the knowledge, skills, and productivity of workers. Moreover, education is a lifelong career. Teachers must use knowledge and skills in making strategic career choices. Fushell andTucker (2013) found out that teachers undertake lifelong programs for different reasons, primarily to become a greater educator and to receive a salary increase. In addition, teachers must finished master's degree to improve their professional qualities and personal attributes (Secong, 2014). Furthermore, through experience, effectiveness and efficiency on the system were improved and developed (Torres, 2015).

Table 4. Instructional Supervision in Terms of Concept and Purpose

	Indicators	$\bar{WX}$	VD	Equivalent	$\bar{WX}$	VD	Equivalent
a.	**Concept of Instructional Supervision**	Experienced Teachers			Novice Teachers		
	Instructional Supervision is …						
1	a model of a collaborative classroom instruction	4.56	SA	VH	4.29	SA	VH
2	a tool to promote shared instructional decisions	4.51	SA	VH	4.30	SA	VH
3	a means to define the roles of teachers in teaching instruction	4.58	SA	VH	4.34	SA	VH

4	a mechanism to provide instructional directions	4.56	SA	VH	4.39	SA	VH
5	an avenue for situational approach of instructional supervision	4.55	SA	VH	4.34	SA	VH
	Composite	**4.55**	**SA**	**VH**	**4.33**	**SA**	**VH**
b.	**Purpose of Instructional Supervision**						
	Instructional Supervision …						
1	promotes cooperative work among instructional leaders and classroom teachers	4.60	SA	VH	4.41	SA	VH
2	improves instructional practices, student achievement and classroom management	4.58	SA	VH	4.43	SA	VH
3	considers the specific needs and developmental stages of individual teachers	4.54	SA	VH	4.36	SA	VH
4	focuses on teacher's knowledge, skills and ability towards curriculum improvement and staff development	4.51	SA	VH	4.31	SA	VH
5	analyses and makes judgments about teacher's instructional efficiency and effectiveness	4.44	SA	VH	4.34	SA	VH
	Composite	**4.54**	**SA**	**VH**	**4.37**	**SA**	**VH**
	Overall	**4.55**	**SA**	**VH**	**4.35**	**SA**	**VH**

Legend: Scale	**Verbal Description**	**Equivalent (Extent of Implementation)**
4.21 – 5.00	Strongly Agree (SA)	Very High (VH)
3.41 – 4.20	Agree (A)	High (H)
2.61 – 3.40	Moderately Agree (MA)	Moderate (M)
1.81 – 2.60	Disagree (D)	Low (L)
1.00 – 1.80	Strongly Disagree (SD)	Very Low (VL)

As shown in Table 4, there is a "very high" extent of implementation of instructional supervision as perceived by both of the novice and experienced teachers in the aspect of concept and purpose of instructional supervision. This implies that both categories of teachers demonstrate greater understanding and display higher awareness on the significance of the conduct of instructional supervision as a tool for teacher's growth.

Instructional supervision is very important to the development of education and it is fitting to establish how it is perceived by teachers in schools. Unless teachers perceive supervision as a process of improving learning conditions and promoting professional growth, the supervisory exercise will not achieve its desired purpose. Researchers also attached numerous purposes to instructional supervision: improving classroom instruction, providing specific direction, fostering curriculum innovations, improving performance evaluation, encouraging human relations and supporting collaboration (Payne, 2010; Awuah, 2011; Wanzare, 2012).

The result shown in the table is in conjunction to the study of Kuizon and Reyes (2014) that collaborative approach to supervision is mostly favoured by instructional supervisors. Moreover, the findings in the study of Hoffman and Tesfaw (2012) show that both beginner and experienced teachers were convinced of the need for instructional supervision, and believe that every teacher can benefit from instructional supervision. Teachers also welcome supervision if it is done in the right spirit and with the aim of improving the learning process and promoting teacher growth. Finally, Tshabalala (2013) found out that teachers generally perceive classroom instructional supervision in a positive way. They are aware of what it is and appreciated its purpose.

Table 5. Instructional Supervision in Terms of Planning and Preparations

Indicators	$\overline{WX}$	**VD**	**Equivalent**	$\overline{WX}$	**VD**	**Equivalent**
a. Advance Notifications and Planning Lessons with Supervisors						

	Instructional Supervisor …	Experienced Teachers			Novice Teachers		
1	keeps teachers aware of the conduct of instructional supervision	4.53	SA	VH	4.29	SA	VH
2	notifies teachers of classroom visitations and lesson observations	4.46	SA	VH	4.21	SA	VH
3	sets up specific sessions with the teachers to discuss curriculum implementation	4.44	SA	VH	4.21	SA	VH
4	provides teachers with adequate information to become familiar with supervision of instruction	4.47	SA	VH	4.31	SA	VH
5	involves teachers in the planning and preparation of the delivery of classroom lessons	4.50	SA	VH	4.33	SA	VH
	Composite	**4.48**	**SA**	**VH**	**4.27**	**SA**	**VH**
b.	**Informal Visitations and Classroom Observations**						
	Instructional Supervisor …						
1	informally visits teachers in their respective classes during teaching instruction	4.29	SA	VH	3.93	A	VH
2	monitors teachers outside the classroom during real-world lesson application	4.21	SA	VH	3.93	A	VH
3	supervise teachers on a regular basis inside the classroom during curriculum implementation	4.31	SA	VH	3.94	A	VH
4	enters the classroom as unobtrusively as possible in the conduct of lesson observations	4.22	SA	VH	3.91	A	VH
5	capitalize the expertise of teachers to share supervisory knowledge, skills and information	4.32	SA	VH	4.09	A	VH
	Composite	**4.27**	**SA**	**VH**	**3.96**	**A**	**VH**
	Overall	**4.38**	**SA**	**VH**	**4.12**	**A**	**VH**

Legend: Scale	**Verbal Description**	**Equivalent (Extent of Implementation)**
4.21 – 5.00	Strongly Agree (SA)	Very High (VH)
3.41 – 4.20	Agree (A)	High (H)
2.61 – 3.40	Moderately Agree (MA)	Moderate (M)
1.81 – 2.60	Disagree (D)	Low (L)
1.00 – 1.80	Strongly Disagree (SD)	Very Low (VL)

Table 5 signifies that there is a higher extent of implementation of instructional supervision as perceived by the experienced teachers compared to the novice teachers in the aspect of planning and preparations for instructional supervision.

In affirmation to advance notifications and planning lessons with supervisors, arrangements should be made in advance for the formal classroom observation. Most teachers prefer the supervisor to notify them of the visit so that they can prepare their lessons. Pansiri's (2008) study indicated that their supervisors planned class visits with them rather than the school head determined when visits would be conducted without consulting with teachers. Hence, careful planning by the supervisor should precede a classroom visit. Awuah (2011) also revealed that teachers want to be involved in pre-observation planning. However, experienced teachers' higher perceived extent of implementation of this aspect of instructional supervision than the novice teachers can be attributed to the number of years in service. As cited in Mariñas (2013), though adequately trained, the new teachers may be at greater risks for failure than the experienced teachers for not having yet acquired skills necessary like classroom management and instructional skills that can only be acquired through experience. This is supported by the study of Faltado and Faltado (2014) which stated that there is a significant difference in the needs of novice teachers when grouped by work experience. In line with this, Kadtong and Usop (2013) added that new teachers need support and development to improve their knowledge, practices and skills.

It is recommended to have actual planning and preparation of the lessons with supervisor. Furthermore, supervisors should mutually decide with their teachers on what and how to observe before proceeding to the classroom to observe a lesson.

Table 6. Instructional Supervision in Terms of Organization and Implementation

	Indicators	$\bar{WX}$	VD	Equivalent	$\bar{WX}$	VD	Equivalent
		Experienced Teachers			**Novice Teachers**		
	a. Lesson Plan Review						
	Instructional supervisor examines teacher's …						
1	formulation of behavioral learning objectives	4.52	SA	VH	4.34	SA	VH
2	organization of RBEC/K-to-12 learning content	4.51	SA	VH	4.30	SA	VH
3	utilization of innovative teaching strategies	4.51	SA	VH	4.30	SA	VH
4	consumption of updated teaching references	4.48	SA	VH	4.26	SA	VH
5	use of appropriate instructional devices	4.58	SA	VH	4.33	SA	VH
6	preparation of meaningful learning experiences	4.52	SA	VH	4.33	SA	VH
7	communication of higher order thinking skills	4.53	SA	VH	4.21	SA	VH
8	construction of objective-oriented assessment	4.49	SA	VH	4.26	SA	VH
9	application of learnt concept to real-life setting	4.55	SA	VH	4.21	SA	VH
10	provision of skills-based enrichment	4.56	SA	VH	4.31	SA	VH
	Composite	**4.52**	**SA**	**VH**	**4.28**	**SA**	**VH**
	b. Actual Classroom Observation						
	Instructional supervisor examines teacher's						
1	preparation of functional lesson plans or appropriate daily logs	4.67	SA	VH	4.36	SA	VH
2	implementation of RBEC/K-to-12 based curricular instruction or classroom lessons	4.65	SA	VH	4.24	SA	VH
3	organization of classroom practices or teaching procedures	4.64	SA	VH	4.30	SA	VH
4	establishment of classroom discipline and routine management	4.63	SA	VH	4.27	SA	VH
5	accomplishment of school forms, teaching records, and learners' reports	4.62	SA	VH	4.33	SA	VH
	Composite	**4.64**	**SA**	**VH**	**4.30**	**SA**	**VH**
	Overall	**4.58**	**SA**	**VH**	**4.29**	**SA**	**VH**

Legend: Scale	**Verbal Description**	**Equivalent (Extent of Implementation)**
4.21 – 5.00	Strongly Agree (SA)	Very High (VH)
3.41 – 4.20	Agree (A)	High (H)
2.61 – 3.40	Moderately Agree (MA)	Moderate (M)

1.81 – 2.60 Disagree (D) Low (L)
1.00 – 1.80 Strongly Disagree (SD) Very Low (VL)

As indicated in Table 6, both categories of teachers perceived "very high" extent of implementation for actual classroom observation in the aspect of organization and implementation of instructional supervision.

Lesson observation is one of the major functions of supervisors. It has been seen as a major tool that supervisors use to assess the content knowledge of teachers and their competency in instructional strategies and practices so as to provide the necessary assistance to improve instruction. Babalola and Hafsatu (2016) therefore noted that administrators should ensure that teachers prepare lesson notes prior to curricular implementation.

In the conduct of classroom observation, Afolabi and Loto (2008) identified, among others, the following areas: the nature of lesson plan, lesson presentation and reference materials. Foremost, the lesson plan is a reflection of the level of preparedness as well as the effort the teacher made in gathering information for the lesson. Thus, the school head must critically examine the following items of the lesson plan: the clarity and appropriateness of the learner behavioural objectives, the relevance and adequacy of the lesson notes, selection of appropriate teaching aids, and selection of appropriate evaluation techniques to determine the extent of realizing the objective effectively as cited from Edo Journal of Counselling Vol. 2, No. 2, 2009. In addition, Payne (2010) said that classroom observation is an opportunity to gain insight from colleagues and administrators through purposeful observation.

Table 7. Instructional Supervision in Terms of Dialogue and Discussion

	Indicators	$\bar{WX}$	VD	Equivalent	$\bar{WX}$	VD	Equivalent
		Experienced Teachers			**Novice Teachers**		
a.	**Immediacy of Feedback on Classroom Observation**						
	Instructional supervisor …						
1	conducts supervisory conferences right after observing teachers	4.57	SA	VH	4.24	SA	VH
2	provides immediate feedback after the teaching-learning process	4.57	SA	VH	4.24	SA	VH
3	spends enough time to discuss teacher's strengths and capabilities	4.49	SA	VH	4.13	A	H
4	gives sufficient time to discuss teacher's weaknesses and difficulties	4.49	SA	VH	4.17	A	H
5	allots time to share supervisory experiences through constructive dialogue, mutual trust and shared expertise	4.49	SA	VH	4.19	A	H
	Composite	**4.52**	**SA**	**VH**	**4.19**	**A**	**H**
b.	**Adequacy of Feedback on Instructional Supervision**						
	Instructional supervisor …						
1	provides data-based feedback and responses	4.45	SA	VH	4.17	A	H
2	gives appreciation and positive comments	4.53	SA	VH	4.26	SA	VH
3	discusses teacher's weaknesses and difficulties	4.46	SA	VH	4.24	SA	VH
4	promotes two-way communication process	4.48	SA	VH	4.24	SA	VH
5	supports curriculum and staff development	4.49	SA	VH	4.23	SA	VH
	Composite	**4.48**	**SA**	**VH**	**4.23**	**SA**	**VH**
	Overall	**4.50**	**SA**	**VH**	**4.21**	**SA**	**VH**

Legend: Scale Verbal Description Equivalent (Extent of Implementation)

4.21 – 5.00	Strongly Agree (SA)	Very High	(VH)
3.41 – 4.20	Agree (A)	High	(H)
2.61 – 3.40	Moderately Agree (MA)	Moderate	(M)
1.81 – 2.60	Disagree (D)	Low	(L)
1.00 – 1.80	Strongly Disagree (SD)	Very Low	(VL)

Table 7 presents that there is a "very high" extent of implementation as perceived by both of the novice and experienced teachers in the areas of immediacy of feedback on classroom observation and adequacy of feedback on instructional supervision in the aspect of dialogue and discussion in post-instructional supervision.

Proponents of instructional supervision consider post-conference in which feedback is given in supervision as an instructional dialogue. The idea of providing feedback after supervision is considered significant as it solely involves both parties sharing what was observed and experienced during supervision. According to Hunsaker and Johanna (2009), improving employees' performance depends on balanced and considerate feedback. Feedback is regarded as a performance motivator as it involves provision of information on progress towards accomplishing a goal, or data indicating where the shortfall occurs. Hattie (2009) contends that providing constructive feedback to teachers based on the meaningful appraisal of their work has consistently been shown to produce significant improvements on teaching and learning on classrooms.

The results on the immediacy of feedback of classroom observation is in conjunction with the findings of Tshabalala (2013) that teachers preferred immediate post supervision. On the other hand, on the adequacy of feedback on instructional supervision, the results was supported by Amina (2015) who said that there was also feedback in the form of reports and queries to teachers on their performances as well as organized personal meetings with teachers to discuss their shortcomings on lesson notes preparation, class attendance, and report to school. Therefore, as an instructional source, supervisors provide, not only a diagnosis of teaching, but also feedback that enables teacher's professional growth and development. Mariñas (2013) said that school heads need to establish a positive work climate. This phase has a significant bearing on the success of supervision and requires qualities like intimacy, honesty, tactfulness, considerateness alongside mutual understanding from both parties. Exchange of ideas leads to teachers' improvement when issues discussed are educational and beneficial most especially pertaining to classroom practice or management (Torres, 2015).

Table 8. Instructional Supervision in Terms of Satisfaction and Evaluation (Part A)

	Indicators	$\bar{WX}$	**VD**	**Equi-valent**	$\bar{WX}$	**VD**	**Equi-valent**
		Experienced Teachers			**Novice Teachers**		
	Satisfaction with Instructional Supervision						
	As a supervisee, I am satisfied with the following:						
	a. Instructional Supervisory Practices based on the …						
1	overall quality of instructional supervision	4.40	SA	VH	4.14	A	H
2	general organization of instructional supervision	4.36	SA	VH	4.16	A	H
3	administrative support to instructional supervision	4.36	SA	VH	4.09	A	H
4	objective evaluation of instructional supervision	4.37	SA	VH	4.16	A	H
5	cooperative action in instructional supervision	4.34	SA	VH	4.03	A	H
	Composite	**4.37**	**SA**	**VH**	**4.11**	**A**	**H**
	b. Instructional Supervisor's …						
1	planning skills on observing, monitoring and evaluating the instructional process	4.37	SA	VH	4.04	A	H
2	analytical skills to explain the relationship that exist between teaching and learning	4.36	SA	VH	4.00	A	H

3	social competence in building collaborative and empowering relationships	4.34	SA	VH	4.10	A	H
4	communicative competence on holding one-on-one conferences with teachers	4.33	SA	VH	4.03	A	H
5	creative and innovative skills in dealing with complex classroom practices	4.34	SA	VH	4.01	A	H
	Composite	**4.35**	**SA**	**VH**	**4.04**	**A**	**H**

Legend: Scale **Verbal Description** **Equivalent (Extent of Implementation)**

4.21 – 5.00	Strongly Agree (SA)	Very High (VH)
3.41 – 4.20	Agree (A)	High (H)
2.61 – 3.40	Moderately Agree (MA)	Moderate (M)
1.81 – 2.60	Disagree (D)	Low (L)
1.00 – 1.80	Strongly Disagree (SD)	Very Low (VL)

Table 8 displays a higher extent of implementation based on the experienced teachers' perceptions compared to that of the novice in the area of satisfaction with instructional supervisory practices and instructional supervisors' skills. In turn, Zepeda (2007) revealed that the satisfaction of teachers depends largely on the availability of supervisory choices based on their needs. Peplinski (2009) further noted about the utilization of differentiated supervision based mainly on a teacher's years of experience and his or her need of such strategies.

In line with this, a research conducted indicated that beginning teachers have desired more on the frequent use of instructional supervision that meets their professional needs, promotes trust and collaboration, and gives them support, advise, and help (Choy, Chong, Wong & Wong, 2011).

Table 9. Instructional Supervision in Terms of Satisfaction and Evaluation (Part B)

	Indicators	$\bar{WX}$	**VD**	**Equivalent**	$\bar{WX}$	**VD**	**Equivalent**
		Experienced Teachers			Novice Teachers		
1.	**Evaluation of Instructional Supervision**						
	a. Based on my observation, the instructional supervisor accomplishes the appraisal forms through:						
1	conducting lesson plan reviews	4.46	SA	VH	4.17	A	H
2	performing classroom observations	4.46	SA	VH	4.16	A	H
3	examining classroom discipline or management	4.47	SA	VH	4.10	A	H
4	checking the routine management	4.47	SA	VH	4.10	A	H
5	monitoring the record management	4.48	SA	VH	4.14	A	H
	Composite	**4.47**	**SA**	**VH**	**4.13**	**A**	**H**
	b. Based on my observation, the instructional supervisor prepares the supervisory reports through:						
1	accomplishing the form 178 upon the observation of the teaching-learning process	4.57	SA	VH	4.26	SA	VH
2	monitoring the class targets or accomplishments	4.52	SA	VH	4.22	SA	VH
3	reviewing IPCRF as part of performance monitoring and tracking	4.50	SA	VH	4.22	SA	VH
4	keeping the appraisal forms for record management and future reference	4.48	SA	VH	4.23	SA	VH

5	assessing the realization of government's instructional policies and practices	4.50	SA	VH	4.17	A	H
	Composite	**4.51**	**SA**	**VH**	**4.22**	**SA**	**VH**
	Overall	**4.23**	**SA**	**VH**	**4.13**	**A**	**H**

Legend: Scale	**Verbal Description**	**Equivalent (Extent of Implementation)**
4.21 – 5.00	Strongly Agree (SA)	Very High (VH)
3.41 – 4.20	Agree (A)	High (H)
2.61 – 3.40	Moderately Agree (MA)	Moderate (M)
1.81 – 2.60	Disagree (D)	Low (L)
1.00 – 1.80	Strongly Disagree (SD)	Very Low (VL)

Table 9 signifies that experienced teachers perceived a higher extent of implementation of instructional supervision compared to novice teachers on the accomplishment of appraisal forms. Education requires supervision of classroom instruction to evaluate teacher's effectiveness. This generally involves an administrator observing and evaluating lessons in a classroom, documenting the teacher's performance, and sharing suggestions for improvement (Zepeda, 2007; Farley, 2010; Shohet, 2011; Weld, 2012). Hoffman and Tesfaw (2012) noted that supervisory choices should be available to beginner teachers. Supervisors should employ various supervisory options by selecting and coordinating these tools focusing on the individual teacher's needs and problems and the issues of teaching and learning that can enhance teachers' professional development and improve their instructional efficiency (Hussen, 2015).

Table 10. Summary Table on the Extent of Implementation of Instructional Supervision

	Variables	$\bar{WX}$	**VD**	**Equivalent**	$\bar{WX}$	**VD**	**Equivalent**
		Experienced Teachers			Novice Teachers		
A	Concept and Purpose	4.55	SA	VH	4.35	SA	VH
B	Planning and Preparations	4.38	SA	VH	4.12	A	VH
C	Organization and Implementation	4.58	SA	VH	4.29	SA	VH
D	Dialogue and Discussion	4.50	SA	VH	4.21	SA	VH
E	Satisfaction and Evaluation	4.23	SA	VH	4.13	A	VH
	Overall	**4.45**	**SA**	**VH**	**4.22**	**SA**	**VH**

Legend: Scale	**Verbal Description**	**Equivalent (Extent of Implementation)**
4.21 – 5.00	Strongly Agree (SA)	Very High (VH)
3.41 – 4.20	Agree (A)	High (H)
2.61 – 3.40	Moderately Agree (MA)	Moderate (M)
1.81 – 2.60	Disagree (D)	Low (L)
1.00 – 1.80	Strongly Disagree (SD)	Very Low (VL)

Table 10 discloses that both the experienced and novice teachers have "very high" level of agreement on the extent of implementation of instructional supervision on the following aspects: concept and purpose of instructional supervision, organization and implementation of instructional supervision, and dialogue and discussion in post-instructional supervision. However, differences are noted in the planning and preparations for instruction supervision as well as satisfaction with and evaluation of instructional supervision. This can be attributed to teachers' confidence level to share knowledge, skills and expertise in the planning, implementation, and evaluation of the delivery of the

subject matter as part of the instructional process. In turn, Powers (2012) indicates that new teachers felt only somewhat prepared or not well-prepared in the area of lesson planning, instructional strategies, and classroom management.

A number of studies also revealed that the beginning years of teaching experience are crucial to the development of novice teachers. In line with this, the study of Choy (2013) found out that teacher's pedagogical knowledge and skills continue to develop and increase significantly in the first three years. Hence, beginning teachers in their novice years of teaching would like to receive more training which could be used to better meet their professional developmental need (Rees, 2015).

Table 11. Job Performance of Novice and Experienced Public School Teachers

Rating	F	%	F	%
	Experienced Teachers		Novice Teachers	
4.500 – 5.000 (Outstanding)	124	53.91	4	5.71
3.500– 4.499 (Very Satisfactory)	103	44.78	6	94.29
2.500 – 3.499 (Satisfactory)	3	1.31		
Total	230	100.00	7	100.00
Overall Rating	**4.470 (Very Satisfactory)**		**4.110 (Very Satisfactory)**	

Table 11 exhibits the job performance of the novice and experienced public elementary school teachers. It reveals that 53.91% of the experienced teachers have a performance of 4.500 and above compared to only 5.71% of the novice teachers with outstanding rating. Moreover, 44.78% of the experienced teachers have ratings of 3.500--4.499 while 94.29% of the novice teachers have very satisfactory rating. The data also reveal that both categories of teachers are at very satisfactory level with 4.470 for experienced and 4.110 for novice teachers. This means that the teachers have displayed effectiveness, efficiency, and timeliness in doing their teaching duties most especially relating to the different Key Result Areas: Teaching and Learning Process, Pupils Outcomes, Community Involvement and Professional Growth and Development. Moreover, the finding is supported by Secong (2014), Pescuela (2015), and Torres(2015) which all revealed that almost all of the teachers have a "very satisfactory" rating as shown in their performance evaluation system. Teacher performance varies at all levels of experience. Teachers' effectiveness is associated with experience and most steep on teachers' initial years but continues to be significant as teachers reach the second, and often third, decades of their careers (Kini & Podolsky, 2016).

Table 12. Difference in the Extent of Implementation of Instructional Supervision as Perceived by the Teachers when They are Grouped According to Their Profile

Variables	Length of Teaching Experience		Teaching Position Held		Highest Educational Attainment	
	Novice (1-2 yrs)	Experi-enced (3yrs. & above)	Teacher I	Teacher II /III/MT	Bacca-lau-reate Degree	With MA units/ Degree/ with EdD units/ Degree
A. Concept and Purpose of Instruc-tional Supervision	4.35 (Very High)	4.54 (Very High)	4.51 (Very High)	4.48 (Very High)	4.34 (Very High)	4.58 (Very High)
B. Planning and Preparations for In-struction Supervision	4.12 (High)	4.38 (Very High)	4.30 (Very High)	4.34 (Very High)	4.21 (Very High)	4.37 (Very High)
C. Organization and Implementation of Instructional Supervision	4.29 (Very High)	4.56 (Very High)	4.48 (Very High)	4.52 (Very High)	4.36 (Very High)	4.57 (Very High)
D. Dialogue and Discussion in Post-Instructional Supervision	4.21 (Very High)	4.50 (Very High)	4.22 (Very High)	4.46 (Very High)	4.36 (Very High)	4.47 (Very High)
E. Satisfaction with	4.13	4.42	4.32	4.41	4.20	4.43

and evaluation of instructional supervision	(High)	(Very High)	(Very High)	(Very High)	(High)	(Very High)
Overall	**4.22**	**4.48**	**4.41**	**4.44**	**4.29**	**4.48**

Table 12 reflects the difference in the extent of implementation of instructional supervision as perceived by the teachers when they are grouped according to their profiles: length of teaching experience, teaching position held, and highest educational attainment.

For the length of teaching experience, the table reveals a "very high" extent of implementation of instructional supervision on most of the aspects as perceived by both novice and experienced teachers except for the planning and preparations for instruction supervision as well as satisfaction with and evaluation of instructional supervision.

The teachers with 1-2 years of working experience still rely on their pre-service teaching experiences, student-teaching engagements, and field study courses in college years. Hence, they have limited knowledge, skills or content expertise to be shared with various instructional leaders in the conduct of planning and preparations for instructional supervisory process. In line with this, Faltado and Faltado (2014) suggest that novice teachers may be prioritized to attend seminars, trainings or workshops as they are in much need of more knowledge and skills. The experienced teachers, on the other hand, can attribute their higher level of agreement on the knowledge, skills, and expertise that they accumulated in the passage of years. They have richer knowledge to draw from and can contribute insights and ideas to the course of teaching and learning process and engagements (Kosgei, 2013).

However, there is no difference in the profile of teachers on teaching position held which imply that whatever the teaching position, all teachers assume the same teaching responsibilities, duties, and functions. Awuah (2011) noted that teachers are aware of the duties they are expected to perform. In affirmation, the study of Pescuela (2015) and Torres (2015) implied that teachers know their personal responsibilities, rights, and functions. They were already responsible to implement the curriculum.

On the other hand, both of the novice and experienced teachers have similar perceived extent of implementation on most of the aspects of instructional supervision when they are grouped according to highest educational attainment except for satisfaction with and evaluation of instructional supervision. This can be attributed to longer years of teaching experience and higher educational attainment as what have also reflected in the planning and preparation for instructional supervision aspect.

Table 13. Job Performance of Novice and Experienced Public School Teachers

Variables Being Paired with Teachers' Job Performance	Computed r_s	Degree of Relationship
A. Concept and Purpose of Instructional Supervision	0.311	Moderate
B. Planning and Preparations for Instruction Supervision	0.309	Moderate
C. Organization and Implementation of Instructional Supervision	0.279	Weak
D. Dialogue and Discussion in Post-Instructional Supervision	0.273	Weak
E. Satisfaction with and Evaluation of Instructional Supervision	0.322	Moderate
Overall	**0.343**	**Moderate**

Legend: Value of r **Strength of Relationship** (Statistical Correlation, 2009)

Between ± 0.50 to ± 1.00 - strong relationship
Between ± 0.30 to ± 0.49 - moderate relationship
Between ± 0.10 to ± 0.29 - weak relationship
Between ± 0.01 to ± 0.09 - very weak relationship

Table 13 presents that the extent of implementation of instructional supervision on the following aspects: concept and purpose of instructional supervision, planning and preparations for instructional supervision, and satisfaction with and evaluation of instructional supervision are moderately related to teachers' job performance. This means that the higher the perceived extent of implementation of instructional supervision on the mentioned variables, the higher also the teachers' rating in the performance job evaluation result. The positive correlation further means that the perceived extent of implementation of instructional supervision on the abovementioned variables is directly proportional with job performance evaluation.

The findings of Mariñas (2013) conform to this as she noted that there is a significant relationship between the extent of principals' manifestations of leadership behaviour and extent of teachers' empowerment in terms of human relations and instructional leadership domains. Tshabalala (2013) also found out that teachers generally perceive classroom instructional supervision in a positive way. Moreover, the study of Mahad (2014) revealed that with respect to teachers' attitude, majority of the respondents expressed positive attitude towards supervisory practices, however, experienced teachers had shown higher level of agreement on overall the attitude related items in the survey.

In addition, the study confirmed that teachers' attitude toward supervisory practices has a weak, positive and significant correlation with their perceptions of actual supervision, and moderate, positive correlation with their perception of ideal supervisory approaches. Furthermore, school administrators' implementation of instructional leadership in terms of managing the entire instructional program giving focus on supervising and evaluating instruction, coordinating the curriculum, and monitoring school progress is perceived to be "very high" by the teachers, hence, having a significant relationship with their job performance (Pescuela, 2015).

Torres (2015) further noted that the administrative and leadership behaviour of elementary school principals and leadership behaviours in the areas of person orientation and system orientation were "very high" in the same manner with that of evaluation of teachers' performances, leadership roles and enhancement of teachers' competence, thus, is significantly related to the performance of teachers.

On the other hand, the rest of the variables like the organization and implementation of instructional supervision as well as the dialogue and discussion in post-instructional supervision have a weak relationship with their job performance evaluation results. This means that those variables are not strong predictors/determinants of the teachers' job performance.

Conclusions

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

1. Three-fourths of the teachers were considered experienced. Most of them earned master's degree units and were classified as Teacher I in their position held.

2. The extent of implementation of instructional supervision as perceived by the experienced teachers was "very high" in terms of the following aspects: (a) concept and purpose of instructional supervision; (b) planning and preparations for instructional supervision; (c) organization and implementation of instructional supervision; (d) dialogue and discussion in post-instructional supervision; and (e) satisfaction with and evaluation of instructional supervision. Likewise, the extent of implementation of instructional supervision as perceived by the novice teachers was also "very high" based on how they rated their instructional supervisors in the following aspects: (a) concept and purpose of instructional supervision; (b) organization and implementation of instructional supervision; and (c) dialogue and discussion in post-instructional supervision.

3. The teaching job performance of both the novice and experienced public elementary school teachers was in a "very satisfactory" level.

4. There was a difference in the perception on the extent of implementation of instructional supervision in the following aspects when teachers are grouped as novice and experienced teachers in favor of the latter: (a) planning and preparations for instructional supervision; and (b) satisfaction with and evaluation of instructional supervision. A difference had also occurred in the extent of implementation of instructional supervision in the aspect of satisfaction with and evaluation of instructional supervision when teachers were grouped as baccalaureate degree holders and with master's units/ degrees or with doctoral units/ degrees in favor of the latter.

5. A moderate relationship was found to exist between the extent of implementation of instructional supervision: (a) concept and purpose of instructional supervision; (b) planning and preparations for instructional supervision; and (c) satisfaction with and evaluation of instructional supervision and teachers' job performance evaluation.

In general, the extent of implementation of instructional supervision as perceived by the novice and experienced teachers is "very high" and has a moderate relationship to teachers' job performance.

Recommendations

On the bases of the findings and conclusions drawn, the followings are recommended:

1. Teachers are encouraged to finish master's degrees and even pursue doctoral studies as professional career advancement incorporated with number of years of working experience afford them greater theoretical and pedagogical knowledge, higher salary rate, and higher position in the education department.

2. Since experienced teachers have higher perceived extent of implementation of instructional supervision in the aspects of planning and preparations for instructional supervision as well as satisfaction with and evaluation of instructional supervision due to their longer years of working experience, they must make it a point that novice teachers will be assisted by lending them instructional materials, modules, budget of work, and other resources needed in the pre-observation planning process and post-instructional supervision conferences.

3. As novice teachers wanted more time to engage in reflective and collaborative approaches to supervision, there is a need for both the instructional supervisors and experienced teachers to address their professional developmental needs to improve their knowledge, practices, and skills.

4. As majority of the experienced teachers pursue post-graduate studies and some of the novice teachers have only master's degree units or still have bachelor degrees, novice teachers may be prioritized to attend seminars, workshops, and trainings to increase knowledge, skills, and expertise on the instructional process, lesson planning, and classroom management among others.

5. Since majority of the items on satisfaction with and evaluation of instructional supervision aspect have higher extent of implementation as perceived by experienced teachers, instructional leaders should provide novice teachers specific instruction and constant monitoring as well as give them initial direction and undivided attention as what situational leadership theory suggests.

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Appendix A

Survey Instrument

Instructional Supervision and Performance Evaluation: A Correlation of Factors

Direction: Please indicate the extent of implementationof instructional supervision using the following scale:

Verbal Description	**Explanation**
Strongly Agree	The degree to which the teacher agrees with the statement is 81-100%.
Agree	The degree to which the teacher agrees with the statement is 61-80%.
Moderately Agree	The degree to which the teacher agrees with the statement is 41-60%.
Disagree	The degree to which the teacher agrees with the statement is 21-40%.
Strongly Disag	The degree to which the teacher agrees with the statement is 1-20%.

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Indicators	Strongly Agree	Agree	Moderately Agree	Dis-agree	Strongly Dis-agree
a. Concept of Instructional Supervision					
Instructional Supervision is …					
1 a model of a collaborative classroom instruction					
2 a tool to promote shared instructional decisions					
3 a means to define the roles of teachers in teaching instruction					
4 a mechanism to provide instructional directions					
5 an avenue for situational approach of instructional supervision					
b. Purpose of Instructional Supervision					
Instructional Supervision …					
1 promotes cooperative work among instructional leaders and classroom teachers					
2 improves instructional practices, student achievement and classroom management					
3 considers the specific needs and developmental stages of individual teachers					
4 focuses on teacher's knowledge, skills and ability towards curriculum improvement and staff development					
5 analyses and makes judgments about teacher's instructional efficiency and effectiveness					

A. Concept and Purpose of Instructional Supervision

B. Planning and Preparations for Instructional Supervision

Indicators	Strongly Agree	Agree	Moderately Agree	Dis-agree	Strongly Dis-agree
a. Advance Notifications and Planning Lessons with Supervisors					
Instructional Supervisor …					
1 keeps teachers aware of the conduct of instructional supervision					
2 notifies teachers of classroom visitations and lesson observations					
3 sets up specific sessions with the teachers to discuss curriculum implementation					
4 provides teachers with adequate information to become familiar with supervision of instruction					
5 involves teachers in the planning and preparation of the delivery of classroom lessons					
b. Informal Visitations and Classroom Observations					
Instructional Supervisor …					
1 informally visits teachers in their respective classes during teaching instruction					
2 monitors teachers outside the classroom during real-world lesson application					
3 supervise teachers on a regular basis inside the classroom during curriculum implementation					
4 enters the classroom as unobtrusively as possible in the conduct of lesson observations					
5 capitalize the expertise of teachers to share supervisory knowledge, skills and information					

C. Organization and Implementation of Instructional Supervision

Indicators	Strongly Agree	Agree	Moderately Agree	Dis-agree	Strongly Dis-agree
a. Lesson Plan Review					

	Instructional supervisor examines teacher's …					
1	formulation of behavioral learning objectives					
2	organization of RBEC/K-to-12 learning content					
3	utilization of innovative teaching strategies					
4	consumption of updated teaching references					
5	use of appropriate instructional devices					
6	preparation of meaningful learning experiences					
7	communication of higher order thinking skills					
8	construction of objective-oriented assessment					
9	application of learnt concept to real-life setting					
10	provision of skills-based enrichment					

	b. Actual Classroom Observation					
	Instructional supervisor examines teacher's …					
1	preparation of functional lesson plans or appropriate daily logs					
2	implementation of RBEC/K-to-12 based curricular instruction or classroom lessons					
3	organization of classroom practices or teaching procedures					
4	establishment of classroom discipline and routine management					
5	accomplishment of school forms, teaching records, and learners' reports					

D. Dialogue and Discussion in Post-Instructional Supervision

	Indicators	Strongly Agree	Agree	Moderately Agree	Dis-agree	Strongly Dis-agree
	a. Immediacy of Feedback on Classroom Observation					
	Instructional supervisor …					
1	conducts supervisory conferences right after observing teachers					
2	provides immediate feedback after the teaching-learning process					
3	spends enough time to discuss teacher's strengths and capabilities					
4	gives sufficient time to discuss teacher's weaknesses and difficulties					
5	allots time to share supervisory experiences through constructive dialogue, mutual trust and shared expertise					
	b. Adequacy of Feedback on Instructional Supervision					
	Instructional supervisor …					
1	provides data-based feedback and responses					
2	gives appreciation and positive comments					
3	discusses teacher's weaknesses and difficulties					
4	promotes two-way communication process					
5	supports curriculum and staff development					

E. Satisfaction with and Evaluation of Instructional Supervision

Indicators	Very Satisfied	Satisfied	Moderately Satisfied	Dissa-tisfied	Very Dissatisfied
1. Satisfaction with Instructional Supervision					
As a supervisee, I am satisfied with the following:					
a. Instructional Supervisory Practices based on the …					
1 overall quality of instructional supervision					
2 general organization of instructional supervision					
3 administrative support to instructional supervision					

4	objective evaluation of instructional supervision					
5	cooperative action in instructional supervision					
b. Instructional Supervisor's …						
1	planning skills on observing, monitoring and evaluating the instructional process					
2	analytical skills to explain the relationship that exist between teaching and learning					
3	social competence in building collaborative and empowering relationships					
4	communicative competence on holding one-on-one conferences with teachers					
5	creative and innovative skills in dealing with complex classroom practices					
2. Evaluation of Instructional Supervision						
a. Based on my observation, the instructional supervisor accomplishes the appraisal forms through:						
1	conducting lesson plan reviews					
2	performing classroom observations					
3	examining classroom discipline or management					
4	checking the routine management					
5	monitoring the record management					
b. Based on my observation, the instructional supervisor prepares the supervisory reports through:						
1	accomplishing the form 178 upon the observation of the teaching-learning process					
2	monitoring the class targets or accomplishments					
3	reviewing IPCRF as part of performance monitoring and tracking					
4	keeping the appraisal forms for record management and future reference					
5	assessing the realization of government's instructional policies and practices					

III. What is the teaching job performance of the teacher? _____

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Level of Science Achievement: Basis for the Production of Strategic Intervention Materials (SIMs)

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Abstract

This research used the descriptive method to determine the level of Science Achievement of Grade VI Pupils: Basis for Production of Strategic Intervention Materials in Bayawan City East Central School, Bayawan City Division during the SY 2019-2020. The quantitative data were gathered from 134 pupils of Bayawan City East Central School, Bayawan City Division during the SY 2019-2020. Also, the researcher conducted a survey questionnaire. Descriptive method was used in this study. The statistical tools used in the analysis of the data were percentage, frequency, mean, weighted mean, and z-test. The study found out that the level of Science Achievement of Grade VI Learners of the Least Learned Organ Systems in terms of the Circulatory System, Respiratory System, and Excretory System were at low mastery level while for the Nervous System, the learners were moving towards mastery stage. Based on the given findings, it served as a basis for the production of Strategic Intervention Materials (SIM) in the different Least Learned Organ Systems namely Circulatory System, Respiratory System, Nervous System, and Excretory System in order to increase the level of learners' achievement in Science subject.

Keywords: *Science Achievement, Strategic Intervention Materials, Least Learned Organ Systems*

I. INTRODUCTION

The K-12 Science Education Curriculum aims to develop scientific literacy among pupils to prepare them to become citizens who actively participate and foster involvement in decision-making with regards to the application of scientific knowledge and building impacts to health, social and environmental sectors (K-12 Curriculum, 2016).

With the implementation of the K-12 Curriculum, elementary Science teachers are challenge to ensure that all pupils would become scientifically literate which means that teaching should not only be limited to acquisition of knowledge but also in the development of higher order thinking skills, however, this goal will never be realized if they lack mastery in major competencies in Science 6.

In 2016, the Mean Percentage Score (MPS) of Science subject in the elementary level is only 59.70%. This showed that only 6 out of 10 pupils mastered the competencies in Science. Moreover, the result became less as shown in year 2017 wherein the Mean Percentage Score (MPS) of Science subject in the elementary level is only 29.01%. This showed that only 2 out of 10 pupils mastered the competencies in Science.

For Bayawan City Division, out of the five subjects tested in 2016, Science ranks second to the last with only 61 Mean Percentage Score (MPS), and even the last in year 2017 which falls below the standard. This showed that most of the competencies in Science subject were not mastered.

Research further indicated that school-based factors such as the availability and use of teaching/learning facilities, socio-economic status, parents' educational qualifications, student factors such as motivation and attitude, school type and the teachers' characteristics contribute to the learners' poor performance in the science subjects. This result indicated the need for designing appropriate intervention programs such as remediation or enrichment through learner-centered approaches (Danso, 2014; Villonez, 2018).

Republic Act No. 10533, otherwise known as "Enhanced Basic Education Act of 2013", Section 5 of the curriculum development states that the production and development of locally-produced teaching materials shall be encouraged, and approval of these materials shall devolve to the regional and division education units. Strategic Intervention Materials (SIMs) is an aid in re-teaching the least mastered topics and competencies that were not developed during regular classroom instruction (Jamandron, 2018; Sinco, 2019).

Thus, the researcher being a Science teacher herself aims to determine the Science achievement of Grade VI pupils as a basis for the production of Strategic Intervention Materials (SIMs) to help improve pupils' level of understanding on the least learned concepts in Science VI and to investigate its impact to pupils' academic achievement of Bayawan City East Central School, Bayawan City Division for S.Y. 2019-2020.

II. METHODOLOGY

Research Design

The study used the descriptive research design which will be used to identify, describe and determine the level of Science achievement of Grade VI Learners.

Research Respondents

The respondents of the study are the 134 Grade VI Learners coming from the different sections of Bayawan City East Central School during the school year 2019-2020.

The researcher determined all the sections in Bayawan City East Central School for the Grade VI level where there were 12. In determining the actual respondents of the study, the researcher used the stratified sampling technique. The researcher chose the sample respondents from the population using lottery sampling after writing the name of the respondents in a piece of paper. From the population of each section, samples of the respondents were taken which resorted into a total of 134.

Research Procedure

The researcher asked permission from the concerned authorities, and secure the necessary endorsements before floating the questionnaires to gather the needed data. A letter of permission to conduct the study was given to the Schools Division Superintendent of the Division of Bayawan City requesting permission to allow the researcher to conduct the study in Bayawan City East Central School. Upon approval, copies of the approved letter were given to the assigned School Head, School and Grade Level Science Coordinators, and Grade VI Advisers or Science Teachers to allow the researcher to administer the questionnaire to the identified research respondents who are the Grade VI Learners. Hence, copies of questionnaires were reproduced and distributed to the respondents and were personally distributed by the researcher which enabled her to explain the purpose of the study. The accomplished questionnaires were retrieved immediately after every administration and as soon as the respondents have answered all the required information. The respondents were further assured that their answers will be dealt with strict confidentiality.

Plan for Data Analysis

The data gathered were processed statistically using the Statistical Package for Social Science (SPSS). These were statistically analysed to answer the specific objectives of the study such as the frequency count and percentage to determine the profile of the Grade VI learners, mean to determine the level of Science Achievement of Grade VI learners, and Z-test to determine the significant difference in the level of Science Performance of Grade VI Learners.

III. RESULTS AND DISCUSSION

This section presents the result of the study and provides in-depth analysis and interpretation of data.

Table 1. *Level of Science Achievement of Grade VI Learners of the Least Learned Organ Systems in terms of Circulatory System, Respiratory System, Nervous System and Excretory System*

Least Learned Organ Systems	Mean	Interpretation
Circulatory system	54.25	Low Mastery
Respiratory system	50.82	Low Mastery
Nervous system	64.70	Moving Towards Mastery
Excretory system	60.19	Low Mastery
Overall Mean	57.49	Low Mastery

The level of Science Achievement of Grade VI Learners of the Least Learned Organ System in terms of the Circulatory System, Respiratory System, Nervous System, and Excretory System resulted to an overall composite mean of 57.49 interpreted as low mastery.

Similar result is also evident in the study of Alboruto (2017) where the test scores totalled an average of 48.25% which is also below 75% passing rate of the Department of Education under DepEd Order No. 8 s. 2015 Policy Guidelines on Classroom Assessment for the K-12 Policy Guidelines on Classroom Assessment Basic Education.

When the items were taken individually, Nervous System obtained the highest mean score of 64.70 percent interpreted as moving towards mastery level while respiratory system got the lowest mean score of 50.82 percent interpreted as very low level. This result, however, negated the results indicated in the study of Sinco (2018) where respiratory system got the highest weighted mean and nervous system obtained the lowest among the given items. This proven the importance of the looking into the concepts of individual differences in the areas of knowledge transfer, teaching styles and learning styles in learning specific concepts across different disciplines. In addition, the use of educational resources in delivering concepts as well was noted by Villanueva (2019), indicating that school-based factors like the availability of teaching and learning facilities served as factors that contribute to the learners' academic performances in Science Subjects (Duya, 2018).

Furthermore, Locsin (2017) emphasized that effective teachers evaluate resources to use when teaching a unit or lesson. They use criteria such as appropriateness for grade level: alignment to national state or local standards, accuracy of information contained within the resource; the time allowed for the lesson unit; and the learning benefits that come from using the resource.

In addition, Abudu and Gbadamosi (2014) regards attitude towards Science as an important factors that affects students' performances and concepts about the subjects. As noted it is only positive attitude that leads to interest in the subject, and interest lead to commitment and commitment in turn leads to yearning for academic achievement. Focusing on the teaching of science courses in primary education, they are regarded as challenging for both teachers and students. Indeed, in many cases, teachers revert to conventional instruction because of the problems they have in understanding a number of subjects (Fokides & Mastrokoukou, 2018).

Students' science misconceptions are a commonplace and their performance is generally poor (Fokides & Mastrokoukou, 2018). In primary level, many educational systems include modules related to the human anatomy and its organ systems.

From the relevant literature, it is evident that students have difficulties in understanding how most of them function, including the respiratory (Fokides & Mastrokoukou, 2018) and the circulatory system (Allen, 2014). In addition, it seems that students have trouble understanding the relationship between these two systems.

The Respiratory and the Circulatory Systems as Teaching/Learning Subjects: As mentioned in the introduction, in many countries the primary school's science curriculum includes units related to the human organ systems. For example, in Greece, the digestive system is taught in the fifth grade, while the respiratory and the circulatory systems are taught in the sixth (Fokides & Mastrokoukou, 2018). In the UK, the circulatory system is also taught in the sixth grade (UK Department of Education, 2015). In Sweden, units related to human organs are included in grades 4 to 6 (Fokides & Mastrokoukou, 2018).

As for the problems that students face, it seems that several biological functions and phenomena are particularly difficult for them to grasp. This also applies to the way the organ systems function, probably because they are complex systems that interact with each other. Also, students seem to find it hard to comprehend how the organs relate to each other, as they consider them as independent components of the body.

Coming to the respiratory system, many students include irrelevant organs to this system such as the stomach (Fokides & Mastrokoukou, 2018). The lungs are often placed in the upper part of the body (near the neck) and quite smaller than their actual size. and Mastrokoukou (2018) recorded several other students' misconceptions, such as the drawing of only one lung, of two lungs not related to each other, and of

two lungs with two separate tracheas. Finally, students often feel that the air we inhale remains to our neck or head until we exhale (Allen, 2014). As for the circulatory system, the situation is similar since students have several misconceptions about the shape and function of the heart. For example, even though they often draw the correct size of the heart, it has the shape of the symbol of the heart. The heart's internal structure it is often depicted with three cavities (atriums or ventricles) instead of four. The role of the heart is also misunderstood; students think that it produces or filters the blood. The circulatory system is regarded as a closed system; the amount of blood remains constant and the blood is moving in both directions inside the veins.

Finally, students seem to believe that the respiratory and the circulatory systems are not related to each other. In a study on how the blood flows into the body, the majority of students chose the model in which the blood flows from the heart to the extremities of the body and back to the heart, without including the circulation to the lungs.

Table 2. *Comparative Analysis in the Level of Science Achievement of Grade VI Learners in the Area of Circulatory System when grouped and compared according to the variables*

Circulatory System							
Variables	Categories	N	Mean Rank	Mann-Whitney U-test	Sig. Level	p-value	Interpretation
Sex	Male	78	65.93	2061.500	0.05	0.569	Not Significant
	Female	56	69.69				
Section	Lower Section	85	53.98	933.000		0.000	Significant
	Higher Section	49	90.96				
Parents' Highest Educational Attainment	Lower	72	68.60	2152.500		0.715	Not Significant
	Higher	62	66.22				
Average Family Monthly Income	Low Income	66	67.33	2232.500		0.958	Not Significant
	High income	68	67.67				

The table depicted the comparative analysis between achievement of Grade VI learners in the area of Circulatory System when grouped and compared according to the variables of sex, section, parents' highest educational attainment, and average family monthly income.

When grouped and compared according to sex, the result showed a computed p-value of 0.569 which is higher than the level of significance of 0.05. Thus, the hypothesis of no significant difference is not rejected. This simply means that that sex is not a determining factor in the level of achievement of the learners in the area of circulatory system. It makes a lot of sense to say that the respondents, whether male or female, demonstrate almost the same level of academic achievement in the science subject. This is supported by the study of Balbon (2019) who also featured the same results on the learners' achievement when they are grouped according to sex.

When grouped according to section, the computed p-value is 0.000 which is depicted as significant. This implied that learners' categories with the variation of learning environment, students' diversity, different interests, individual difference and multiple intelligences all play significant roles in academic achievement (Caloring, 2018). When grouped according to parents' educational attainment, the composed p-value is 0.715 which is also higher than the level of significance of 0.05. The hypothesis of no significant difference on the level of science achievement of Grade VI learners' when compared according to their parents highest educational attainment is therefore not rejected. This implied that whether parents have lower or higher educational attainment they both work in providing the learners the necessary support they need in their schooling (Arevalo & Comighud, 2020; Comighud et. al, 2020).

When grouped according to average monthly income, the computed p-value of 0.958 is also higher than the level of significance of 0.05. It could be inferred that whether learners' belong to low or high income families, their parents and/or guardians extended the necessary support system in terms of finances to support their educational undertakings (Tuisa, 2018; Comighud & Arevalo, 2020).

Table 3. *Comparative Analysis in the Level of Science Achievement of Grade VI Learners in the Area of Respiratory System when grouped and compared according to the variables*

Respiratory System							
Variables	Categories	N	Mean	Mann-	Sig.	p-value	Interpretation

			Rank	Whitney U-test	Level		
Sex	Male	78	66.19	2082.000	0.05	0.641	Not Significant
	Female	56	69.32				
Section	Lower Section	85	81.41	900.500		0.000	Significant
	Higher Section	49	43.38				
Parents' Highest Educational Attainment	Lower	72	52.57	1157.000		0.000	Significant
	Higher	62	84.84				
Average Family Monthly Income	Low Income	66	44.78	744.500		0.000	Significant
	High income	68	89.55				

The table presented the comparative analysis between achievement of Grade VI learners in the area of Respiratory System when grouped and compared to according to the variables of sex, section, parents' highest educational attainment, and average family monthly income.

When grouped and compared according to sex, the result showed a computed p-value of 0.641 which is higher than the level of significance of 0.05. Thus, the hypothesis of no significant difference is not rejected. This simply means that that sex is not a determining factor in the level of achievement of the learners in the area of circulatory system. It makes a lot of sense to say that the respondents, whether male or female, demonstrate almost the same level of academic achievement in the science subject. This is supported by the study of Balbon (2019) who also featured the same results on the learners' achievement when they are grouped according to sex.

When grouped according to section, the computed p-value is 0.000 which is depicted as significant. This put forward the importance of school climate (Pescuela, 2015) and classroom environment (Locsin, 2017). This put emphasis on the learning performance of Filipino learners in science subject through fostering support in scientific culture reflected in the school curriculum, laboratory facilities, and instructional materials among others.

When grouped according to parents' educational attainment, the computed p-value is 0.000 which is depicted as significant. Higher educational attainment equates to grater knowledge obtained which parent could likely showed with their children in learning reinforcement and activities done outside the formal school setting. As indicated, parental involvement is considered as effective strategy to ensure learners' success (Martinez, 2015; Fuller, 2017).

When grouped according to average monthly income, the computed p-value is 0.000 which is depicted as significant. Research indicates how socio economic factors can contribute to learners' academic performance in the science subject (Amukowa, 2013; Lalamonan & Comighud, 2020).

Table 4. *Comparative Analysis in the Level of Science Achievement of Grade VI Learners in the Area of Nervous System when grouped and compared according to the variables*

Nervous System							
Variables	Categories	N	Mean Rank	Mann-Whitney U-test	Sig. Level	p-value	Interpretation
Sex	Male	78	71.20	1895.500	0.05	0.180	Not Significant
	Female	56	62.35				
Section	Lower Section	85	62.38	1647.000		0.038	Significant
	Higher Section	49	76.39				
Parents' Highest Educational Attainment	Lower	72	59.15	1631.000		0.006	Significant
	Higher	62	77.19				
Average Family Monthly Income	Low Income	66	54.36	1377.000		0.000	Significant
	High income	68	71.20				

Table 4 showed the comparative analysis between achievement of Grade VI learners in the area of Nervous System when grouped and compared to according to the variables of sex, section, parents' highest educational attainment, and average family monthly income.

When grouped and compared according to sex, the result showed a computed p-value of 0.180 which is higher than the level of significance of 0.05. Thus, the hypothesis of no significant difference is not rejected. This simply means that that sex is not a determining factor in the level of achievement of the learners in the area of circulatory system. It makes a lot of sense to say that the respondents, whether male or female, demonstrate almost the same level of academic performance in the science subject. This is supported by the study of Balbon (2019) who also featured the same results on the learners' achievement when they are grouped according to sex. In contrary to this, Kabunga et al. (2018) revealed that attitude, age and gender had significant relationship with students' performance in science subjects.

When grouped according to section, the computed p-value is 0.000 which is depicted as significant. This underscores the relevance of learning environment and diversity of learners as well as the use of instructional materials, learning facilities and learning resources (D.O. No.42, s. 2017; Lebata, 2014; Amina, 2015). When grouped according to parents' educational attainment, the computed p-value is 0.000 which is depicted as significant. This put relevance on the importance of parents' educational attainment in supporting their child's learning achievement as the knowledge and skills they learned can also be used for transfer of learning (Comighud, 2019; Pillado, Futalan, & Comighud, 2020; Comighud et al., 2020).

When grouped according to average monthly income, the computed p-value is 0.000 which is depicted as significant. Average family income which equates to socio economic factors serve as a determining factor in learning assessment and evaluation as it represents as a support network for the acquisition of learning materials and resources needed to support their educational endeavours towards their holistic growth and development (Thomas, 2014; Carlin 2015; Kilgoni, 2015; Comighud, 2019; Comighud et al., 2020).

Table 5. *Comparative Analysis in the Level of Science Achievement of Grade VI Learners in the Area of Excretory System when grouped and compared according to the variables*

Excretory System							
Variables	Categories	N	Mean Rank	Mann-Whitney U-test	Sig. Level	p-value	Interpretation
Sex	Male	78	72.08	1827.000	0.05	0.101	Not Significant
	Female	56	61.12				
Section	Lower Section	85	67.64	2071.000		0.957	Not Significant
	Higher Section	49	67.27				
Parents' Highest Educational Attainment	Lower	72	55.33	1356.000		0.000	Significant
	Higher	62	81.63				
Average Family Monthly Income	Low Income	66	51.65	1198.000		0.000	Significant
	High income	68	82.88				

Table 5 displayed the comparative analysis between achievement of Grade VI learners in the area of Excretory System when grouped and compared to according to the variables of sex, section, parents' highest educational attainment, and average family monthly income.

When grouped and compared according to sex, the result showed a computed p-value of 0.101 which is higher than the level of significance of 0.05. Thus, the hypothesis of no significant difference is not rejected. This simply means that that sex is not a determining factor in the level of achievement of the learners in the area of circulatory system. It makes a lot of sense to say that the respondents, whether male or female, demonstrate almost the same level of academic performance in the science subject. This is supported by the study of Balbon (2019) who also featured the same results on the learners' achievement when they are grouped according to sex. When grouped and compared according to section, the result showed a computed p-value of 0.957 which is higher than the level of significance of 0.05. Thus, the hypothesis of no significant difference is not rejected. This implied that whether the Grade VI learners who belong to low or high sections, the level of instruction given by teacher-educators are the same as anchored on similar subject area or learning curriculum anchored on providing educational standards of the school towards quality education (Coton et al, 2016; Comighud, 2019; Pillado, Futalan, & Comighud, 2020; Comighud et al., 2020).

When grouped according to parents' educational attainment, the computed p-value is 0.000 which is depicted as significant. Azar et al (2017) noted that educational attainment positively correlated to learners' academic achievement as the former can support the latter for them to achieve success in their educational undertakings. Furthermore, Pescuela (2015) supported this notion on parents' involvement on their child's education. When grouped according to average monthly income, the computed p-value is 0.000 which is depicted as significant. This put forward the significance of socio economic status in strengthening learners' educational support as home serves as a determining factor of the child's holistic growth. Hence, building upon a sufficient socio economic support through comfortable home, increasing parents' involvement in their child's education (Ross, 2014; Gaff, 2017; Lalamonan & Comighud, 2020).

IV. CONCLUSIONS

Based on the findings of the study, the following conclusions were made:

1. As the level of Science Achievement of Grade VI Learners were within low mastery level, it could be inferred that both the learners demonstrated less awareness on the given Science concepts pertaining to the different Science systems. This further indicates that Science continues to be one of the most difficult fields of study in basic education both the elementary and secondary levels. Moreover, it means that school-based factors (the availability and use of teaching/learning facilities), socio-economic factors (the education of the parents and their economic status), student factors (motivation and attitude), school type and the teachers' characteristics as the factors that contribute to the learners' poor performance in the science subjects.

2. In the area of circulatory system, sex is a significant predictor in learning the area on circulatory system. It also forwarded that whether pupils belong to either of the sections, regardless of parents' educational qualifications and family's socioeconomic status, learners' academic achievement is aimed and promoted by key players of education and its community partners like that of parents as school's stakeholders.

3. In the area of respiratory system, it could be inferred that being part of the higher section, parents' educational status and being categorized in a high income group positively correlated learners' educational results and test scores as they can be given a support network across intellectual, social, and economic factors.

4. In the area of nervous system, it could be inferred that school climate, parents' knowledge, and family's financial resources could help achieve higher educational attainment though supportive learning environment and active parents' involvement in the pupils' educational engagement.

5. There was no significant difference between the level of Science Performance of Grade VI Learners in the area of excretory system when grouped and compared according to sex and section but a significant difference exists in terms of parents' highest educational attainment, and average family income. It means that parents' educational achievement and family's economic schemes can support learners' development.

V. RECOMMENDATIONS

In the light of the findings and conclusions of the study, the following recommendations are advanced.

1. As the level of Science Performance of Grade VI Learners in terms of the given least learned organ systems were within the low mastery level, it is therefore recommended that the teachers will produce and utilize Strategic Intervention Materials (SIMs) for teaching. The production of SIM can be done under the Learning Resource and Management Development System (LRMDS) department in coordination with Science Master Teachers during In-Service Trainings (INSET).

2. The school-based factors like the availability and use of teaching and learning facilities, socioeconomic factors or the education of the parents and their economic status, among others should be taken into consideration when examining students' academic achievement.

3. It is also recommended that there should be available practical lessons to clarify and reinforce scientific concepts as it is indicated that these serve as essential components of effective teaching and learning. The production of practical lessons can be done through the Whole Brain Learning System (WBLS) Teachers' Sessions during seminar-workshops and training activities to pave way on the production of localized lessons that could aid better learners' understanding on scientific concepts as anchored on the principles of indigenization and contextualization.

4. Teachers are also encouraged to use interactive and innovative teaching strategies which are aligned to the Philippine Professional Standards for Teachers (PPST), the standards for good teaching in the Philippines which are focused in the development of the 21st century teachers who can respond to the demands of the K-12 Basic Education System.

5. Teachers are therefore encouraged to make instructional materials. These materials can support and increase students' success which can increase their academic achievements. Also, modified instructional materials help low achievers in mastering the least learned concepts. These modified instructional matters shall undergo the validation of experts in the field to be able to cater to the learning needs of the students.

6. In view of this, the development and utilization of Strategic Intervention Materials (SIM) is therefore recommended as this will enhance the test scores of the learners through enabling them to deepen their knowledge and understanding on the identified least mastered concepts in Science subject. Hence, as indicated, the use of SIM uplifts the learning achievement and accomplishments of the students for better academic gain.

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APPENDICES

Science Performance of Grade VI Pupils: Basis for Production
of Strategic Intervention Materials

Part I. Profile of the Respondents

Name (Optional) _____

Sex: _____Section: _____

Parents' Highest Educational Attainment: _____

Average Family Monthly Income: _____

Part II. Questionnaire Proper

Science Performance of Grade VI Pupils

The Circulatory System

Test I: Read and understand the questions carefully. Choose the letter of the correct answer.

1. Which of the following is the main transport system of the body that is responsible for the carrying of water, nutrients, and oxygen as well as bringing of carbon dioxide and other wastes to the excretory system?
   a. excretory system c. circulatory system
   b. respiratory system d. digestive system
2. What do you call the specialized muscular organ which is about the size of your fist and is found at the middle of the chest with its apex tilted to the left side?
   a. pancreas c. blood vessels
   b. heart d. lungs
3. Gina's 78-year old mother died of "heart attack". What do you think is its probable cause?
   a. Her heart become hardened. c. Her heart was attacked by bacteria.
   b. Her blood vessels hardened. d. The blood going into the heart was blocked by a clot.

4. Why are blood cells important in the human circulatory system? Because

I. Blood keeps us cool at all times.

II. The red blood cells fight disease germs.

III. The white blood cells keep fight disease germs.

IV. Blood improves our complexion by making reddish.

a. I only b. II only c. III only d. II and III

5. Which of the following is the main function of the Red Blood Cells (RBCs) in the body?

a. Help fight infections and microorganisms that enter the body.

b. Deliver oxygen to the different parts of the body.

c. Help in blood clotting.

d. Deliver water, minerals, nutrients, sugar and other substances in the body.

6. Which of the following is a protein-rich fluid circulating in the body which consists of plasma and three blood cells namely red blood cells, white blood cells and platelets?

a. blood c. vitamins

b. minerals d. nutrients

7. Which of the following chambers of the human heart is the narrowest and most numerous blood vessels in the human body where food nutrients and oxygen molecules are transferred from the blood to the cells of the body and carbon dioxide and other wastes are picked up?

a. arteries c. veins

b. aorta d. capillaries

8. Which chamber of the heart pumps oxygenated blood to the different parts of the body?

a. right auricle c. right ventricle

b. left auricle d. left ventricle

9. Why is it better that we should take care of our circulatory system?

a. So that we will have a large heart.

b. So that our body get rid of body wastes.

c. So that diseases germs cannot easily attract our bodies.

d. So that we can play the whole day.

10. To take care of your body, what desirable habits would you practice to control the common ailments of the circulatory system?

I. Eat too much salty food. III. Exercise Regularly

II. Drink juice and softdrinks IV. Smoke cigarettes three times a day a. I only b. II only c. III only d. I, II, III, IV

The Human Respiratory System

Test II. Read the questions carefully and choose the letter of the correct answer.

1. What body system allows a person to breath and exchange oxygen and carbon dioxide throughout the body?

a. digestive system c. respiratory system

b. circulatory system d. nervous system

2. A tube about 13cm long found at the back of the throat which connects the nasal cavity and trachea?

a. larynx c. pharynx

b. windpipe d. lungs

3. Which of the following is a box like structure commonly known as the voice box that contains vocal cords?

a. larynx c. pharynx

b. windpipe d. lungs

4. What do you call a stiff tube about 11cm long and 2cm in diameter, made up of C-shaped rings of cartilage?

a. Alveoli c. Lungs

b. Bronchi d. Trachea

5. The major organ of the respiratory system that has pinkish, sponge-like quality that provides the surface areas for gas exchange and filter gaseous waste materials.

a. lungs c. nasal cavity

b. diaphragm d. nose

6. Which among the following is a dome-shaped muscle and consider as the main muscle for breathing?

a. lungs c. nasal cavity
b. diaphragm d. nose
7. How does oxygen enter our body?
a. Through the hole of the ears.
b. Through the pores of skin.
c. Through the esophagus.
d. Through the nose.
8. What inference can you make about the air we breathe during inhaling processes?
a. Lungs get smaller. c. Chest region expands.
b. Diaphragm moves up. d. Chest region becomes smaller.
9. The following are ways of taking care of our different organ systems, one of them is to take care of our respiratory system, which one?
a. It digests all food substances needed for the body.
b. It transports nutrients to the cell and collects waste materials from them.
c. It protects the body from foreign microorganisms that cause ailments.
d. It facilitates the diffusion of oxygen in the blood and the release of carbon dioxide from the body.
10. Based on the following, which best or how would you explain the function of the lungs?
a. It purifies the air that we breathe.
b. It transports purified air to the bloodstream.
c. It serves as a passage of air from nostrils to the chest cavity.
d. It prevents the entry of food into the respiratory system.

The Nervous System

Test III. Read the test items carefully. Choose the letter of the correct answer.

1. Which is NOT the function of the nervous system?
a. Receives information from the environment.
b. Controls the activities of the body.
c. Manages the activities of the body.
d. Coordinates the action in the body.

2. When you touch something very hot, you move your hand away from the object as soon as you feel the hot sensation. Can you cite the reason why?
a. The blood moves faster to the hand.
b. The nerve ending are very sensitive.
c. The message travels fast to your hand.
d. The message to and from the brain move fast through the nerves.
3. Which part of the brain controls the blood pressure and the heart beat?
a. cerebrum c. medulla oblongata
b. cerebellum d. spinal cord
4. Which part of the brain is responsible for muscular movement?
a. cerebrum c. medulla oblongata
b. cerebellum d. spinal cord
5. The following given system is NOT controlled by the brain stem?
a. urinating c. breathing
b. adding numbers d. sneezing
6. What generalizations can you make when a person's cerebellum will be damaged?
a. A person will be paralyzed.
b. A person will be more active.
c. A person will be irritated.
d. A person will be absent minded.
7. Why is it necessary to help prevent and control common ailments in the nervous system?
I. Relax your nerves and spend your leisure time wisely.
II. Drink too much alcoholic beverages.
III. Stay up late watching movies.
IV. Always frown with people you newly meet.
a. I and II b. II and III c. I, II and III d. I, II, III, IV
8. Which do you think among the following is the part of the brain that is considered as the seat of memory and thinking?
a. cerebrum c. medulla oblongata
b. cerebellum d. spinal cord
9. The following can cause a serious injury to the nervous system, which one?
I. bad fall III. studying hard
II. drinking coffee IV. too much exercise
a. I only c. I, II and III

b. II and III d. I, II, III and IV

10. Why is it better for a person to wear a helmet when he/she rides in a motor cycle?

a. To protect the spinal cord.

b. To protect his head from accident.

c. To prevent the air from entering his/her eyes.

d. When sweat has a pleasant odour.

The Excretory System

Test IV. Read the questions carefully and choose the letter of the correct answer.

1. The kidney is the blood-filtering organ of our body. Evaluate the other important functions/s that our kidneys perform?

Remove wastes out from the blood.

Balance the fluid of the body.

a. I only c. III only
b. I and II d. I, II, and III
2. Which part of the excretory temporarily holds the urine until it finally goes out from the body.
a. kidney c. urinary bladder
b. ureter d. urethra
3. Our kidney has thousands of filtering structures that remove wastes from the blood. Which of the structures do this function?
a. cortex c. nephrons
b. medulla d. glomerulus
4. Kidneys are not the only organs of excretion in the human body. Which other organ supplements its work.
a. liver c. heart
b. skin d. large intestine

5. Which of the following is our main excretory organ?
a. kidney c. skin
b. lung d. bladder
6. The following are the functions of the skin EXCEPT:
a. Covers and protects the body c. Expels carbon dioxide
b. Regulates body temperature d. Cools the body during evaporation
7. Which of these glands eliminate waste from the skin?
a. oil c. sweat
b. sebaceous d. pituitary
8. Which of the following is NOT eliminated through the skin?
a. water c. feces
b. salt d. carbon dioxide
9. The following compounds are the main composition of our sweat. Which one of them is 99%?
a. table salt c. carbon dioxide
b. water d. sugar
10. Twenty percent (20%) of the heat of the body is lost during:
a. When sweat condenses. c. When sweat is reabsorbed by the body.
b. When sweat evaporates. d. When sweat has a pleasant odor.

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Looking at the Perceived Benefits of Feeding Program in the Eyes of the Stakeholders

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Abstract

The study focused on the effects of school-based feeding program in the eyes of the stakeholders conducted on March 2019 to grades 1 to 6 beneficiary pupils, selected teachers, SBFP In-Charge and School Head of Mansagomayon Elementary School, District 4 of Sta. Catalina, Division of Negros Oriental. A descriptive design was used in this study which deemed appropriate in the context of this study since the researcher will describe the effectiveness of the SBFP as employed in the research locale. Additionally, Key informant interview with the selected representatives of the identified groups of stakeholders was conducted to provide qualitative support to the claims of the study. Since this study used the KII as the principal mode of data gathering among the participants, a semi structure interview guide was used. The said interview shall be composed of 7-10 questions that were patterned to achieve the objectives of this research conduct. However, the researcher has the leeway to ask a follow up questions given the goal of the research is not yet clarified to the respondents.

Meanwhile, the secondary data such as the baseline and endline data of the respondents' nutritional status were taken from the Nutrition Coordinator of the school. Mean and t-test was used to analyze the data.

Results revealed that the nutritional status of the pupils were below normal despite of the efforts in giving supplement and dietary assistance of the school through the conduct of feeding program

hence the very purpose of the program in providing complete meals and enhancing the nutrition of these pupils were not thoroughly achieved.

The mean of pupils' baseline and end line data shows a highly significant difference on the baseline and endline data results for the pupils' BMI with a P-value of 0.000 and t-value of -3.570.This implies that the results of the BMI of the pupil beneficiaries differ significantly before and after the 120 days feeding program. This means that there was a change and movement in the nutritional status of the pupils as the program was implemented.

I. INTRODUCTION

Feeding program as a social safety net has been popular indeveloping countries as an instrument for achieving the Millennium Development Goals. School-based feeding programs (SBFPs) are then intended to alleviate short-term hunger, improve nutrition and cognition of children, and transfer income to families (Joma, 2011).Also, Lawson (2012) indicated how these programs are frequently targeted towards populations that are food insecure and reside in areas with high concentrations of families from low socioeconomic status, or towards schools that face poor attendance and enrolment for school-aged children.Neervoort (2013) further specified that SBFPs have been established in large parts of developing countries all over the world, improving general socioeconomic conditions as well as providing educational and nutritional benefits to children.

In this connection, Middleton et al. (2013) indicated that schools have a crucial role for promoting and establishing healthy behaviours early in the life-course. In recent years, the emphasis has been to improve the food-culture, moving beyond changes to just thefood provision or education, but to improve the "whole-school" learning environment (Rana& Alvaro, 2010, Dick et al. 2012).

Middleton et al. (2013) further indicated the cultural issues that necessitate these healthy eating programs mean that interventions are not without challenges to their application and effectiveness particularly as they rely on collaboration between stakeholders: teachers, parents,public health practitioners, policy makers among others. Large school-based nutrition programs which use a "whole-school" approach rely on the insight and collaboration of teachers and parents.

As stakeholders, they provide critical contact with children when healthy eating habits and education can make a significant impact on life-long health. Their roles as "social agents" are important when considering implementation and evaluation of the conduct of SBFPs. Policy makers, researchers and other practitioners must perceive the value of their contributions. Hence, the study focuses on the Perceived Benefits of the Feeding Program in the Eyes of the StakeholdersofMansagomayon Elementary School, Sta. Catalina District 4 for SY 2018-2019".

II. METHODOLOGY

Research Design

This study used the descriptive research design to capture the objectives of this study. According to Gonzales and Calderon (2015), it is the research design that deals with the present condition. Moreover, according to Cooper, et al. (2014) this could be done by creating a profile of a group of problems, people, or events. Such studies involve the collection of data and the number of times the researcher observes a single event or characteristics. Furthermore, descriptive research was used to obtain information and to describe what exists with respect to the variables or conditions identified herein. Descriptive research is often used as a pre-cursor to more quantitative research designs, the general overview giving some valuable pointers as what variable are worth testing quantitatively (USC Libraries, 2015). Thus, it is deemed appropriate in the context of this study since the researcher will describe the perceived benefits of the SBFP as employed in the research locale. Additionally, key informant interview with the selected representatives of the identified groups of stakeholders was conducted to provide qualitative support to the claims of the study.

Research Respondents

The respondents of the study comprised a total of 12 (3 from each group of respondents): teachers, pupils, school heads and SBFP-in-charge, and parents of Mansagomayon Elementary School, Sta. Catalina District 4, Division of Negros Oriental.

The respondents of this study werepurposively identified members of the school's stakeholders in lieu of the SBFP implementation. In the selection of the participants the following criteria are considered: (1) They should have a direct connection and concern to the implementation of the SBFP in school; (2) They should have at least one child who are a recipient of the SBFPas external stakeholders of the school, such as parents; and (3) They should be willing to participate until the completion of this study.

Research Procedure

First, the researcher sought the approval of the committee research in-charge of the Central Philippine State University. Then, permission to conduct the study was requested from the Division of Negros Oriental through the office of the Schools Division Superintendent. Next, the researcher asked permission to the school head to gather data of school nutritional status baseline and end line.

The researcher then conducted the Key Informant Interview to the different respondents' prescheduled at the most convenient time and place upon the participants' approval using the interview guide questions. The criteria as specified in the respondents of the study were the guide of the researcher in selecting the samples. Presentation of research results through interview was then employed to capture the opinions, facts and insights from the participants. The qualitative data generated from this activity was utilized in supporting and enhancing the qualitative data of this research.

Plan for Data Analysis

Since this study use the KII as the evaluation study as the principal mode of data gathering among the participants, a semi-structured interview guide was used. The said interview was composed of 7questions that were patterned to achieve the objectives of this research conduct. However, the researcher has the leeway to ask a follow-up questions or probing questions given the goal of the research is not yet clarified to the respondents. Meanwhile, the secondary data such as the baseline and endline data of the respondents' nutritional status were taken from the School-based Feeding Program and/or Health and Nutrition Coordinator of the school.

III. RESULTS AND DISCUSSION

This chapter presents the analyses and interpretation of data gathered to answer problem under study. It consists of qualitative and quantitative presentations collected in an interview form and insightful evaluation and understanding of this study.

Table 1. *Profile of the Respondents*

GRADE LEVEL	BODY MASS INDEX (BMI)	Baseline Data			Endline Data		
		MALE	FEMALE	TOTAL	MALE	FEMALE	TOT
G1	Severely Wasted	4	2	6	0	0	0
	Wasted	0	1	1	0	0	0
	Normal	8	3	11	12	6	18
	Overweight	0	0	0	0	0	0
	Obese	0	0	0	0	0	0
G2	Severely Wasted	8	5	13	0	0	0
	Wasted	0	0	0	1	0	1
	Normal	14	5	19	21	10	31
	Overweight	0	0	0	0	0	0
	Obese	0	0	0	0	0	0
G3	Severely Wasted	3	5	13	0	0	0
	Wasted	1	0	1	2	2	4
	Normal	4	5	9	6	7	13
	Overweight	0	0	0	0	0	0
	Obese	0	0	0	0	0	0
G4	Severely Wasted	6	4	10	0	0	0
	Wasted	1	1	2	0	0	0
	Normal	7	5	12	14	10	24
	Overweight	0	0	0	0	0	0
	Obese	0	0	0	0	0	0
G5	Severely Wasted	4	9	13	0	0	0

	Wasted	1	0	1	0	0	0
	Normal	4	7	11	9	16	25
	Overweight	0	0	0	0	0	0
	Obese	0	0	0	0	0	0
G6	Severely Wasted	7	8	15	0	0	0
	Wasted	0	0	0	0	0	0
	Normal	2	9	11	10	18	28
	Overweight	0	0	0	0	0	0
	Obese	0	0	0	0	0	0

The first table presents the profile of the respondents across their Body Mass Index (BMI) data.

Table 1 shows the profile of the respondents in terms of their body mass index before and after the feeding program.

The baseline data for Grade 1 pupils of Mansagomayon Elementary School showed that out of 18 participants, 6 of them were severely wasted, 1 wasted, and 11 of them have a normal body mass index (BMI). For Grade 2, out of 32 participants, 13 of them were severely wasted and 19 of them were of normal body mass index. Moreover, there were 13 severely wasted, 1 wasted, and 9 pupils with normal body mass indexes for Grade 3 out of 17 participants. Out of 24 Grade 4 participants, 10 of them were severely wasted, 2 of them were wasted, and 12 of them have a normal body mass index. For the 25 pupils of Grade 5, there were 13 severely wasted, 1 wasted, and 11 normal BMI. Lastly, out of 26 Grade 6 participants, there were 15 pupils with severely wasted BMI and 11 pupils with a normal BMI. This implies that most of the participants belong to the lowest bracket of nutritional status and were identified as undernourished and over nourished before the school-based feeding program was implemented.

On the other hand, the endline data reflected in the table showed that all 18 Grade 1 participants have achieved a normal body mass index. For grade 2, 31 participants have achieved a normal body mass index, only 1 participant was wasted out of 32 participants. Moreover, there were 13 participants who achieved a normal body mass index, and 4 of the participants were wasted out of 17 Grade 3 participants. For the 24 Grade 4 participants, all of them achieved normal body mass index while same is true with the 25 Grade 5 and 28 Grade 6 participants. This implies that the nutritional status of the pupils of Mansagomayon Elementary School have improved and was enhanced by the School-based feeding program. This means that those pupils that were identified as severely wasted become wasted and /or normal in terms of their body mass index, however, those pupils with normal nutritional status retained to be in the normal status.

Table 2. *Mean of Pupils' Nutritional Data*

	Mean	Std. Deviation	Interpretation
Baseline Data	14.80	3.261	Underweight

Endline Data	15.79	1.708	Underweight

Table 2 showed the mean body mass index of the pupils for the baseline and end line data. Result showed that the average BMI in the baseline data was 14.80 with standard deviation of 3.261 interpreted as underweight, while the average BMI for the end line data obtained was 15.79 with standard deviation of 1.708 still interpreted as underweight. This implies that the nutritional status of the pupils were below normal despite of the efforts in giving supplement and dietary assistance of the school through the conduct of feeding program hence the very purpose of the program in providing complete meals and enhancing the nutrition of these pupils were not thoroughly achieved.

In connection to the abovementioned, the result reflects the conflicting arguments as to whether households adjust the feeding practices of school children at home in response to SFPs. It has been shown that there is no reduction of food at home given to children who participate in SFPs in such a way that those children who benefit from SFP should get less at home. Instead, school meals are additional diets intended to what he or she can get from home. To the contrary, there are counter arguments to such claims. In response to the school meals, families may also adjust resource allocation among children within the household by taking away some resources from beneficiary children and redistributing them to other members of the household (Kazianga, de Walque et al. 2009; Lalamonan & Comighud, 2020; Comighud et al., 2020). As a result, those children from whom resources are taken away will be worse off if the food provided at school is not very useful compared to what they would have had at home.

Also, this is supported by Pediatr (2018) who noted that School Feeding Program (SFP) is a targeted safety net program designed to provide educational and health benefits to vulnerable children. However, limited evidence exists regarding the effect of the intervention on the nutritional status and school attendance of children. Moreover, there are many studies that have evaluated its impacts and effects. Analysis of the information extracted from these studies shows that it conclusively impacts the micronutrient level of targeted children, but have modest and mixed effects on health outcomes as evaluated by anthropometric measurements. This further implies that having an in-school feeding program–even that reaching the mostneedy populations- does not necessarily address the desired goals of compensating for nutritional deficits and correlating to improved test results (Ardoque & Orlicki, 2013; Pillado, Futalan, & Comighud, 2020).

Perceived Benefits of Feeding Program

SBFP as a DepEd Initiative: A Means to Improve Physical Health and Provide Nutritional Benefits

In Maslow's hierarchy of needs, the physiological needs must be met. That children need food in the right quality and quantity. Food is necessary because it builds, protects and repairs the body. The malnutrition and its effects on brain development have tremendous implications on child performance. Poorly-fed children are more exposed to disease infections and emotional frustrations as compared to well fed children.

The School-Based Feeding Program (SBFP) aims to address undernutrition among public school children. Primarily, it aims to improve the nutritional status of the beneficiaries by at least 70% at the end of 120 feeding days. Secondarily, it aims to increase classroom attendance by 85% to 100% and improve the children's health and nutrition values and behaviour (DepEd Order No.39, s.2017). In support, these are what the participants made mentioned:

The School-Based Feeding Program is defined as an intervention to provide supplementary meals to children in the school setting. This serves as a means to enhance their physical health and promote nutritional values and benefits. Hence, through this, children were provided with nutritious meals to help decrease the incidence of malnourishment. ("Teacher Jea Marie")

SBFP is a program that nourished children for them to be physically-active. In line with this, it is considered relevant by being an aid in supporting physical growth and development. ("Teacher Rodelyn")

SBFP is a program initiated by DepEd to all wasted and severely wasted children in school. Its objective is to rehabilitate at least 70% of the identified beneficiaries. Moreover, the program is considered relevant as the foods served are utilized by the body to enhance physical growth and increase energy level for learners to perform well in school. ("Teacher Melody")

SBFP helps pupils become healthy and strong. It is also a program that aids children who are undernourished to gain the right nutrition most especially for those underweight, wasted or severely wasted not to experience hunger anymore. ("Pupil Cherry Mae")

SBFP is a program that helps children who lacks nourishment in their respective homes. It is relevant to our school children undernourished and very sustainable for 120 days because of the cooperation of the children, parents and teachers in school. ("School Head")

It is a program that aims to uplift the nutritional status of the children below normal level. Moreover, it is relevant for children's mind and body to function to its fullest especially for them to be both mentally-engaged and physically-active. ("SBFP-in-charge 1)

SBFP provides undernourished children with healthy meal. It is anchored on the objective to improve children's physical health. In addition to this, it is efficient to provide healthy and nutritious meal. ("Parent 1")

It is relevant because healthy and nutritious foods were served which in turn enhance children's physical well-being and health aspects. ("Parent 2")

In support to the abovementioned findings, Middleton et al. (2013) noted that School-based Feeding Program (SBFP) sought to address nutritional objectives. Another study also shows that School Feeding Programs can improve health by reducing morbidity and illness and hence attract children to school (He, 2009). In addition, Joma et al. (2011) in a study noted that school feeding programs (SFPs) are intended to alleviate short-term hunger and improve nutrition in addition to enhancing cognition of children, and transferring income to families.Analysis of

the articles revealed relatively consistent positive effects of school feeding in its different modalities on energy intake, and micronutrient status among others.

Also, Ardoque and Orlicki (2013) in their study noted that as Argentina presents problems of malnutrition, the federal in-school feeding program has become a key policy because it provides an important nutritional intervention during a relevant growth period. The findings suggest that the program has successfully targeted the most disadvantaged schools.

Furthermore, this is supported by Pediatr (2018) who noted that School Feeding Program (SFP) is a targeted safety net program designed to provide educational and health benefits to vulnerable children. Moreover, there are many studies that have evaluated its impacts and effects. Analysis of the information extracted from these studies shows that it conclusively impacts the micronutrient level of targeted children, but has modest and mixed effects on health outcomes as evaluated by anthropometric measurements. This further implies that having an in-school feeding program–even that reaching the most needy populations has necessarily address the desired goals of compensating for nutritional deficits and correlating to improved physical growth (Ardoque & Orlicki, 2013).

SBFP as a Nutritional Advocacy: A Key to Promote Academic Learning and Enhance Scholastic Achievement

School feeding mostly takes place within the context of broad national school reform programs. These reforms should focus on other essential inputs to education and learning such as teacher development, curriculum reforms and student assessment.

SBFP is a program that does not only help beneficiaries to be physically nourished but also to become mentally-engaged in classroom activities. ("Teacher Rodelyn")

It helps children become more active and participative in the teaching and learning process for them to get high grades in academics. ("Pupil Jean")

SBFP helps children not only to become active but engaged in class discussions. Aside that it is a remedy to short-term hunger, it also enhance nutrition and cognition. ("SBFP-in-charge 2, Teacher Josephine")

SBFP aims providing food supplements to the identified wasted and severely wasted children during lunchtime to increase their academic performance. ("SBFP-in-charge 1")

The objective of SBFP is not only centered on the improvement of children's physical health but also on the enhancement of their mental aspects. This indeed served as a means for them to perform well in academics. ("Parent 1)

SBFP helps learners to be participative in intellectual undertakings both in the classroom settings and school contexts. ("Parent 2")

The targets of the program have been catered well which are evident in the positive results of their school performances. ("Teacher 2")

Several researchers support the above stated findings. The interaction between nutrition and education can be generally understood in three ways (Kazianga, de Walque et al. 2009). First, nutrition and health statuses influence the child's learning and his/her performance in school. That is poor nutrition among children affects their cognitive function and hence reduces their ability to participate in learning activities at school. Second, children who are malnourished or who are unhealthy are unable to attend school regularly and which in turn leads to poor academic performances. Third, hungry children encounter difficulties to concentrate and perform complex tasks than well-nourished ones. Moreover, according to Pediatre (2018) and Lalamonan and Comighud (2020), attendance and school performance are greatly enhanced by school feeding program.

Joma et al. (2011) in a study SFPs are not only intended to alleviate short-term hunger and improve nutrition but also enhance children's cognition. In addition to this, Otieno (2014) in a study indicated that a school feeding program is essential to provide a balanced diet to ECD children which would in turn enable them to increase their attention span, hence, achieving a better academic achievement. Hence, the school feeding program is a crucial component in the development of a holistic child. Therefore, nutrition and health are powerful influences on a child's learning and how well a child performs in school.

In line with the abovestated, Chepkwony et al. (2016) noted that the School Feeding Program (SFP) is an essential aspect of child growth and holistic development. To establish a functional SFP, parents should be involved in all procedures to ensure sustainability of the program which will cater for children from diverse socio-economic backgrounds hence academic achievements among Early Childhood and Development (ECDE) children.

Routman and Smith (2016) in a study also noted that the implementation of school feeding programs have a significant impact on learning outcomes in the areas of reasoning, memory, comprehension and knowledge. Additionally, the study analyzes the impact of governance (in this case the presence of a parent teacher association) on student achievement. The results showed that the feeding program contributed to the cognitive development of the students and produced positive outcomes that were more pronounced in Math than in French. Ogbugo and Taylor (2016) in the study indicated that with a view to determine its effects, there is also an increase in school enrolment, retention, and academic performance of the pupils.

Furthermore, Barroga et al. (2016) in the study indicated that adequate nutrition is vital in the proper growth and development of children as it conditions their learning ability and their capacity to work. The child's mental and physical development in early life demands healthy and nutritive foods. In this study, a supplemental feeding program for underweight pupils with a five-month duration was implemented using a cycle menu. Results revealed significant improvement of pupils in their school performance like eagerness to attend classes regularly and promptly, good grades, active participation in school activities to mention a few.

Thus, as stakeholders revealed that children are participative in class discussion, exudes happy faces and less susceptible to diseases. Participant SBFP in-charge 2 said *"It helps children become more active in class engagements, happier and more interactive in social activities with peers and healthier or physically fit in doing different tasks and assignments".* Thus, apart from the easily perceptible benefit of improving the nutritional status of school children, other literature has reported other wide ranging positive outcomes. These findings are supported by Otieno (2014) who indicated that a school feeding program is essential to provide a balanced diet which would in turn enable the children to increase their attention span, hence, better academic achievement will be achieved as an outcome.

SBFP as a Food-based Incentive: A Means to Increase School Participation and Educational Access

School-based feeding program as a social safety net has been popular in developing countries as an instrument for achieving the Millennium Development Goals. Food-based incentives such as school meals and take-home rations will compensate for both direct and opportunity costs resulting to school participation.

It is a program that helps those who lacks nourishment in their respective homes. It does not only improve classroom performance but also increase school attendance. ("School Head")

The main objectives of the program are to feed children who do not have enough food at home to lessen their absenteeism and increase school interest in addition to school participation making, thus, them more capable to do work. ("Teacher 2")

It improves class attendance, school enrolment, and nutritional status, hence, increasing academic achievement and promoting inclusion in school. ("SBFP-in-charge 1")

It is effective in a way that those pupils with nutritional deficiency are catered well and efficient in a way that those identified beneficiaries can attend classeseveryday. ("Teacher 1")

It helps us become physically active, mentally sharp and socially engaged. ("Pupil 1")

The abovementioned statements support the findings thatschool meals increase school participation by improving nutrition by enabling children get more nutrients which leads to better educational achievements.Therefore, it attracts more children to come to school (He, 2009). Moreover, analysis of the articles revealed relatively consistent positive effects of school feeding in its different modalities on energy intake, micronutrient status, school enrollment, and attendance of the children participating in SFPs compared to non-participants.

Lawson (2012) in a study noted that these programs are frequently targeted towards populations that are food insecure and reside in areas with high concentrations of families from low socioeconomic status, or towards schools that face poor attendance and enrollment of students. There are many studies that have evaluated the impacts of school feeding.Analysis of the information extracted from these studies shows that school feeding programs conclusively impact

the micronutrient level of targeted children, but have modest and mixed effects on health outcomes as evaluated by anthropometric measurements. While the impact of these interventions on cognitive skills and abilities of students is still uncertain, there is strong evidence that school feeding programs positively affect school enrollment and attendance rates, especially for girls.

Aregawi (2012) in affirmation noted that School Feeding Program (SFP) is one of the major strategies of Education Sector Development Program II (ESDP), with specific objectives of improving access, stabilizing attendance, increasing enrollment, reducing dropout and alleviating short-term hunger for better learning (Lalamonan & Comighud, 2020)

Ogbugo and Taylor (2016) also indicated its effects on school enrolment, retention, and academic performance of the pupils.In the same manner, Barroga et al. (2016) added that adequate nutrition is vital in the proper growth and development of children as it conditions their learning ability and their capacity to work. The child's mental and physical development in early life demands healthy and nutritive foods. Results revealed significant improvement of pupils in their school performance like eagerness to attend classes regularly and promptly, good grades, active participation in school activities to mention a few (Comighud, 2019; Comighud & Arevalo, 2020; Pillado, Futalan, & Comighud, 2020; Comighud et al., 2020).

Tagaki and Yamaguchi (2018) also revealed that with respect to improved school presence, growth of vegetables, and observed positive health habits and behaviors, the SBFP might be evaluated as a "well managed program". In support, Jensen (2010) said school feeding mostly takes place within the context of broad national school reform programs. In line with increased school participation, attendance and school performance are greatly enhanced (Arevalo & Comighud, 2020; Lalamonan & Comighud, 2020)

SBFP as a Food Culture: A Tool to Establish Healthy Eating Behaviors among Children in Their Life Course

Schools have a crucial role for promoting and establishing healthy behaviors early in the life-course. In recent years, a substantial effort and resources have been invested in attempts to change the 'food culture' in schools in westernized societies. Large school-based programs which promote healthy eating often utilize an ecological model for instigating behavior change amongst school children. An ecological model is a set of comprehensive intervention strategies that target a multitude of factors which influence the eating practices of children in the school setting. The cultural issues that necessitate these healthy eating programs mean that interventions are not without challenges to their application and effectiveness particularly as they rely on collaboration between stakeholders: teachers, parents, public health practitioners, policy makers and more. The stakeholder input and relations are key parts of planning, implementing and evaluating complex health promotion and education programs in schools. This commentary will outline the importance of considering both teachers and parents as influencing agents or 'enablers' in the process of creating change in this context. Parental perceptions and teachers' insights are critical for underpinning intervention feasibility, acceptability and performance. Their perceptions and understandings can provide ground-level and highly applicable expertise and importantly motivate children in the school environment. The philosophical principles behind parent and teacher

integration into formal program evaluation are discussed, providing a theoretical basis for program evaluation. Recommendations are made for policy makers, researchers and professional evaluation experts' to consider and integrate these stakeholders in future programs (Middleton et al, 2013).

SBFP helps pupils who belong to the food insecure population to become healthy and strong. ("Pupil Cherry Mae")

The program has been promoting quality food culture as it is supplemented by other projects and advocacies sustaining health and nutrition through the conduct of GPAK, handwashing and toothbrushing as well as clean and green project to mention a few. ("Pupil Sharlyn Mae")

It is important that for the program to become sustainable, we should as well help its implementation through extending support like cleaning the feeding center and bringing food from home. ("Pupil Reyna Jean")

In addition to the growing need for recognition of the impact of parents and teachers on program uptake, there is also a growing body of evidence that supports the notion that school children themselves, as recipients of many program actions, are worthy of consultation (Evans et al., 2013; Arevalo & Comighud, 2020). The centrality of participants' perceptions of health programs has been outlined, but there is a tendency for practice in schools to view school children as passive recipients of health programs.Such an approach can reduce people endowed with whole bodies, sentience, feelings and personalities embedded in class, gender and culture to the management of physiological and psychological part-processes (Evans &Sleap, 2012; Arevalo & Comighud, 2020; Comighud, 2019; Comighud et al., 2020). Instead, there is a growing appreciation that young people in schools can be regarded as expert 'knowers' of programs due to their first-hand experiences of program delivery, and as embodied individuals upon which 'health' ideologies are imprinted. Indeed, there is much to be gained by investigating young people's first-hand, embodied experiences of health-based programs because of the potential for target groups, as well as formal and informal stakeholders, to resist, re-interpret and contour the manner in which programs are received. Sociological and phenomenological studies of young people's embodied experiences are on the increase, which emphasize how young people negotiate ideologies of health and wellbeing within and through their bodies.

SBFP Program Evaluation: An Ecological Model to Promote Stakeholders' Collaboration

Large school-based nutrition programs which use a 'whole-school' approach reply on the insight and collaboration of teachers and parents. As stakeholders, they provide critical contact with children when healthy eating habits and education can make a significant impact on lifelong health. Their roles as 'social agents' in this context is important when considering implementation and evaluation of school-based programs. Policy makers, researchers and other public health practitioners must avoid neglecting their contributions.

The potential for informal stakeholder perceptions to influence program delivery should not be overlooked and this chapter highlighted the theoretical importance of parental and teacher integration in program evaluation. Inclusion and participation early in the design and throughout can often determine feasibility, performance and subsequent outcomes that the program is projected to achieve. Although this chapter focused on parents and teachers, the active involvement of children in the design and implementation of programs should also not be ignored either. Their input will bring greater participation and tackle issues over barriers and palatability of interventions. Indeed, the creative 'Food Dudes' intervention illustrates how an intervention can be invented to support and encourage change by involving children from the outset.

Feeding program has been considered very effective as it is highly monitored by the in-charge teachers and given adequate support by other stakeholders. Indeed, it resulted the undertaking yielded to positive effects. ("Teacher Melody")

The program has been sustainable as it gained support from the Department of Education (DepEd) and the local government unit itself. It has also been sustained by the school stakeholders through the GulayansaPaaralan Alay saKabataan (GPAK) Initiative. ("Teacher Rodelyn")

It is effective since it has not only been planned and budgeted by the government but also supported by the stakeholders through the close monitoring of teachers and active support of parents. ("Teacher Marie")

SBFP has been sustainable for 120 days as it has been supported by the government and the stakeholders. ("Parent 1")

SBFP has been successful due to the cooperation shown by the teachers, parents and pupils in school. ("School Head")

In line with an increase in the investment in and frequency of school-based programs, there has also has been a steady increase in the systematic reviewing and evaluation of such programs (Brown &Summerbell, 2009, Waters et al., 2011, Verstraeten, et al., 2012). Research has paid particular attention to programs that use a whole-school approach which account for the wider social, cultural and environmental factors which influence children in the school setting. As such, programs when they are devised are theoretically informed by an 'ecological' model (Lee et al., 2010). Ecological models are comprehensive intervention strategies or frameworks that logically isolate 'change' mechanisms at multiple layers of influence over the key determinants of health. This approach has been advocated as a means for promoting wide-scale change in the child's learning environment in school (Lee et al., 2010, Lohrmann, 2010). In practice, this type of model proposes that practitioners take actions in many of the different social spheres in which children learn and develop early nutrition and healthy eating practices (Hemar-Nicolas et al., 2013). Consequently, when public health practitioners, evaluation specialists and researchers devise school-based programs they often have multiple interventions operating at the same time. Inevitability, this has produced complex and multi-faceted programs with numerous interventions operating at different levels (age ranges, class groups, year groups) and possibly various stages

during the child's schooling years. Furthermore, program interventions are delivered in multiple settings (classroom, canteen, in the community etc.) and although they regularly operate within one school, various collaborative programs have managed to work between several schools in a close geographic area at the same time (Dick et al., 2012, Middleton et al., 2012; Lalamonan & Comighud, 2020).

Researchers in the field convey that the very nature of large and complex school-based programs produces problems in design, implementation, evaluation and sustainability of the interventions within (Hammerschmidt et al., 2011, Middleton et al., 2012). Often the authors indicate a key influencing factor for program efficiency and success is collaboration between 'stakeholders' involved in the program (Middleton et al., 2012). It has been further suggested that any person who has a 'stake' in a program at any level has a vested interest and therefore should be considered as a potential 'stakeholder'. Moreover, it has been stated that stakeholders can be an array of people involved in a program such as; decisions makers, policy makers, advisors, developers, designers, administrators, service staff, managers, and also people who are beneficiaries from the programs delivery (children,families, community people). Indeed, all these stakeholders are regularly involved in program implementation and are consequently required to take responsibility and 'play a part' to instigate and install healthier behaviors early in a child's development. Importantly, stakeholders must not be passive in the process of collaboration. Instead they must have an 'active role' in the program particularly if any evaluation is conducted.

Given that school-based programs (and the interventions within) rely on a range of stakeholders, the extent to which these particular stakeholders engage in any intervention can impact on the overall direction and outcome of the program. Two key stakeholder groups are teachers and parents. For example, an intervention that has the contributions of parents would have a different focus and design (i.e. through a first-hand appreciation of how messages can be supported in the home environment) and potential for sustainability than one that does not. Therefore, stakeholder input and relations should be considered as a key part of planning, implementing and evaluating complex school-based programs (Pettigrew et al., 2012). In particular, the role parents and teachers take is critical for underpinning any intervention feasibility, acceptability and overall performance (Della Torre et al., 2010, Bruss et al., 2010, Downs et al., 2012; Arevalo & Comighud, 2020; Lalamonan & Comighud, 2020; Comighud, 2019; Comighud et al., 2020).

Several studies have attempted to conduct interventions using both parents and teachers together, with a view to generating improved health outcomes (Lippevelde et al., 2012). Such outcomes could range from 'making better choices' to measurable changes in adiposity or body mass index (BMI). The interventions in these studies ranged from 6-weeks to 3-years, and supported 'health education' through a combination of classroom activities, school events, promotional materials sent home from school, reward schemes for families, and even health-checks with feedback to parents. Specifically, these studies compared the effects of involving parents in school-based interventions versus restricting activities to the school environment, and four out of the five studies reviewed by Lippevelde et al. (2012) reported a beneficial effect of involving parents, with the fifth showing no difference. Involving parents in school-based interventions delivered stronger improvements in dietary knowledge, health behaviors, BMI and fat intake than exclusively school-based programs (Lippevelde et al., 2012). When asked how interventions

could be tailored to optimize their involvement, parents suggested that interactive and practical activities, such as after school cooking classes or nutrition workshops may be ideal.

Additionally, attempts to involve parents should be affordable, convenient, focused on the child's health (and not the parents' potential shortcomings), and not 'preachy' or theoretical (Lippevelde et al., 2011). The qualitative evaluation of such a program performed by Middleton et al. (2012) largely supported these assertions, and flagged both opportunities and barriers to the successful delivery of teacher-parent interventions aimed at supporting children's dietary health.

PROPOSED PROGRAM FOR THE ENHANCEMENT OF SCHOOL-BASED FEEDING PROGRAM OF MANSAGOMAYON ELEMENTARY SCHOOL

Utilizing the results of this study as the basis, the researcher has formulated an enhancement program designed for the school of Mansagomayon Elementary School. This program will develop and strengthen implementation of School-based Feeding Program.

Rationale of the Enhancement Program

The results of this study showed that there is a high significant difference of the baseline and endline data of the pupils' nutritional status. This implies that is a positive effect of the program. Nevertheless, there are still specific areas to improve and develop to enhance the program.

In so doing, this enhancement program is designed to assist School Head, SBFP In-Charge, parents and pupils in the manner of implementation and management of the school-based feeding program, given all its resources can function in its optimum through various activities. Consequently, it is assumed that the stakeholders can function better as through this program.

Program Description

This enhancement program is designed to sustain or enhance the school-based feeding program of Mansagomayon Elementary School, Sta. Catalina District 4 Schools in the Division of Negros Oriental. Furthermore, it is hoped to reinforce significantly the working relationship of

school heads, SBFP In –Charge, Parents and teachers and strengthen the implementation to be more efficient, effective and productive. More specifically, this enhancement and development program includes proposed programs, activities, and interventions to the problem on the implementation. It is suggested to take effect in the Academic Year (AY) 2019-2020.

Areas of Concern	**Specific Objectives**	**Programs/ Projects/ Activities *(Description)***	**Strategies**	**Time Frame**	**Budget Source**	**Persons Involved**	**Performance Indicator**	**In**
Implementation	To intensify the proper conduct of the School-Based Feeding Program	Feedback mechanism from /Monitoring and Evaluation of Results	Collect feedback through suggestion box, meetings, one-on-one interview with pupils, parents and teachers.	Whole Year round	School s MOOE Donation from Sponsors in the community	School Heads; Resource Persons	No. of solicited feedbacks and meetings	han sch bas ing
Manpower	To encourage parents to cooperate in the program To spot parents knowledge-eable to cook	*Conduct general PTA meeting* *Make agreement with parents* *Interview and background check*	-Send letter to parents -Schedule and group parents to cook everyday -One-on one interview with parents	Can be conducted every beginning until the end of the school year	Division and Schools MOOE Donation from Sponsors in the community	School Heads; Resource Persons	Spotted cook parent	Me
Insufficient Operational Expenses	To encourage parents to bring water and firewood	Assign parents to bring water and firewood	Schedule parents to bring water and firewood	Conducted every beginning until the end of the school year	Division and Schools MOOE Donation from Sponsors in the community	School Heads; Resource Persons	water and firewood	Me

Table Manners	To teach proper table manners and importance of discipline To demonstrate proper use of eating utensils	Discuss proper table manners and discipline Demonstrate proper use of eating utensils	Lesson integration Demonstration proper use of eating utensils	Conducted every beginning until the end of the school year	Division and Schools MOOE Donation from Sponsors in the community	School Heads; Resource Persons	Proper table manners Proper use of eating utensils	tabl ners use ing

IV. **CONCLUSIONS**

Based on the above findings, the following conclusions were drawn:

It is concluded that the pupils of Mansagomayon Elementary School for SY 2018-2019 are categorized as underweight based on the baseline BMI data. Pupils revealed that they have no enough food at home and parents also revealedthat their children demonstrate poor eating habits. Although, some pupils were underweight, through this School-Based feeding program the endline result revealed that there was an improvement on their nutritional status. In fact, parents concluded that their children gained weight, developed good eating habit, become more energetic and sociable with others.Pupils claimed that they are now physically active as they are engaged in class activities, mentally sharp in academic undertakingsand sociable in interpersonal engagements.Teachers, School-Based Feeding Program In-Charge and School Heads concluded that pupils are more active in class and display more focus in the accomplishment of their classroom tasks. They claimed that pupils if provided with the adequate amount of food and given the right nutrition can ultimately perform better and potentially increase their overall performance in schools.

However, there are also challenges encountered by the stakeholders such as less cooperative parents, unavailability of expert volunteer, insufficient operational expenses, lack of discipline and proper table manners and some recipients do not know how to use spoon and fork among others.

V.**RECOMMENDATIONS**

Based on the conclusions of the study, the following recommendations are advanced to:

Pupils. Since they have improved in their nutritional status it is recommended that they should have self- discipline specially in eating the food given to them. They should not left any amount of food on their plates. They should have washed their hands before and after meal to ensure cleanliness and safety. Brush their teeth after eating to improve as well their oral health. Have patience and cooperate in waiting their turn in getting their food and properly wash the utensils after using. Follow the eating rules imposed in the feeding center. And most of all they should have the habit of thanking the Above Almighty for the food they eat as well as the parents who prepared their food.

Parents. It is recommended that parents should be proactive in supporting the program as the primary external stakeholder. They should be present during their turn in cooking the food. If they don't know how to cook they should help in other means. If they have available vegetables at home it would be of great help to bring some to ensure fresh vegetables from their backyard.Parents should be on time during their schedule.

They must be conscious in time of cooking to reach the exact time to feed the pupils. Parents must be willing to sacrifice their time, efforts, and energy to fulfil their tasks in preparing the food. They should be willing to bring water and firewood since it is essential in cooking. They should bear in mind that without it their children cannot eat. From time to time, they should give feedback to the SBFP In-Charge and School Head to their experiences and difficulties encountered during cooking, and suggest any idea to improve more the system in the program. Parents should understand that their cooperation would have a great impact in their pupils performance and the school.

Teachers. It is recommended that teachers should cooperate and active in the implementation of the program and activities deemed necessary for the success of the implementationof the program. They should sacrifice and give time to help the parents assigned in cooking and assist the children while eating. They should be a great motivator to the children in developing good eating habit. They should see to it that the children follow the imposed rules in the feeding center. They should lead and be a great example to the children in proper table etiquette. The teacher should imprint on their mind to be grateful for the food they have and tell them to pray before and after meal. They should see to it that the children eat on time. They should supervise the hand washing and tooth brushing of the children. They should lead and strengthen the complementary programs like GulayansaPaaralan Alay saKabataan (GPAK) and essential health programs. They should have a close monitoring in the children's nutritional health status, development in academics and notify it to parents.

SBFP In-Charge. It is recommended that School-Based In-Charge should personally lead and guide the volunteer stakeholder in cooking the menu of the day and other resources necessary for cooking.They should closely monitor the food supply so as not to sacrifice the amount of food for the children. The freshness and quality of the vegetables and ingredients must be ensured by them. They should check the budget from time to time and find alternatives for those vegetables with high price but does not sacrifice the target nutrients of the menu. They should check the proper preservation of food supply to save the budget, time and effort. They should lead the marketing and proper handling to avoid food contamination. They should check the cleanliness and proper hygiene while cooking as well as the proper garment for cooking. The utensils and cook wares must be inspected, to see to it that it is clean before and after using. They should closely monitor the health development of the children.

School Head. It is recommended that school head should closely monitor the program where there is close association to teachers and parents. She should liquidate on time so that the budget should be released on time. It is recommended that she should see to it thatproper implementation is done. Additionally, she should tap other stakeholders that could best help the program.

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APPENDIX

Perceived Benefits of Feeding Program in the Eyes of the Stakeholders

Interview Questions for the Stakeholders
(School Administrators/SBFP In-Charge)

1.Please tell me a little bit about yourself and your role here, including:
- How many years are you in the service?
- How many years are you in this school?

2. How in your setting do you define school-based feeding program?
3. Based on your perspective, can you share your thoughts on:

-What are the objectives of School-Based Feeding Program?

4. How do you look at the conduct of School-Based Feeding Program?

-What are the benefits of the School-Based Feeding Program?

-How effective is School-Based Feeding Program?

-How efficient is School-Based Feed Program?

-How relevant is the School-Based Feeding Program?

-How sustainable is School-Based Feeding Program?

5. Do you think this program is helpful to your pupils/ children as beneficiaries?
6. Is there a difference in the child's physical, mental and social development since the start and up to the end of the program? How about in terms of the following aspects:
   - improving physical health and providing nutritional benefits;
   - promoting academiclearning and enhancing scholastic achievement
   - increasing school participation and educational access;
   - establishing healthy eating behaviors among children; and
   - promoting collaboration among stakeholders
7. Exit question: What enhancement program could you suggest to improve this program even more?

KII Guide Questions

Perceived Benefits of Feeding Program in the Eyes of the Stakeholders

Interview Questions for the Stakeholders *(Teachers)*

1. Please tell me a little bit about yourself and your role here, including:
   - How many years are you in the service?
   - How many years are you in this school?
2. How in your setting do you define school-based feeding program?
3. Based on your perspective, can you share your thoughts on:

-What are the objectives of School-Based Feeding Program?

4. How do you look at the conduct of School-Based Feeding Program?

-What are the benefits of the School-Based Feeding Program?

-How effective is School-Based Feeding Program?

-How efficient is School-Based Feed Program?

-How relevant is the School-Based Feeding Program?

-How sustainable is School-Based Feeding Program?

5. Do you think this program is helpful to your pupils/children as beneficiaries?
6. Is there a difference in the child's physical, mental and social development since the start and up to the end of the program? How about in terms of the following aspects:
   - improving physical health and providing nutritional benefits;
   - promoting academic learning and enhancing scholastic achievement
   - increasing school participation and educational access;
   - establishing healthy eating behaviors among children; and
   - promoting collaboration among stakeholders
7. Exit question: What enhancement program could you suggest to improve this program even more?

Perceived Benefits of Feeding Program in the Eyes of the Stakeholders

Interview Questions for the Stakeholders *(Pupils)*

1. Please tell me a little bit about yourself and your role here, including:
   - How many years are you in the service?
   - How many years are you in this school?
2. How in your setting do you define school-based feeding program?
3. Based on your perspective, can you share your thoughts on:
   -What are the objectives of School-Based Feeding Program?
4. How do you look at the conduct of School-Based Feeding Program?
   -What are the benefits of the School-Based Feeding Program?
   -How effective is School-Based Feeding Program?
   -How efficient is School-Based Feed Program?
   -How relevant is the School-Based Feeding Program?
   -How sustainable is School-Based Feeding Program?
5. Do you think this program is helpful to your pupils/children as beneficiaries?
6. Is there a difference in the child's physical, mental and social development since the start and up to the end of the program?
   How about in terms of the following aspects:
   - improving physical health and providing nutritional benefits;
   - promoting academic learning and enhancing scholastic achievement
   - increasing school participation and educational access;
   - establishing healthy eating behaviors among children; and
   - promoting collaboration among stakeholders
7. Exit question: What enhancement program could you suggest to improve this program even more?

KII Guide Questions

Interview Questions for the Stakeholders *(Parents)*

1.Please tell me a little bit about yourself and your role here, including:
   -How may are children do you have I school?
   Pila kabuok ang imo anak/mga anak?
   -Does your child included in the feeding program?
   Aduna kaba'y anak nga apil sa programa?
   -What grade level is he/she?
   Unsa nga grado?

2. How in your setting do you define school-based feeding program?
   Para nimo unsa man kabahin king libreng pakaon sa eskwelahan?

3. Based on your perspective, can you share your thoughts on:
   -What are the objectives of School-Based Feeding Program?
   Unsa kaha ang hinungdan niini?
   - How do you look at the conduct of School-Based Feeding Program?

Giunsa kini pagpatuman?

-What is the impact of the School-Based Feeding Program?
Unsa ang epekto sa programa?

-How effective is School-Based Feeding Program?
Unsa ka epektibo ang programa?

-How efficient is School-Based Feed Program?
Eficient ba kini?

-How relevant School-Based Feeding Program?
Importante b akini?

-How sustainable are School-Based Program?
Makalungtad ba kini?

4. Do you think this program is helpful to your pupils/your child?
Makatabang ba kini sa imong anak?

5. Is there a difference in the child's physical, mental and social development since the start and up to the
end of the program?
Aduna bay deferecia ang panglawas, panghuna-huna, ug pagkulo-kabildo sa uban sa imong anak?

6. Exit question: What enhancement program could you suggest to improve this program even more?
Unsa kaha ang pwedeng mahimo aron mapalambo pa gayud ang programa?

Motivation In Relation To Teachers' Performance

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ABSTRACT

This research used the descriptive-correlational method to determine the level of motivation in relation to teachers' performance. The quantitative data were gathered from 89 teachers of District 6, Bayawan City Division, Negros Oriental for SY 2018-2019. Also, the researcher conducted a survey questionnaire. Descriptive–correlational method was used in this study. The statistical tools used in the analysis of the data were percentage, mean, weighted mean, and spearman rank correlation coefficient. The study found out that the level of motivation as perceived by the teachers was "very high" in terms of the following aspects: (a) existence needs; (b) relatedness; and (c) growth needs. In addition, it was also found out that the level of teachers' job performance is at a "very satisfactory" level. Moreover, there is no significant difference in the level of teachers' motivation when they are grouped and compared according to variables of age, sex and length of service, however, variables on highest educational attainment and average monthly income are found to be significant. Lastly, the relationship between the level of teachers' motivation and the level of teachers' job performance is found to be insignificant.

Keywords: Level of Motivation, Teachers' Performance, Existence, Relatedness, Growth Needs

I. RATIONALE/ INTRODUCTION

Teachers serve as one of the most important elements of our educational system. In the Philippines, the attainment and failure of educational activities depends highly on their performance in executing the teaching and learning process, facilitating classroom management in the learning environment, participating in curriculum improvement and development, and promoting professional growth and engagement. Balogun (2016) indicated that teachers' decisions and behaviors are likely to influence their well-being and job prospects especially pertaining to their work ethics in classroom settings. In the Division of Bayawan City, for instance, teachers are said to be motivated by a number of factors such as existence needs, relatedness, and growth needs.

Teacher motivation depends critically on effective management, particularly at the school level. If systems and structures set up to manage and support teachers are dysfunctional,

teachers are likely to lose their sense of professional responsibility and commitment (Mark, 2015). Hence, a teacher has to update professionally, personally and be rightfully motivated so he/she could discharge his/her diverse tasks and responsibilities with efficiency and effectiveness (Lopez & Irene, 2015).

At present, it can be said that many factors exist which promote teachers' motivation. These factors may be viewed as material, psychological, etc. It is also found that a teacher's daily experience on the job determines the activities which are psychologically most rewarding.

Moreover, without motivation, teachers' performance would be highly hindered. The level of motivation of workers will determine the teachers' response to the organizational rules, responsibilities and opportunities. Also, motivation is the force that initiates, guides and maintains goal-oriented behaviors (Callo, 2014).

It is important to note that teacher motivational level can rise when the teaching job enables teacher to satisfy the life supporting elements of his or her physical body like food, water, shelter etc. It can also rise, when the teacher feels useful in his or her job and when he or she feels satisfied with what she or he is doing. Also, in the literature, there are many determinants of teacher motivation. These include teacher status, class size, workload, professional development and salary.

Furthermore, motivation and performance are very important factors in terms of school success and students' achievements. For this, the main thing they required is skilled and competent teachers (Kevin, 2016). Hence, the relationship between teachers' level of motivation and level of performance should be examined.

In this connection, the researcher as one of the teachers of Bayawan City Division would like to shed light on the matter as she observed that quality teaching has become the focus of many education systems, and yet little attention has been given to teacher motivation that could ensure quality teaching and improved learning results. Hence, this research sought to ascertain the true picture of the state of motivation of teachers, investigate the relationship between motivational factors and teachers' performance in District 6 of Bayawan City Division, Negros Oriental for SY 2018-2019.

REVIEW OF RELATED LITERATIRE

Teachers are the pillar of an educational system. The attainment and failure of educational activities depends highly on their performance. Teachers' decision and behaviors are likely to influence the well-being and prospect of a nation including the lives of the country's next generation (Balogun, 2016).

Teacher motivation depends critically on effective management, particularly at the school level. If systems and structures set up to manage and support teachers are dysfunctional, teachers are likely to lose their sense of professional responsibility and commitment. Teachers' management is most crucial at the school level, where the importance of teachers' work and their competence in performing it are crucially influenced by the quality of both internal and external supervision (Mark, 2015).

Studies on motivational strategies on teachers have shown that teachers by some kind of incentives are recognized as being effective. Incentives are often given in the form of money, that is money can be seen as part of the reward system designed to reinforce behaviour and therefore to motivate people to work towards the achievement of goals and those of the organization. The recognition of the goals and objectives of any establishment largely depends on how the

workers perceive and react to their jobs. This attitude controls teachers output. Without motivation, teacher performance would be highly hindered. The level of motivation of workers will determine the teachers' response to the organizational rules, responsibilities and opportunities. Sala (2017) conceptualized the economic basis of human motivation. He believes that people work primarily for money and they are motivated to do only that which provide them with the greatest rewards.

Motivation is the willingness of an employee to contribute high levels of effort towards his or her work, conditioned by the capacity of the effort to satisfy needs as well as his or her personal environment. A motivated employee willingly tries hard to contribute his or her best performance towards accomplishing his or her work. Motivation plays a role in achieving goals and objectives and is equally important for organizations that work in team based environments or for workers who work independently. For an organization to ensure that the employees" workplace goals and values are aligned with the organization's mission and vision, they should create and maintain high levels of motivation leading to high performance. Teachers' motivation has become an important issue given their responsibility to impart knowledge and skills to learners (Zalwango, 2014). Moreover, motivation encourages teachers to facilitate knowledge and skills of academic to learners (Kelvin, 2016).

According to Reiss (2014) motivation means a feeling of enthusiasm, interest or commitment that makes somebody want to work, a reason for doing something or behaving in a certain way. Psychologically, it means the forces determining behavior, the biological, emotional, cognitive or social forces that activate and direct behavior.

As of now, it can be said that many factors exist which promote teachers' motivation. These factors may be viewed as material, psychological, etc. In particular, it is found that a teacher's daily experience on the job determines the activities which are psychologically most rewarding.

Motivation is the inner drive that pushes individual to act or perform and it is one of the most important factors that move every human being to achieve his or her goals. This includes personal as well as professional goals and targets (Mbwana, 2015).

Motivation and performance are very important factors in terms of school success and students' achievements. If changes occur in school external environment then it is necessary for a school to adopt that change because it may motivates to gain a competitive advantage. For this, the main thing they required is the skilled and competent teachers (Kevin, 2016).

Teachers' job performance is a concern of everybody in the society (Mbwana, 2015). In this respect, teacher performance connotes the teacher's role of teaching students in class and outside the class. The key aspects of teaching involve the use of instructional materials, teaching methods, regular assessment of students, making lesson plans, assessment of pupils, conduct of fieldwork, teachers „participation in sports, attending school assembly and guidance and counseling. Therefore, teacher job performance is the teacher's ability to integrate the experience, teaching methods, instructional materials, knowledge and skills in delivering subject matter to students in and outside the classroom. Teacher performance was measured by regular and early reporting at school, participation in extra-curricular activities, supervision of school activities, adequate teaching preparation (schemes of work, lesson plans), marking and general punctuality among others.

Performance of a given school depends more on the teacher‘s effort and if that a given teacher is unhappy with his/her job, he/she will not put emphasis into his/her teaching (Mark, 2015).

However, (Chudi, 2013) found out that teachers refused to teach effectively in class causing a decline in performance because of irregular payment of salaries. Disparities in teacher effectiveness in public and private schools areas are a preoccupation of policymakers throughout the developing world. In Tanzania, for example, the leading students' performance comes from private schools. In response, the government has tried to provide incentives to teachers in terms of hardship allowance in order to motivate and retain them, especially in rural areas. Yet despite the popularity of such policy, little is known about what real motivate teachers and keep them in their job despite "hardships" in remote location.

Performance may be defined as the ability to join skilfully the right behavior towards the attainment of organizational goals (Ali et al., 2014). Susa (2018), the Ministry of Education demands a very high measure of loyalty, dedication, patriotism, hard work, and commitment from its teachers. Similarly, the role and contexts of motivational methods cannot be overemphasized because high motivation heightens performance which is in the interest of all educational system.

In view of the fact that a sizeable increase in teachers earning will significantly enhance teachers' commitment and performance. It is pertinent to note that good social status of teachers considerably impact on their morale and thereby, motivate them. As of now, it can be said that no school system can have high achievement more than the level of teachers' motivation within the system. Therefore, all those factors which contribute to appreciable improvement in teachers' morale and commitment should be upheld with utmost priority. Hopefully, when this is done, it will unfold a multifaceted payoff, namely, increased pupils' learning outcomes and high teachers' output. In fact, it is a good exercise to investigate the extent to which the twenty first century teacher's job content versus reward system (in terms of pay package and promotion) affects high teacher's output (Nyam, 2014).

II. RESEARCH ELABORATIONS

This contains the researcher design, research environment, respondents, instruments and data gathering.

Design

The study used the descriptive-correlational research design and a self-made questionnaire. Three analytical scheme were used, the descriptive, comparative and relational.

Environment

The study was conducted in District 6, Bayawan City Division which is composed of six Public Elementary Schools namely Nangka ES, Guisocon ES, Holy Family ES, Kasla ES, Tavera ES, Magsulay ES and Matunoy ES.

Respondents

The respondents of the study, the level of motivation in relation to the level of teachers' performance are the 89 Public Elementary School Teachers of District 6 Bayawan City Division during the SY 2018-2019.

Instruments

This research study used the descriptive correlation design of the variables covering social belongingness, curiosity, cultural parenting orientation and education. This design used survey guide as a tool to gathered data.

Data Gathering

For the data gathering procedure, the self-made questionnaire is the main instrument to be used which undergone validation of experts and reliability testing analysis.

Treatment of Data

Different statistical tools were used to quantify all problems such as Frequency and Percentage, Mean, Mann Whitney U-Test, and Spearman Rank Correlation.

III. RESULTS OR FINDINGS

Table 1. Level of Motivation of the Respondents in the Area of Existence Needs

	Existence Needs	Mean	Interpretation
1	Adequate salary with respect to the nature of my work or the teaching profession.	4.17	High
2	Sufficient benefits and compensations which are at par with other organizations.	4.27	Very High
3	Financial incentives through fringe benefits and bonuses.	4.30	Very High
4	Wide range of health benefits like that of health care (maxicare, blue cross, caritas, etc.)	4.10	High
5	Primary needs such as durable house with amenities.	4.27	Very High
6	Living a happy and contented life with my family whom I foster strong relationship.	4.44	Very High
7	Engaging myself in convenient lifestyle and satisfying leisure activities.	4.30	Very High
8	Feeling contented, fulfilled and satisfied with my job.	4.29	Very High
9	Enjoying high prestige and social standing in my work.	4.27	Very High
10	Working for a stable and secured future through my profession.	4.31	Very High
	Overall Mean	**4.27**	**Very High**

The level of motivation of the respondents in the area of existence needs resorted to the overall mean score 4.27 interpreted as "very high" level. It could be inferred that salaries and financial incentives as well as a number of benefits are determining factors in promoting the level of teachers' motivation in performing his/her assigned duties.

It was found out that the teacher-respondents perceived that there is a "very high" level of motivation in item number 6, "Living a happy and contented life with my family whom I foster strong relationship". Having the highest weighted mean compared to the rest of the items, 4.44 as perceived by the teachers, it could be inferred that teachers are living with contentment while fostering happy and strong relationship with their respective family members. As then revealed in the study of Hechanova (2014) who investigated the needs of the Filipino working population and the relationship between these needs and employee engagement, it has been found out in an interview where workers were made to determine the needs that motivate them as to the different types such as job-related, career-related, organization-related, and family-related, among these, family is a novel addition to the extant theories of work motivation of the employees.

On the other hand, the item which obtained the lowest mean score of 4.10 is item number 4, "Wide range of health benefits like that of health care (maxicare, blue cross, caritas, etc.)". It could be inferred that public school teachers do not have enough and sufficient access to wide range of health benefits promoting their physical well-being and wellness. This is supported by the study of Puntero (2019) who made mention on health care and benefits as the factors to be given attention by the government in promoting teachers' health and wellness for the latter to perform well his/her assigned duties and responsibilities.

Financial incentives are often given in the form of money, that is money can be seen as part of the reward system designed to reinforce behavior and therefore to motivate people to work towards the achievement of goals and those of the organization. In affirmation, studies on motivational strategies on teachers have shown that teachers by some kind of incentives are recognized as being effective (Sala, 2017). She further asserted that people work primarily for money and they are motivated to do only that which provide them with the greatest rewards. In the same manner, Nyam (2014) put forward the fact that a sizeable increase in teachers earning will significantly enhance teachers' commitment and motivation to perform better for the welfare of their classroom learners and environment as well as office workplaces.

On the other hand, Mark (2015) showed that motivation of teachers was affected by factors such as poor working conditions and low salary or pay. Based on the findings, the study recommends that the government should improve teachers' compensation and pay as well as improve working conditions.

Pescuela (2015) supported this notion dwelling on the very fact that a higher performance has a monetary equivalent which also increases employee's desire to perform better. Castor (2016) further noted that among the factors which give level of satisfaction are overtime pay policies, benefit scheme, tidiness and cleanliness in the workplace and opportunities for advancement.

Table 2. Level of Motivation of the Respondents in the Area of Relatedness

	Relatedness	Mean	Interpretation
	Organization foster supportive climate to its members.	4.24	Very High
	Friendly and congenial are my peers or colleagues in the office or in the workplace.	4.31	Very High

	The organization promotes good working conditions through the presence of camaraderie.	4.35	Very High
	The organization demonstrates social acceptance and belongingness.	4.31	Very High
	The organization promotes trust and confidence in the workplace.	4.34	Very High
	The organization values the contributions of each member for better performance management.	4.35	Very High
	The organization pay due attention to the needs of its members for better work engagement.	4.37	Very High
	The organization promotes public acknowledgement for better work accomplishments.	4.35	Very High
	The organization practices immediate feedback to manage expectations of its members.	4.25	Very High
0	The organization promotes teamwork and cooperation among its members in work activities	4.28	Very High
	Overall Mean	**4.31**	**Very High**

Table 2 showed that the teachers' perception on the level of motivation in the area of relatedness obtained an overall composite mean of 4.31 denoting a verbal equivalent of "very high" level. Based on the given finding, it is evident that good social status and working conditions of teachers considerably impact on their morale and thereby, motivate them. In this connection, Nyam (2014) and De Castro and Portugal (2014) put emphasis on the role of school heads in maintaining a remarkable atmosphere among employees which is necessary to demonstrate larger commitment and intense devotion to quality service.

The item which obtained the highest weighted mean of 4.37 as perceived by the teachers is item number 7, "The organization pay due attention to the needs of its members for better work engagement". This implies that that aside from wages and salaries, recognition for good work done, participation in decision making and conducive working environment were the major factors that really affect teachers' level of motivation and work engagement. In the same manner, Hechanova (2014) who investigated the needs of the Filipino working population and the relationship between these needs and employee engagement put emphasis on the presence of needs such as job-related, career-related, organization-related as predictors of engagement. Garcia (2016) in fact shared the findings that a significant relationship was noted between the working conditions of the teachers and their job performance.

On the other hand, the item which obtained the lowest mean score of 4.24 is item number 1, "Organization foster supportive climate to its members". It means that teachers as employees seek support from the Department of Education itself especially in a number of employee engagements pertaining to their classroom duties and professional development. In support to this, Aguado (2015) noted that the teachers given support is a way of appreciating their efforts from the school management. Furthermore, this constitute higher priority in gaining prestige in the teaching profession as part of personal gratification and self-motivation and as valuable substance of the academic institutions.

Table 3. Level of Motivation of the Respondents in the Area of Growth Needs

Growth Needs	**Mean**	**Interpretation**

1	Opportunities to learn new things through attending seminars, workshops and training activities.	4.28	Very High
2	Prospects for career advancements through study leave benefits, scholarship grants and graduate degree obtained.	4.25	Very High
3	Promotion of my abilities contributing to research undertakings and other developments.	4.09	High
4	Chances to exercise leadership in the organization and make necessary contributions as part of it.	4.13	High
5	Breaks to use my special abilities in working as part of a team and in a variety of work commitments.	4.11	High
6	Recognition for promoting professional growth and development.	4.17	High
7	Opportunities for promotion to higher positions through career progressions and prospects.	4.16	High
8	Participation in work related activities to enhance my skills and abilities.	4.17	High
9	Opportunities to engage in feedback system mechanism to the top level management in order to enhance organizational practices.	4.22	High
10	Remarks or constant feedbacks regarding my work progress and development for better work engagement.	4.26	Very High
	Overall Mean	**4.18**	**High**

Table 3 displayed that the overall composite mean of the teachers in the level of motivation in the area of growth needs is 4.18 with a transmuted rating of "high" level. Based on the finding, it could be inferred that attending to teachers' growth needs through career advancements, research undertakings, and training activities serve as motivating factors in improving teachers' performance at work.

Item number 1, "Opportunities to learn new things through attending seminars, workshops and training activities" obtained the highest weighted mean of 4.28 as perceived by the teacher labelled as "very high" level. It means that most of the time, this professional development is conducted in various purposes: to get certified, to become upgraded, to prepare them for new roles, to get refreshed in teaching pedagogies, and to get information regarding curriculum related updates. Along similar stance, Bush and Kaparou (2015) noted the relationship between delivery of instructional leadership and encouragement of teachers' professional development in centralized context. Hence, teachers must be supported and nurtured in their professional development through seminars, workshops, and training activities (Pescuela, 2015). Babalola and Hafsatu (2016) then added that school heads should motivate their teaching force towards creativity, initiatives and productivity.

However, item number 5, "Breaks to use my special abilities in working as part of a team and in a variety of work commitments" obtained the least weighted mean. It could be inferred that teachers were given less opportunities to use their talents and skills in individual engagements and group work commitments. This has been supported by the findings shared by Cadalso (2019) who indicated on the teachers' misunderstanding of some office duties and refusal to work and chairmanship. Along with it, it has been revealed that teachers lack requirement for professional growth which lead to the occurrence of the negative interpretation of feedback.

In addition, remarks or constant feedbacks regarding work progress and development for better work engagement is also one of the factors that must be taken into consideration. In affirmation, this has been supported by literature on feedback environment which claimed that supportive environment fostered by the school heads lead to the improvements of teachers' well-being and performance. Frantz et al. (2016) also put emphasis on these factors which can in turn increase teachers' engagement and empowerment. As indicated, the relationship between teaching personnel and their environment affect motivation to work and perform (Taylor, 2015). In addition, Chau et al. (2015) showed that supervisory feedback environment that is supportive as perceived by teachers are associated with the higher instrumental as well as image enhancement motives.

Table 4. Level of Teachers' Performance when Grouped According to Variables

Variables	Groupings	N	Mean	Interpretation
Age	Younger	44	4.07	Very Satisfactory
	Older	45	4.14	Very Satisfactory
Highest Educational Attainment	Lower	30	4.04	Very Satisfactory
	Higher	59	4.14	Very Satisfactory
Length of Service	Shorter	44	4.07	Very Satisfactory
	Longer	45	4.14	Very Satisfactory
Average Monthly Income	Low Income	42	4.07	Very Satisfactory
	High Income	47	4.14	Very Satisfactory

Table 4 disclosed the level of teachers' job performance when the respondents are grouped according to the different variables such as age, highest educational attainment, length of service, and average monthly income. As reflected in the table, all of the variables lead to a "very satisfactory" evaluation result.

Foremost, teachers' job performance is a central construct in the field of work both in the industries and organizations. It refers to the ways individuals perform their jobs (Soodmand & Doosti, 2016). Having a high job performance means that teachers have the ability to combine relevant inputs for the enhancement of the teaching and learning process (Werang, 2014) and improvement of student learning (Werang, Betaubun & Radja Leba, 2014).

Moreover, the above reflected findings were coherent with the results of the local studies of Secong (2014), Pescuela (2015), Torres (2015), and Agir (2019) among others which all revealed that majority of the teachers have "very satisfactory" ratings as then shown in their performance evaluation system.

Also, Scott as cited in Ali et al. (2014) noted that job performance has been viewed as the total output that employees give to the organization as the sum total of their abilities, opportunities, and motivation. In the context of the Department of Education, having a high job performance yield into satisfactory up to outstanding ratings which means that the teachers perform well with their work and have displayed effectiveness, efficiency and timeliness in doing their duties most especially related to the different Key Result Areas: content knowledge and pedagogy, learning environment and diversity of learners, curriculum and planning, assessment and reporting, and plus factors. In view thereof, the job performance evaluation results serve as a determining factor on the teachers' level of participation in the day-to-day running of the school organizations.

In the similar way, Selamat et al. (2013) noted that teachers' job performance is a way related to teachers' effectiveness. This is further supported by Balogun (2016) as he noted that teaching is a highly noble profession and teachers are the asset of the society and the nation.

Table 5. Significant Relationship between the Level of Motivation and the Level of Teachers' Performance

Correlates	N	Rho	Level of Significance	*p* - value	Interpretation
Level of Motivation	89	0.102	0.05	0.342	**Not Significant**
Level of Teachers' Performance	89				

As reflected in Table 26, there is no significant relationship between the level of motivation and the level of teachers' performance.

Since the r-computed value is 0.106 which is greater than the p-value of 0.000 level of significance, the null hypothesis which states that there is no significant relationship between the level of motivation and the level of teachers' performance is not rejected. The results of the study showed that there is no significant relationship between the level of motivation and the level teachers' job performance. It further implies that the level of motivation have no influence on the level of teachers' performance.

The result is supported by the study of Sala (2017) and Puntero (2019) that the motivational factors have no significant relationship in teachers' job performance as to the variable of age as both younger and older are all working to satisfy their existence needs, relatedness and growth needs. In a similar way, Pescuela (2015) and Alabata (2019) revealed that the length of

service is not a predicting factor as both categories of teachers, the novice and the experienced both help each other in their respective work functions towards a better job performance in the educational system as anchored on efficiency, timeliness and effectiveness.

IV. CONCLUSIONS

On the bases of the foregoing findings of the study, the researcher arrived at the following conclusions:

The teachers were motivated by adequate salary, rewards, and incentives with respect to the nature of the teaching profession in itself to finance the needs of their family members towards positive engagement and socialization process.

There is a need for education leaders to pay attention to the needs of the teachers to promote professional and organizational commitment towards employee engagement, school improvement, and performance management.

The teachers value opportunities to learn new things through workshops and trainings as well as professional schooling as career advancements facilitate personal growth and professional development.

The teachers performed well their work functions and job descriptions towards organizational efficiency, timeliness and effectiveness.

The teachers are motivated by salaries, step increments, financial incentives, fringe benefits and bonuses. Hence, higher job performance has a monetary equivalent which also increases the employees' desire to perform better.

Attending graduate studies which equates to instructional effectiveness and promotion to higher position in the teaching field leading to higher salary received served as a motivational factor for teachers to perform better in their workplace environment. Those who attended professional schooling and received higher salary rate are motivated to attend to their growth needs toward positive work engagement. It means that regardless of the variables stated, all teachers perform their mandated key result areas to better deliver basic education services.

The teachers are motivated to perform their work and deliver their assigned functions as they have a positive regard of the teaching profession as they considered it their mission and vocation. In addition, these teacher-educators also desire to have a positive evaluation result in order to contribute to the betterment of school organization and educational administration.

V. RECOMMENDATIONS

In the light of the findings and conclusions of the study, the following recommendations are advanced.

The level of motivation of the respondents in the area of existence and relatedness were very high. It is therefore recommended that the government should provide adequate wages and salaries, incentives and reward systems to the teachers. This can be done through revisiting the

current salary range given to our teachers by the national government in congruence to the standard cost of living. Also, the Department of Education in coordination with the local government units could utilize the Special Education Funds (SEF) as well as other monetary incentives through LGU initiatives to grant monetary reward system to our teachers. In the same manner, as to relatedness, teachers should be given recognition for the positive contribution to the organization as they desire to contribute to school improvement and performance management which could be done through Awarding Ceremonies for Recognizing Well Performing Employees in the conduct of DepEd Events.

The level of motivation of the respondents in the area of growth needs was only high. It is therefore recommended that teachers should be encouraged to attend professional schooling through graduate school programs both in master's and doctorate degrees as well as attending training activities on professional development as these would not only promote increased knowledge in instructional planning, teaching-learning process and classroom management but also higher positions in the field of teaching which also equate to higher salary rate. Aside from attending graduate studies and training activities, DepEd could as well address teachers' growth needs through In Service Trainings (INSET) and the conduct of Learning Action Cell (LAC) Session in the school levels.

The level of teachers' performance when grouped according to aforementioned variables is at very satisfactory level. It is therefore recommended that positive engagement should be sustained in the same manner that teachers' performance management should be intensified for them to perform better toward the outstanding level demonstrating organizational efficiency, effectiveness and timeliness. The school heads, master teachers, education supervisors and other educational leaders should intensify monitoring and evaluation in the conduct of supervisory visits to teachers as well as provide positive working environment for them to perform better with their respective work engagements.

APPENDIX A

Motivation in Relation to Teachers' Performance

Part I: Profile of the Respondents

Name (Optional) _____

Age: _____ Highest Educational Attainment: _____

Length of Service:_____ Average Family Monthly Income:_____

Latest IPCRF Numerical and Adjectival Rating: _____

Part II. Questionnaire Proper

Level of Motivation

Instructions: Please check the number that indicates the level as to which you are motivated with the given factors: existence, relatedness, and growth needs. Please refer to the guide below in choosing your option. It is important that you honestly answer each item. Please do not leave any item unchecked. Rest assured that your individual information will be treated with strict confidentiality.

Code	**Interpretation**
5	**always**

4 often
3 sometimes
2 rarely
1 almost never

A. Existence Needs	5	4	3	2	1
What is the level of your motivation according to the following items?					
1. Adequate salary with respect to the nature of my work or the teaching profession.					
2. Sufficient benefits and compensations which are at par with other organizations.					
3. Financial incentives through fringe benefits and bonuses.					
4. Wide range of health benefits like that of medical care.					
5. Primary needs such as durable house with amenities.					
6. Living a happy and contented life with my family whom I foster strong relationship.					
7. Engaging myself in convenient lifestyle and satisfying leisure activities.					
8. Feeling contented, fulfilled and satisfied with my job.					
9. Enjoying high prestige and social standing in my work.					
10. Working for a stable and secured future through my profession.					
B. Relatedness	5	4	3	2	1
What is the level of your motivation according to the following items?					
1. Organization foster supportive climate to its members.					
1. Friendly and congenial are my peers or colleagues in the office or in the workplace.					
3. Organization promotes good working conditions through the presence of camaraderie.					
4. Organization demonstrates social acceptance and belongingness.					
5. Organization promotes trust and confidence in the workplace.					
6. Organization values the contributions of each member for better performance management.					
7. Organization pay due attention to the needs of its members for better work engagement.					
8. Organization promotes public acknowledgement for better work accomplishments.					
9. Organization practices immediate feedback to manage expectations of its members.					
10. Organization promotes teamwork and cooperation among its members in work activities.					
C. Growth Needs	5	4	3	2	1

What is the level of your motivation according to the following items?					
1. Opportunities to learn new things through attending seminars, workshops and training activities.					
2. Prospects for career advancements through study leave benefits, scholarship grants and graduate degree obtained.					
3. Promotion of my abilities contributing to research undertakings and other developments.					
4. Leadership in the organization and make necessary contributions as part of it.					
5. Breaks to use my special abilities in working as part of a team and in a variety of work commitments.					
6. Recognition for promoting professional growth and development.					
7. Opportunities for promotion to higher positions through career progressions and prospects.					
8. Work related activities to enhance my skills and abilities.					
9. Opportunities to engage in feedback system mechanism to the top level management in order to enhance organizational practices.					
10. Remarks or constant feedbacks regarding my work progress and development for better work engagement.					

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EFFECT OF PROJECT BASED LEARNING ON THE READING SKILLS

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A B S T R A C T

The topic was selected to probe the effectiveness of project based learning on the reading skills of the students. In this qualitative research, the prime objective was to determine that whether students can become autonomous learners through project based learning and does it improves their reading skills effectively. Literature review conducts a meticulous investigation of the research in the same area. Research of this write up has designed a case study to proceed.

The data was collected through census sampling that enabled the researcher to have detailed. The students were engaged in their projects. The results proves that project based learning not only improved their literacy skills but also made them inquisitive and independent learners. Therefore, many surveys and studies conducted before, have proven the findings of this study similar to the one conducted now and also highlights the scope of the study.

A R T I C L E I N F O

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K E Y W O R D S

Autonomous learners
Independent learners
Literacy skills
Project Based Learning
Qualitative research

INTRODUCTION

According to Bell (2010) Project Based Learning (PBL) helps the students/ learners in becoming lifetime readers and moreover, reaching the level of critical learning which is important for success in the 21st century. PBL provides the best ways to the students in their classroom with accurate literacy experiences, which however, means making them write and read for the actual purpose. The project gives the students an actual "need to read"; so as to answer the additional questions of inquiry which students on their own, come up with. The children find answers by reading the authentic resources, which could be defined as the bases of information that is present outside of the learning in the context of writing and reading. However, an authentic framework of PBL is highly functional for improving the student learning. The students who are involved with authentic literacy projects are aware of the high stages of development in the writing ability and reading comprehension moreover, PBL engages students more deeply and meaningfully in literacy. In the vision of this, PBL is one of those methods which are highly recommended to be used. Patton (2012) stated that PBL states to a method which allows students to plan, design, and perform a comprehensive project that generates a visibly demonstrated output by the means of publication, presentation or product.

A study was done by Gultekin (2005) which was about the motivation of the students through PBL. He compared conventional teaching with PBL and found PBL to be the most effective method that should be used and introduced in the schools. He explained that when students are given the task and autonomy along with a little guide line by the teacher, the students

will build their track or framework which will make them critical thinkers. Students choice and involvement are the basic elements of PBL, moreover PBL teachers act as the facilitator who gives the choice to the students to select the project and proceed themselves through guidance (Bell, 2010).

Hence many researches have been done on the language acquisition and the literacy skills that students acquire the literacy skills through acquisition which means that students learn skills from their practical work than teaching explicitly. Once they are given the chance to practice their skills they create their own ways to increase literacy skills and their learning styles. According to Gee (2001) students need social aspects to take the possession of their learning style and skills. However, Hammond (2010) refers that PBL can give that chance to make students practice and improve their literacy skills. It involves all the aspects of literacy skills than only writing and reading.

The researcher named Jones (2003) expressed that PBL has the positive advantage on the students as they are more intrinsically motivated in their learning, students like their work so they utilize more effort and time on it. Teaching of the reading skills might be noticed as the means of affected monologue. In this manner, the teacher becomes the only speaker and students become listeners which further means that the students become passive recipients rather than being active; they only listen to their teacher rather than understanding her. However, the teaching approach not only happens in grammar translation method but in fact, the learners spent years of their learning in learning English and yet several of them still are not able to use the language appropriately. They are aware of the vocabulary words but are unable to use this knowledge in their communication effectively outside their classrooms and how to put their skills (use of vocabulary) to active use.

There are several students who faced difficulty to be the focused readers as they cannot find the reason of that assigned text. However, students wanted to be engaged in such a social setting that could enable their interest towards reading which PBL provides them with. PBL provides opportunity to the students to select and create their own projects by giving them the autonomy which leads them towards success (Bruce, 2008). PBL also proves them to interact with their peers that improve their literacy skills. Through interaction with peer, the students would know that how they can use their skills in the society. Students practice variety of literacy skills while creating their projects. In this way students not only teach skills to their peers but also to themselves (Bell, 2010). Larson and Marsh (2005) in her study mentioned about the literacy skills and argued that literacy skills are not only taught through reading novels, answering the questions, writing or rote learning but by interesting with each other.

However, a teacher may form a perfect classroom condition only by presenting a strategy which will emphasize and focus on the student. Slater and Collie (1987) suggested that, putting an effort into that of the teaching of text, by motivating students to read and by encouraging their replies. The practice of the approach would not only led to the greater understanding but also to the language learning procedure on the students part and would also to make students independent learners, long life learners and critical thinkers (i.e., students will take responsibility of their own learning which will be the basis of working effectively and cooperatively with others).

Students come to TNS (The New School) from various language backgrounds and are new to PBL based learning system. A small number of students have been studying in a PBL environment since the beginning and have a good command on the language skill. In the classroom a typical learner has spent years of learning English in a majorly English medium school yet many are not fluent in the use of English language effectively. Though they are exposed to the language and know to a good extent about the language but are unable to effectively communicate their meaning in an appropriate manner outside the classroom. However, PBL is the instructional framework which is introduced to increase the interest of the students while studying.

The reason of selecting reading skills was to highlight that in conventional schools reading skills are not measured, like their fluency i.e., students have read the passage themselves but how it will be evident that they have errors or have self-corrected their errors, how to know their exact reading stage etc. Keeping in mind these questions the researcher went through different frameworks of teaching but found PBL the best framework in all. However, there are four components of the reading skills which are: phonics awareness, fluency, vocabulary and reading comprehension. The researcher covered only those components in her research which were widely used in PBL framework. So, researcher focused fluency, vocabulary and reading comprehension which has the main role in PBL however, phonics awareness is less focused in PBL though it is important part of English Language but is not widely used/focused or highlighted in PBL framework.

The researcher used rubrics to measure each skill of reading, such as to measure the fluency of the students researcher took running records and got their exact stages through the formulae (reading percentage). The assessments taken for the leveled reading is taken from the running records either using books or small passages what must be close to the student's developmental level. This approach helped the researcher to record students reading behaviour.

In the end, the researcher put the students in similar theme to find out that how many students are not independent learners and needs a lot of scaffolding, how many students require less scaffolding and how many students are independent learners, this will give the finest results to the researcher that how many students has improved a lot or still needs to work on their skills.

However, this study tries to find out that whether the PBL could develop the students reading skills? What are the reading stages of the children and how they can be active inquirer as well as independent learners? Therefore, the choice of this study shows the practice of PBL in improving the reading skills of the young learners. The most difficult part that the researcher faced was that what is the difference between problem-based learning and project based learning. There is a slight difference between them i.e. coming up with a solution of the problem, is in fact problem based learning. After getting this idea then the researcher started to work on her research.

Statement of the problem:

The effect of project based learning on the reading skills of the students of Beaconhouse TNS DHA branch, Lahore.

Significant of the study:

Children in conventional schools read simple, familiar stories and selections. However, PBL allow students to choose the books they read which could help them in their project. They have to read every bit of the information that could help them in their project which increases not only their vocabulary but also their reading skills. It is basically the part of hidden curriculum of PBL that could improve their skills in a way by keeping evidences i.e. taking running records of their readings, taking reading logs, scanning of the project reflections and writing journals etc.

Review of Related Literature:

This chapter deals with conceptual and relevant discussion, which are discussed together on every step. It contains cognitive theory of Vygotsky, project based learning, reading skills and the running records, which are discussed in-detail with respect to the importance of their use.

Bruner's (1973) theory about project based learning was quite different that PBL is the combination of various socio-constructivist and other modern instructional schools of thought. However, the theory of socio-constructivism is based on the understanding of the learning in which the stress is on the construction of the knowledge, based on the prior knowledge and the interaction with the environment. According to Michaelson, Thomas and Mergendoller (1999) socio-constructivism is pedagogical set which is used as a strategy alike project-based learning.

Cognitive Educational Theories

Scaffolding was defined by Bruner, Wood and Ross (1976) as a 'course that allows the learner to solve the problem, complete the tasks which should be more than his individual effort. This was a concept designed by Vygotsky (1978) that zone of proximal development (ZPD) is

the distance from the actual development of the learner to the potential level through the solving of problems under the guidance of adult (teacher). However, scaffolding includes the balancing support with challenges, whereas the goal is to be independent learner (Vygotsky, 1978).

A study was conducted by Krajcik and Wu (2006), who asked the students to create graphs and chart through PBL. The researchers found that students needed teachers support in understanding the project which later leads them to better understanding. They used higher level skills for instance interpreting and predicting in understanding the relationship between the graphs and charts and learned the reason behind this study. They discussed about the role of scaffolding in PBL, scaffolding plays a vital role in the classroom. Teacher explains things to the students and support them when they need, it is the part of student centered teaching. Scaffolding is used for the students to take them to the right direction and making them independent learners.

OBJECTIVES OF THE STUDY

The following objectives were formulated in the light of project based learning framework and the standards of the class:

1. To give learners an opportunity to become autonomous learners in their reading skills through project based learning
2. PBL enable the students to construct their knowledge in the reading skills through inquiring
3. PBL encourage the students to read extensively and maximize the extensive reading to enrich their vocabulary

MATERIALS AND METHODS

Research Methodology:

The researcher visited Beaconhouse TNS, DHA branch to get permission for conducting the research so, the school heads took an interview of the researcher and asked several questions like 'why you want to conduct the research and what will be your variables?' etc. After getting selected as a teacher, the researcher requested that she wanted to teach year 3 and attended teachers training in order to know PBL much better. Moreover, how it works to improve students reading skills? The researcher conducted research to know which components of the reading skills are fully focused in PBL and how effective it is. So, the researcher conducted a qualitative research based on the Case Study. The data was collected through census because the population is small and detailed data is collected from each student. However, for data collection, the researcher used different tools for various reasons:

- To collect the data regularly
- To collect a snap shot of students artifacts (writing journals and reflections)

Population and sample of the study:

Beaconhouse TNS was the only school in Pakistan where students are taught through PBL. There are two branches of TNS in Lahore and the researcher was given chance to teach at DHA branch with the students of year 3 orange, as the activities and trainings were held at DHA branch. An intact group of 17 students were available, who were the used as the sample as well as the population of the study. The study was census in nature, where each and every detail of the student was recorded. The school's head permission was taken for the application of study.

Research Instrument:

The researcher practiced triangulation from comparing the variety of sources which are: running records, reading logs, observations and students artifacts (reflective journals and writing journals). The researcher got lot of information using these three different kinds of sources.

RESULTS AND DISCUSSION

After collection of the data, the researcher organized the data. The first step was to gather all the records of the students such as their reflections about the projects, acrostic poems, writing journals, running records etc. to analyse the data in the correct form. Moreover, students' projects were also analysed. At the end, the researcher uploaded the students' portfolios and presentations

on to the laptop in order to get the results in more refined form. Once the researcher had all the data she began reading the data and made meanings out of it through coding them. All the strands were kept in mind while marking the rubrics. Marking all the three skills of reading which were commonly used in the project was not an easy task so the researcher used Likert scale to check their levels and then to put similar codes in groups with respect to the literacy skills. Three themes were found that could emerge students' skills i.e. independent learner, literacy skills and inquirer. PBL revolves around the main element i.e. making students independent learners so, keeping in mind this element the researcher used it as a theme.

CONCLUSION AND RECOMMENDATION

Recommendations:

The researcher learned from this study certain ways which can motivate students learning to the reading skills and also found that learning through projects not only teaches the literacy skills to the students but also the other skills which include inquiry and becoming independent learners. The implications of PBL can result great progress in students attitude and their learning.

Recommendation 1: The researcher worked hard in creating such activities that could uphold their curiosity. As the findings of this study reflects that how curious the students were towards their projects. They wanted to make the audience know about what they learned and apply them to their lives, the way students did. The students were highly engaged in their projects and wanted to be the best. Hence the motivation level of the students was too high that they wanted to have more readings and read more through books and over the internet. They were so excited that they started to read encyclopedias to know more in depth/detail. In other words it can be said that students took advantage of their autonomy and utilized it well. Thus, it is suggested as one of the best approaches which the teachers' should be used in their lessons.

Recommendation 2: The other influential factor which made students independent learner was giving them the choice (Jones, 2003). However, students were given many choices to make their own decisions and drive their project in their way. This is how they gain self-confidence and chose their learning style. The students chose their topics for the projects and proceeded. They found ways themselves of selecting the authentic information. Though, they mentioned that they faced difficulty in finding the appropriate information but still they did not give up. They faced all the challenges and worked very well on their projects. The students learned from their decisions rather than being fed by their teacher (Bezon et al., 2007). This element must be applied into the teaching classroom whenever it's possible.

Recommendation 3: Furthermore, students were also given creative freedom which was given to make them independent learners'. Their learning was assessed through their reflections and their creative work rather than the conventional style of taking written quizzes to know how many marks they get and finalize their results on them. The students learned about their projects in depth and so reflected them in detail. The students read about space shuttle so, they made a model of it. They wanted to demonstrate their learning so, whatever they read made the model of it too. The students had their original pieces which they created themselves through their creativity. The students have different learning styles all cannot be taught through the same style so, keeping that in mind the researcher gave them the autonomy to create their creativity and will be assessed according to it. In Bruce's (2008) study he also found that students have different learning styles and learns in their ways. In his study he observed that students made their multimedia projects to make their learning interesting and understandable to them. This is the one of the learning styles which teachers' must apply while carrying out their projects.

Recommendation 4: PBL also helps the students to increase their literacy skills. The completion of students' projects shows their effective learning. Their ownership took them to the height of learning and achievement. The students took charge of their learning by reading from various sources then, designed their projects. After reading from other sources students wrote reflections and made notes side by side as student 'p' wrote. The findings of this study is exactly the same

as done by Friedman and Heafner (2008), he also found that effective learning is done through PBL which leads them to memorize their content for a long time. This makes the students remember their projects and the content as well.

Recommendation 5: Through PBL the students gained inquiry skills an ability to work hard and use meaningful resources for inquiring new and unique ideas and information. Though, it was a challenging part for them to get the authentic information but still they did not give up. However, these skills are important and valuable for the future in their everyday lives. The findings of De La Paz and Hernadez- Ramos (2009) study has the similar findings to this study that PBL lead students to collaboration skills as well as inquiry skills which could use for the future projects. This study also shows not only the literacy skills that students improved but also the skills of designing their projects and working collaboratively with others. This can make students improve their instructional strategies; craft and inquiry skills for the improvement of their reading skills.

Recommendation 6: Through PBL, students get the chance to practice their understanding of the things through communicating and interacting with their group peers. In fact, students don't memorize things or concepts, they under the things deeply which make the remember thing for long time. In other words, we can say that if students are taught through PBL they get the chance to practice their learning. Teachers should create such an environment that should give students privilege to interact with their peers face to face and share their work and responsibilities as it is done in this study.

Recommendation 7: However, students can be discouraged and frustrated by the lessons so, keeping this situation in mind the teachers should be trained and lessons should be well-organized to create a positive atmosphere of the classroom. Also, teachers' educational programs must be updated with both theoretical and practical framework of PBL. There should be proper courses and seminars to train the teachers.

These recommendations can help the teachers to implement these above strategies into their classrooms and make their teaching effective. Through this strategy they can make their Students autonomous learners'. Teachers' must be trained by how they can assess their student's creativity and their projects, as they are only familiar with the standardized tests and their marking criteria's. Project based learning is rapidly growing larger and quite successfully.

CONCLUSION

This study aims to investigate the effectiveness of PBL on the reading skills in improving the literacy skills of the students. Moreover, making student independent learners and inquiring. Project based learning (PBL) is a teaching approach in which students drive their method of instructions which leads them to demonstrate their skills and learning through project's (Bell, 2010). Teachers can motivate their students for reading through PBL, as students' are given an opportunity to create their projects and mold them in the way they want to. They are given the ability to make their own choices and decisions. The students are given the privilege to take the ownership of their learning which makes them have deep understanding of their contents which are read by them (Bezon et al., 2007). The findings of this study show that how the students were motivated towards their learning through projects, they wanted to explore every side of the content in detail and to share them all with the audience. Teachers' should give autonomy to the students to make them independent learners' in which the students will discover their learning style. The result of doing this will lead them to success and make them a better inquirer. Moreover, Boaler (1997) and Marx et al (1997) who reported the effects of PBL on student's knowledge in the subject matter and the challenges they faced during their projects.

Buck Institute for Education (BIE) helps the teachers to implement the PBL in schools. According to them the PBL is defined as: "A teaching method in which students gains knowledge and skills by working for an extended period of time to investigate and respond to a complex question, problem, or challenge" (BIE, 2014a). However, this is a case study of project-based learning which affected the students reading skills and enhanced their literacy skills, made them

independent learners and inquirers. The analysis of the students reflections revealed the implementation of the projects and their skills which enhances their reading skills which seems that PBL is slightly better than the other instructional models in academic achievements for increasing the cognitive skills. Some studies regarding PBL reports the unintended consequences on the part of teachers when they are not trained properly for the planning of the projects before giving it to the students. It is evident through many researches that PBL is comparatively challenging for the teachers to plan and ratify.

The researcher collected the data through multiple resources, i.e. observation, reading log and running records. After data collection, organizing and analyzing the data were the most important and difficult jobs which the researcher performed. Data was analyzed through various artifacts and rubrics of the students to get the maximum authentic information and to squeeze it with the respect to that important point should be highlighted. After that, the researcher revealed the findings from data analysis. The findings were almost same with the objectives. Hence, the findings made the objectives authentic, reliable and more appropriate.

There are ample of evidences that PBL is the only method that leads the students towards problem solving, communicating, inquiring, and decision making. It takes the learning to complex procedure and process. However, there are some evidences regarding the difficulties which students face such as managing of time, using of technology, initiating inquiring, and directing the investigational process to the peers. There is a need of more researches always, what may come in the educational topic. Though, PBL helps the students to develop thoughtful decisions, be the critical thinkers and more important to exercise on making reasonable judgments. To keep this aim teachers have to provide them with tasks, scaffolding and support where is required for the development strategies.

The students are assessed on their projects, than a conventional based narrow rubric that only defines exams and the written reports. However, the marking criterion of the project based learning is quite meaningful to the students and teachers. PBL connects the academic work to the real world issues which is therefore more inspiring to be engaged or pursue with enthusiasm. On the other hand project learning gave the flexibility to the students to work in their way. In this study the students were assessed on their way of questioning in higher order thinking, their reflections, their projects, and their collaborating work with peers.

Students very well applied confusions' statement "Tell me and I will forget; show me and I may remember; involve me and I will understand". This study highlights that how PBL has make students involved in the projects and made them inquirer and independent learner than that of other instructional models in this intervention. In this study, the implementation of the running records has clearly defined their reading levels of the students in both the terms.

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Qualitative Impact Assessment of a Conditional Cash Transfer Program in a Central Philippine Community

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Abstract.This study utilizes the narratives of beneficiaries in the evaluation of a conditional cash transfer program. Guided by the theory that narratives bridges the objectives of the program and its impact, these narratives contain the themes describing both ends. Moreover, most of the participatory assessments did not utilize beneficiaries' narratives in the evaluation process. The utilization of narratives was done through the participatory approach. This study demonstrates that assessment of projects through narratives is feasible. It is found out that beneficiaries adopt an eclectic stance in their participation and acceptance of activities implemented by the program.

Keywords: impact assessment, qualitative assessment, conditional cash transfer, Philippines

Introduction

Assessments of development programs, like the conditional cash transfer programs (CCTP), are major undertakings of all development agencies. These are carried out by them to ascertain the influence of the projects (Royce, Thyer, & Padgett, 2014) in terms of their relevance to community and adoption by its target clientele. In consideration of these undertakings, socio-economic variables were used as the gauge of the projects' relevance and its contribution to the community's development. Improvement of life measured in terms of "before" and "after" intervention became the main tangibles of the program's efficiency. It is therefore the specific aim of the study to look into the 4Ps beneficiaries' compliance on the stipulations of the program and the evaluation of the activities by the beneficiaries. To implement this task, qualitative procedures were utilized in the assessment of beneficiaries' narratives which consequently would determine the CCTP's relevance and the beneficiaries' adoption of its activities.

In assessment of development programs and projects, either the program-evidence based approach or the people-centric approach have been used by development agencies. For the former, programs and their component activities are quantitatively measured against explicit counterfactuals (Ravallion, 2007) and tangible outputs (Royce et al., 2014). On the other hand, the people-centric approach was employed on the assumption that clienteles are partners of development efforts (Chambers, 1995; Hao-kun & Cheng-long, 2013) hence, they should be subsequently incorporated in the evaluation mechanics (Neubert, 2010). In conjunction with this note, participatory approaches were then utilized and developed on the premise that local people or beneficiaries were the real experts on their knowledge about their environment and situations (Sakset & Chesoh, 2014).

Although these approaches have their own niches in the assessment undertakings, participatory approaches gained momentum in the literature (Paudyal, Baral, Bhandari, & Keenan, 2015; Dyer et al., 2014; Mathe, 2014; Rakodi & Lloyd-Jones, 2002). Evaluation tasks using participatory techniques focused not only on the benefits received and appropriateness of the activities (Alan de Brauw, Gilligan, & Roy, 2013; Attanasio, Battistin, &

Mesnard, 2012; Paudyal et al., 2015), but more importantly on the people's participation on the different activities as development partners. Although participatory technique acknowledged the importance of the beneficiaries' perspectives, yet the analysis of their narratives by means of thematic content was not given emphasis or importance. Rather, researchers looked into the experience of the target populace in the assessment and further development of the programs (Ademokoya & Stowe, 2007; Ghiyasvandian, Abedi, & Navali, 2008; Mmereki, Li, & Loeto, 2012; Rodolfo, Calsiyao, Duclayan, & Himson, 2016). In line with this theoretical development, this study addresses on the need of literature analyzing the oral narratives of recipients through their thematic content in the context of development efforts.

The analysis of 4Ps beneficiaries' narratives is implemented with the use of Atlas.ti - a qualitative data analysis (QDA) software. Through this software, the narratives were coded, memoed and through these codes and memos, themes were generated.

Method

Guided by the theory that people's narratives bridge the program objectives and their impacts, the narratives contain the themes describing both ends. These themes reflect people's perceptions and attitudes on anything that matters to them. From the objectives of the program, activities flow; at the other end of the continuum was the impact of the program. The quality of the impact of the activities would be contained in the narratives.

Data collection was done through in-depth interview utilizing the lived-experience approach. The lived-experience approach entails the uniqueness of experience and consequently the specificity of narration. For this reason, the ontological approach was not resorted to in order to avoid the tendency of generalization or categorization of perceptions especially that the beneficiaries have attended series of information seminars pertaining the project. Thus, interviews were designed to solicit actual experience of beneficiaries as members of the project.

In the analysis of data, a three (3) - column table was prepared in the tabulation of results. Column 1 contains the activities grouped by objectives, Column 2, the sample narratives in every activity, and Column 3, the impact of the activities reflected as narrative theme.

The transcripts used in this study were those of the CCTP beneficiaries – referred to as cooperator-informant in this study -- from two urban localities in central Philippines. A total of ten (10) interview transcripts from ten (10) CCTP beneficiaries were selected using the criteria as follows: uniqueness of responses, specificity, and fallibility of testimonials. The implementation of these requirements was dependent upon the researchers' judgment.

Results and Findings

Majority (90%) of the cooperator-informants have a household maximum monthly income of Php 7,000 (US$ 149.02) for a family of five (5) while the remaining ten percent (10%) has Php 4,000 (US$85.16) of similar household size.

The CCTP, in the implementation of its mission, identified activities to be conducted nationwide under the scope of the lead line agency of the national government. These activities were on education, health and nutrition, and community building. However, in the implementation of the general objectives, local government units (LGUs) were given a freehand to translate some objectives into activities suited for the locality (Table 2a-2b).

Table 1 shows the beneficiaries compliance on the objectives and Tables 2a and 2b are on the degree of relevance of the different activities and the beneficiaries' adoption of such activities.

Qualitative Assessment of Program Objectives through Narratives. As shown in Table 1, two major activities were not complied with as narrated by the beneficiaries. These are on education and community building areas. As required by the program, beneficiaries should ensure children's regular class attendance while for the latter, beneficiaries shall attend and participate in the community-building activities e.g. clean-up drive, livelihood seminar, environmental protection and sanitation activities, etc. However, the narratives of beneficiaries have shown that beneficiaries have failed to comply these stipulations due to economic reasons. As explained by a cooperator-informant: "Tungod man gud kay wala mi lain nga panginabuhi-an, amo patabangon ang mga bata sa among gimbuhaton. Mao nga usahay ma-absent sila sa klase. Ang tabang sa 4Ps dili man ma-kada bulan, mao mga mangita mi ug panginabuhi-an," ("Because we do not have other means of livelihood, we have to require our children to help us, hence they are absent. The assistance of 4Ps is not on monthly basis, thus we have to look for other means of living", i1). Furthermore, as attested by another informant: "Mag-drive man ko ug sikad aron makatabang ni tatay ug nanay, mao nga ma-absent ko sa clase. Ang ako kita, para sa ako allowance unya ang uban para sa amo. Pero kasagaran, sabado o domingo (I drove a pedicab to help my parents, that is why I got absent from the class. My income is for my daily allowance, the rest for the household needs.

Usually, it's on weekends", i5, grade 6 pupil). All other testimonials have centered on the issue of meeting the daily needs of the beneficiaries' family. On community-building activities like attendance to meetings, participation on communal work, livelihood seminar, and environmental sanitation activities, beneficiaries admitted that they have only partially attended these activities. The common reason that surfaced in the interview transcripts were again on their economic activities. Conflict of schedules was mostly attributed to this non-compliance. As explained by a cooperator informant: "Naa'y panahon nga dili mi gyud ka-apil. Maatol nga naa mi-raket. Pero, modalikyat mi aron pagtabang. Ma-sabado, bisan na gani ug domingo, naa pa man gyud mi daginoton nga trabaho-on, aron makapuno-puno sa among panginahanglan. (There are times we cannot participate, for the activities coincide with our part-time job. But, if we have spare time, we catch up with the rest. Even Saturday, even during Sundays, there are menial work that we have to do, for we know these can help in our daily needs", i2).

The health and nutrition program was complied as contained in the narratives. The health and nutrition component includes services such as vaccination, deworming, pre and post natal services, and regular free medical check-up especially for children under five (5) years old. As narrated by an informant: "Nindot man ni para namong mga pobre. Libre ng doctor ug tambal pud. Timbang sa bata, bakuna, ug vitamins pud, libre. Nakatubag gyud ni sa among panginahanglanon. Sa higayon masakit among mga bata, dili man dayon mi akaado sa doctor kay wala lagi mi ikabayad sa doctor. Kasagaran, kami-kami nala'y ambal. Mangutana sa silingan kon unsay idapat sa maong nga sakit. Pinaagi sa 4Ps, pahabaw-on man mi kon unsay ihatag sa bata sa eskuylahan ug sa barangay health center". (This is a very good program especially for the poor. The services of the physicians are free ncluding medicines and vitamins. Weight monitoring on children, vaccination, and vitamins are ree. It has met our needs especially on our health. When our children get sick, we can seldom bring them to doctors because we don't money for doctor's fees. Most of the time, we personally administer drugs on our own through the assistance of our neighbors. Through the 4Ps, the teachers will inform us through the children of the medical services to be conducted in the school. Some in the barangay health center, i10).

Figure 1 visually presents the interconnections of themes on the aspect of beneficiaries' compliance on the major activities of the program. These themes were generated through the informants' narratives with reference to an activity. From the diagram, most of the non-compliance lie on the livelihood, economic, and social development concerns with economic concern as its central issue. For instance, the non-participation on the communal activity which is under the social development component of the program is attributed to economic activities of the beneficiaries.

For the complied activities, the activities under the Nutrition and Health were complied by the beneficiaries for being perceived as appropriate activity. These activities include among others: nutrition improvement which is the feeding program, free medical services, and the administration of vaccination. Notable among these activities is the feeding program to all school children. This is implemented through the mandatory vegetable gardening project for all beneficiaries. However, the activity on deworming was not complied by the beneficiaries because of the fear on the rumored side-effects and of the religious prohibition.

Qualitative Assessment on Program Activities through the Narratives. The appropriateness of an activity is determined on its relevance and adoptability. If an activity is appropriate, in turn, recipients will adopt such activity and is therefore considered as relevant. As shown in Tables 2a – 2b, some of the activities of the program were considered as not relevant and are therefore could not be accepted by the recipients. These were: deworming, environmental sanitation, and tree planting. As explained by an informant on their non-participation of the community-building activities: "Amo man kining gimbuhaton, apan lagi dili man mahimong amo unahon. Pamilya una, pagkahuman na ang uban. Dili mi makahatag ug suporta tungod sa among panginabuhian. Pero kon duna mi oras, motabang man mi," (We know it is our duty, but we have to take care first of the family priority before anything else. We cannot give our full support because of our need to look for livelihood. Although not our priority, we still give time to it by catching up", i4). As supported by another informant: "Makalagot kayo ni. Kami manglimpyo, pero ang uban maoy maghugawhugaw. Dili maikog ba. Ang uban, apil na ko, dili maka-apil, labi na ug naa mi raket. Naa'y panahon nga dili mi ka-apil. Maatol nga naa mi-raket. Pero, modalikyat mi aron pagtabang", (It's really discouraging. We do the cleaning, others, don't maintain it. Most of the times, we cannot participate in an activity for conflict of schedule. If we have spare time, we will help, i5).

On the case of the deworming activity, the activity was considered as not relevant, hence beneficiaries have not availed of this service. Prior the activity, it was rumored that medicines used for the deworming of children could produce negative side-effects, thus causing mothers to pull-out the children from the activity. As recalled by one informant: "Wala namo ipa-purga amo mga anak kay nadungog man gud nga na'ay lain nga epekto. Himoon kunong pangtesting among anak. Kahadlok ba ana. Bisan pa ug di na tinuod nga istorya, kung may aso, naa gyud nay baga. Di ba?" ("We did not avail of the deworming service because we have heard of its side-effects. It was rumored that our children be tested for this drug. We are afraid for that. Even if it is not true, if there's a smoke, at least there is an ember. Isn't it?", i4.)

The other case that was not adopted by the beneficiaries was the program on animal dispersion. This activity was conceived to give beneficiaries livelihood to augment their income. It was observed that some beneficiaries accepted this activity, for others it is a risky venture. As opined by an informant: "Bahin sa pagpamuhi ug kahayupan, nindot man kana. Pero lagi, wala man kaayo mi kahimanan ug kahibalo ana. Mokaon man na sila. Nagkinahanglan pud ug budget, ug oras. Imo kining atimanon. Dili pwede pasagdan. Asa man mi ug budget para anang butanga? Makahatag ug dugang kita namo. Pero, dili lagi diha-diha dayon. Ang karon-karon dayon maoy una gyud namong atimanonon" ("Livestock raising is good, but we don't have resources and knowledge for it. They also eat and need budget and ime. You have to tend to them and cannot be taken for granted. Where do we source the budget for their sustenance considering our meagre income? We believe income, but that they can augment our not immediate. The immediate need is our prime concern", i4).

Activities like enrolment assistance and financial grants, students' promotion and retention – with a no drop-out and mass promotion policy – and class attendance monitoring were consistently enforced by the lead agency concerned. As remarked by an informant: "Ang amo mga anak kon ma-absent gani sa makadaghan, bisita-on man sa maestra. Kon moabsent gihapon unya walay rason, dili unya mi makadawat sa among allowance. Unya, tungod ani, makapadayon sa sunod tuig", i2. "Sa pagkatinuod, ang uban mahadlok nga walay madawat sa 4Ps, mao nga mahadlok ma-absent ila anak, gawas ug kinahanglan na gyud", ("If our children will be absent, we will be visited by teacher-in-charge. If still persists, she will recommend for the discontinuance of our benefits. Because of this, they will be promoted to the next grade", i2. "In reality, some were afraid if they will be disqualified because of this, except if it is already necessary to tap their children's help", i7). The

lead agency in the implementation of this activity mandated that all children should be in school. To ensure compliance, teachers conducted home visitation as a form of support activity for students' academic performance. Other activities like nutrition enhancement and free medical check-up were considered as relevant and were being accepted by the beneficiaries.

Figure 2 presents the different activities perceived by the beneficiaries as relevant. Relevance in this regard is determined as having met the needs of the intended recipients. As explained by one informant, the program is good if "It has met our needs especially on our health", i7. In this case, the medical services and its related activities like the feeding program, and the giving of free vitamins were labelled as appropriate activities. Furthermore, the case conference which usually happened during home visitation were welcomed by the recipients as relevant activities.

However, the activities to bolster the beneficiaries' income through alternative livelihood training and community service were considered by them as not relevant. Budgetary constraints and not being a priority were one of the many factors of its being not relevant activities. Referring to the community service, "Although not our priority, we still give time to it by catching up", demonstrates that there is a higher priority that beneficiaries are attending to.

Findings

1. There is an improvement in all the health parameters of the pupil-respondents and as such, their health status belongs to the normal category.

2. Consumption pattern of the beneficiaries have three categories: basic food, prestige related food, and ceremonial-related food. On household income, 50-65% of the beneficiaries have a maximum monthly income of Php 4,000.00 while the remaining has a maximum of Php 7,000.00.

3. The beneficiaries are able to highly comply with the objectives of the 4P's.

4. The beneficiaries rate the intervention activities of the program as having high impact.

Discussion

As results have it, some activities of the program were not complied. Reasons for non-compliance revolved within the economic themes such as, the lack of financial resources, meagre income, household income augmentation, and the search for additional income. The narrations accompanying these themes exhibit experiential considerations as they indicate people's survival – seeking behaviour (SSB). Family concern takes precedence in their prioritization, and their participation in the program is anchored in this prioritization scheme.

As told by co-operator-informants in their SSB, children's labor and services were utilized to augment family income in its attempt to make both ends meet. In general, daily subsistence takes precedence in all the concerns these beneficiaries have. With a family monthly income of Php 7,000.00 for a family of 5, where to get the next meal is the great question for them to answer. Along this concern, development agencies and the government's line agencies that have pro-poor and anti-poverty programs need to develop a course of action meeting both the short-term and long-term needs of the beneficiaries. Short-term needs e.g. work-for-cash programs, livelihood-training-for cash programs, and class-attendance-for-food programs may be considered as alternative plans for beneficiaries to earn and meet their daily needs requirements. Long-term needs, on the other hand, can be designed vis-à-vis the short-term goals.

The relevance of activities, in the perspectives of the cooperator-informants, is founded on their capacity to meet the daily requirements of survival. If such is met, then the activities are adopted and participation is full as proven in the narratives. On the contrary, any lack that may arise – knowledge, finances, and information – ambivalent participation is to be expected. Economic wants, right information, lack of resources, and conflict of interest and prioritization were the prevalent themes that explained the non-acceptance of the activities. As raised by the informants, source and access of right information led to acceptance of the activity. To dispel doubts, for the case of deworming, and extend training support – as in the case of livestock dispersion – to all intervention activities have to be assured by government's development workers and professionals. When the target beneficiaries are in doubt on the outcomes of introduced technology, to cling on tradition which they knew would assure their subsistence is a rational act rather than adopt a new technology which is full of uncertainties (Kazancigil & Oyen, 2002; Rhoades & Booth, 1982). It has to be noted that existential concerns are concrete experience of pragmatic people and decisions are made around practical themes. Information-seeking actions, strategy of resource acquisition and mobilization, and knowledge acquisition became the bases of their decision-making strategies.

Conclusion

From this discussion, it can be deduced that beneficiaries adopted an eclectic mode of participation which is founded on their income-seeking behavior.

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Table 1. The thematic content of the beneficiaries' compliance/ non-compliance of the major activities as contained in the informants' narratives

Community Building			
Attendance to community meeting/ cooperative work/ clean-up drive	*"There are times we cannot participate, for the activities coincide with our part-time job. But, if we have spare time, we catch up with the rest. Ever Saturday, even during Sundays, there are menial work that we have to do, for we know these can help in our daily needs",i2.*		Conflict of interest; Income augmentation Weekend devoted to part-time work for additional income
Health and Nutrition			
Monitoring of health needs	*"This is a very good program especially for the poor. The services of the physicians are free including medicines and vitamins. Weight monitoring on children, vaccination, and vitamins are free. It has met our needs especially on our health. When our children get sick, we can seldom bring them to doctors because we don't money for doctor's fees. Most of the time, we personally administer drugs on our own through the assistance of our neighbors. Through the 4Ps, the teachers will inform us through the children of the medical services to be conducted in the school. Some in the barangay health center",i10*	Good program; Free medical services; Met our health needs; Cannot afford doctors' and medical fees; Home/ Personal medication; Assistance and medical activities announced through 4Ps	

Legend: Green – economic factors; Blue – Reason for compliance; Yellow – caution; Red – reason for non-compliance

Table 2a. The thematic content on the relevance-acceptance of Education and Health and

Health and Nutrition			
Free medical checkup	*It's a good activity. Free medical check-up for children.*	Good activity. Free check-up	
Deworming of children	*We did not avail of the deworming service because we have heard of its side-effects. It was rumored that our children be tested for this drug. We are afraid for that. Even if it is not true, if there is smoke, at least there is an ember. Isn't it?, i4.*		Did not avail; Rumored side-effects; Wait-and-see for results
Feeding of children and vegetable gardening.	*It is good. It has provided food to all school children. Nutrition improvement is the goal, i3*	Appropriate activity; provision of food for children; nutrition	

Legend: Red – not relevant/not acceptable
Green – relevant/acceptable
Yellow – ambivalence/ doubtful

Nutrition activities as contained in the narratives of informants

Table 2b. The thematic content on the relevance-acceptance of Community Service and Alternative Livelihood activities as contained in the narratives of informants.

Environmental sanitation and	*We know it is our duty, but we have to take care first of*	Awareness of duty	Conflict of interest: Family priority;

MAJOR ACTIVITIES	INFORMANTS' NARRATIVES	IMPACT (Thematic Content)	
		RELEVANCE & ACCEPTANCE (FACTORS)	NON-RELEVANCE AND NON-ACCEPTANCE (FACTORS)
Cooperative Work and Income Augmentation			
Livestock dispersal	*"Livestock raising is good, but we don't have resources and knowledge for it. They also eat and need budget and time. You have to tend to them and cannot be taken for granted. Where do we source the budget for their sustenance considering our meagre income? We believe that they can augment our income, but not immediate. The immediate need is our prime concern", i4*		Lack of resources; Not appropriate in their given situation Income augmentation

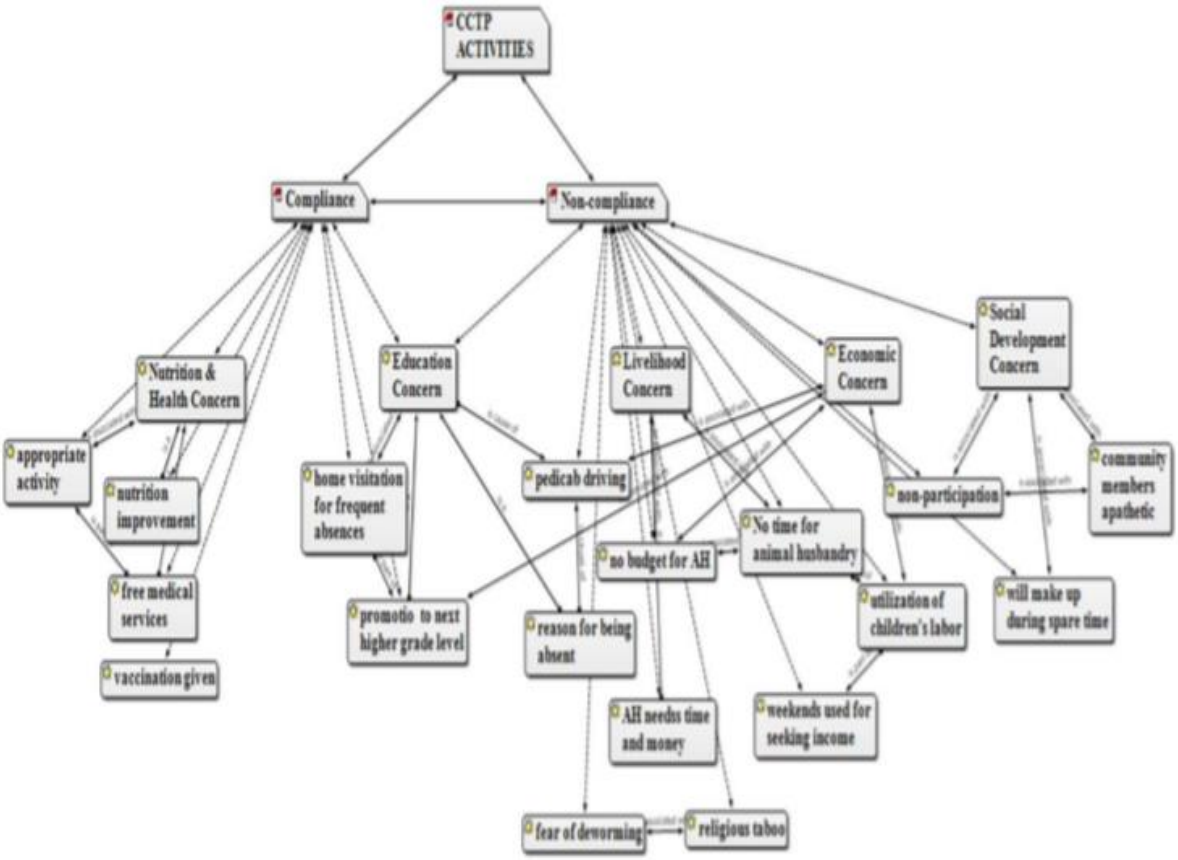

Figure 1. The compliance – non-compliance network of the CCTP activities

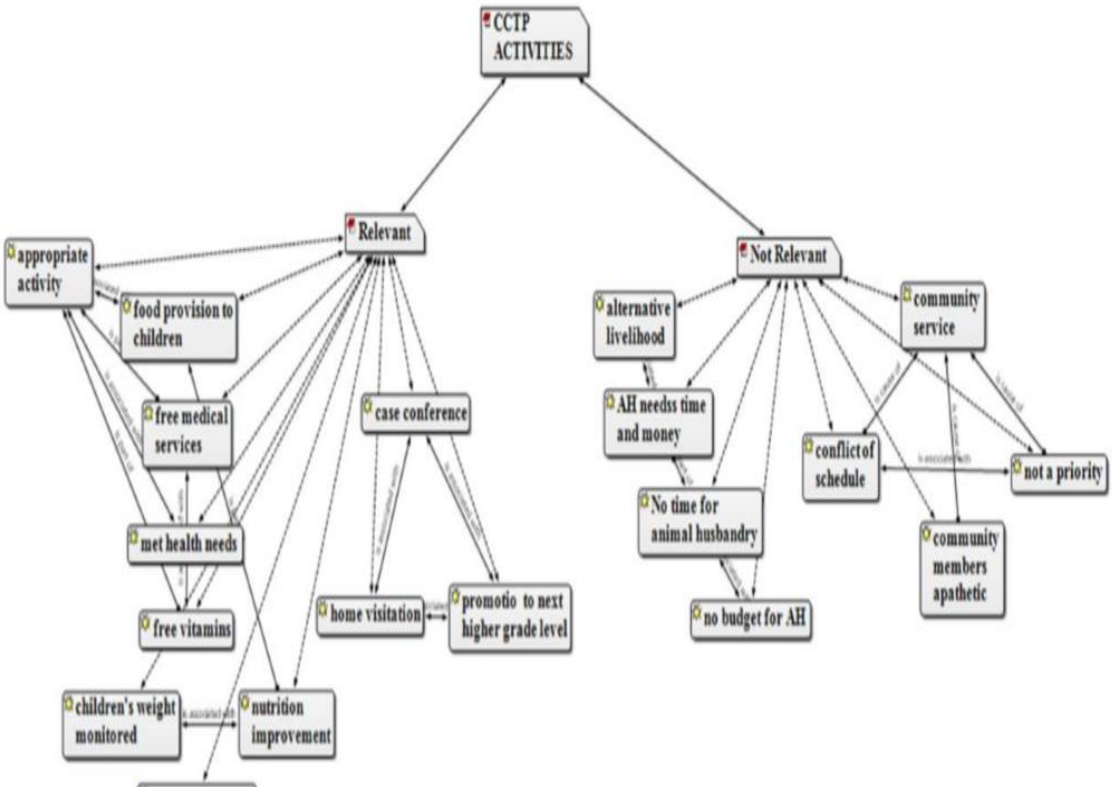

Figure 2. The relevance-not relevant network of the CCTP activities

The importance of the teacher-student relationship and the effect of students' learning

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Abstract.

The teaching process is one of the most complex and sensitive processes in terms of education. It includes many areas through which this process can function. To create a better and more efficient learning process, relations must first be formed between the two key subjects of the process, the teacher and the student. A healthy relationship between these subjects is the main step in creating an ideal learning process. It provides a safe environment and confidence work and perform without pressure. When the classroom in which teaching takes place is a safe and supportive environment, students are more motivated and stimulated to learn and actively collaborate with teachers and peers. Thus, the role of the teacher is essential to them. Knowing that the relationship between teachers and students affects the way learning develops in the classroom, the quality of students, and their motivation to learn, this study will focus on the importance of the teacher-student relationship and the impact of this relationship on the learning process. Furthermore, these supportive relationships with teachers can play an important developmental role during the transition periods of education.

By providing specific and empirical evidence, the results of the study help identify factors related to teacher-student interactions and confirm the importance of this relationship.

Keywords: teacher-student relationships, emotional support, classroom management, motivation, classroom environment, learning strategy, lesson organization.

This study aims to explain the impact of the teacher-student relationship and it has been conducted in three Kosovo Schools and the achievement of its goals is based on the findings of the questionnaires piloted with a group of 40 teachers working in these three elementary schools "Elena Gjika", "Asim Vokshi", "Green School" and 250 students of the same elementary schools of grade 9. The aim was to gather teachers' and students' perceptions of the supportive relationship and how this relationship might affect students' learning and their interest in the learning process. By providing specific and empirical evidence, the results of the study help identify factors related to teacher-student interactions and confirm the importance of this relationship.

Keywords: *teacher-student relationships, emotional support, classroom management, motivation, classroom environment, learning strategy, lesson organization*.

1.Introduction

Creating a warm and productive environment in the classroom is quite reasonable because the socio-emotional climate that a teacher is capable of creating and offers potential students to see themselves fit, worthy and confident in the classroom. It also incorporates them into a part of the students, making them feel part of a process. The ability of students to connect with rubber teachers is an attribute that can make a huge difference in student achievement. Pianta (1999) was assigned to teach student lessons, as "the case has an emotion created by the future interactions of their students' teachers". When students feel that teachers are supportive and trustworthy, they have made connections to their teaching and see teachers as the person who keeps students and do not want to have the opportunity to grow.

Many Murray & Pianta (2009) believe that soil structure can foster a positive within the classroom. From a well-managed classroom environment and student safety, they were forced to ensure that behavioral expectations were clearly expressed and constantly reinforced. Land settings and student opportunities to develop a sense of trust and comfort with all members of the classroom community. Land cultivation environments also give teachers more as such to achieve and achieve in terms of my classroom fulfillment, because teachers in this environment have the freedom to engage in more positive interactions with students than in other assignments of discipline. For this reason, this study identifies the various factors that create a conducive classroom environment and an effective learning process. Also affect the characteristic affective characteristics, which result as a result of proper relationships between teachers and students. So the study clarifies the importance of student learning in such a lesson and works to create such action.

2. The importance of teacher-student relations

It is important to have a teacher who cares about the needs and strengths of the students. Also, a teacher, who creates supportive relationships with his students, offering them opportunities to show themselves during the learning process. Participation in the learning process makes students feel comfortable and free to interact in the classroom. In this way, the improvement of their teaching skills is achieved. A teacher who cares for his students transmits knowledge affectively and has good interaction with them. In addition, he or she offers students the opportunity to make emotional connections. Allen, Gregory, Mikami, Lun, Hamre & Pianta (2013) suggest that "improving the quality of interactions between teachers and students in the classroom depends on a

solid understanding of the nature of effective teaching for students." The emotional connection created between students and the teacher makes students feel good in the classroom and in relation to their teacher. This feeling is essential for the success or failure of the student, because it plays a key role in defining his achievements. Classroom organization is the way teachers lead the class to achieve certain goals, which includes how teachers physically organize the classroom for learning. Learning support is important to help teachers provide strategies and support that will best help them to distinguish lessons and meet all student needs. At the same time to promote their engagement in the learning process.

3. Perspectives on teacher-student relations

There is a diverse range of perspectives in the field of interactions between teachers and students that have been researched over the past decades. However, they share some fundamentally different principles. What follows in this literature review is a sample of these perspectives as they relate to the effect that teacher-student interactions have on the learning environment including findings and implications, organized by categories of researchers.

3.1. Educational perspective

"What do the positive relationships between teachers and students in the classroom look like?"

Downey (2008) conducted a study that synthesized educational research on the factors that influence academic success. The rationale for the study was to examine classroom practices that made a difference for all students, but in particular, for students at risk for learning failure. What was determined was that a teacher's personal interaction with his students made a significant difference.

The recommendations from Downey's analysis were that "students need teachers to build strong interpersonal relationships with them, focusing on students' strengths while maintaining high and realistic expectations for success." The main starting point of these relationships should be based on the care, cohesion, trust and respect established between teachers and students. Downey concludes that "the study served as a powerful reminder that everyday interactions between teachers and students in the classroom are important." In addition to him, other researchers in this field such as: Marzano, Cazden, Langer agree that the interaction between teacher and student has a significant impact on student learning in the classroom.

3.2. Psychological point of view

"How are good relations between teachers and students noticed and why are these relationships important?" "What effect does a positive relationship with teachers have on a student?" Sarason (1999) sees teaching as an interpretive art and discusses the "art of teaching" and the role that teacher interaction plays in creating a productive learning environment. He argues that, after World War II, when teachers were trained, education increasingly focused on the subject to the detriment of pedagogy, "the obligation of the teacher to know who the student is and makes the subject interesting, motivating and compelling for students Theirs". He asks "are there no characteristics of a good teacher that can be observed when the teacher interacts with children?". Such a candidate would be someone capable of understanding, motivating and guiding the intellectual development as well as the socio-personal development of children. Sarason claims, "If you do not know the minds and hearts of students, you overturn productive learning," this is the starting point of all learning. Sarason claims to have three key characteristics for productive learning; the first is recognizing and respecting the individuality of the student. The second is for the teacher to know the topic should be sufficient to determine when the student may have difficulty and be able to mediate to prevent difficulties from occurring. The third principle is that the teacher is constantly looking for ways to engage and stimulate the student so that he / she wants to learn. By building relationships with students, teachers can accomplish what Sarason claims the primary purpose of schooling is to motivate students to experience personal and cognitive growth. According to Sarason there is no system in place that evaluates how teachers interact with children. This is a big problem in the field of education, which will start to change during the next generation of students and teachers. Teachers need to build a relationship with their students, which builds trust, respect and an understanding of them as students. He considers it an essential component to teaching and learning - he requires teachers to be "both performers and smart psychologists".

3.3. Sociological perspective

"What is the contribution that the social aspects of school make to the child's education?"

Crosnoe, Johnson, & Elder (2004) investigated the effect that the 'alienation' of young people from the school community had on their teaching and school performance. Alienation is defined as the feeling of detachment from others. They claim that "student alienation contributes to learning problems that lead to problems at the societal level." They emphasize the need to consider more social aspects of schooling, such as the relationship that teachers create with their students.

They studied whether an affective dimension of the relationship between teachers and students predicts learning progress and behavioral problems. In a study of adolescents in grades 7-12 it was found that positive teacher-student relationships were associated with their best outcomes both in terms of learning and behavior. Crosnoe et al. concluded that "students who had more positive views of their teachers were better off and had fewer problems at school". Their recommendation, based on these findings, is that the research should extend deeper into the teacher-student relationship; in particular, exploring the connection between the affective dimensions of these relationships. They consider good student-teacher relations as a resource for schools and that students should be promoted as such. Facilitating interpersonal relationships, from a sociological point of view, is important to keep students committed to the education process.

4. Impacts of teaching

Making a strong connection with a student results in deep and consistent learning (Flood, Lapp, Squire, & Jensen, 2003). According to Flood et al. (2003), there is a consensus among researchers that good readers have a plan to understand and use their metacognitive knowledge in a regular way to implement their plan - they use a thought process that can be learned. The process of thinking used to understand reading is very similar to the process involved in writing, in that of synthesis and analysis. The ability of a successful teacher to successfully learn these thinking strategies can result in a student with the skills of transferring knowledge that will prepare them for lifelong learning. Knowledge transferability, as discussed by Spiro et al. (1987), is a necessary skill if one is to gain complex knowledge and mastery beyond the superficial understanding of prior learning. Spiro et al. show that knowledge cannot be delivered only to students, it is necessary active involvement in acquiring knowledge along with "possible guidance from expert mentors". When teachers have sufficient knowledge of how their students learn, they can provide important guidance to students. This is achieved through the establishment of strong relations between the two parties. Downey (2008) also recommends using reciprocal teaching as an effective learning strategy which requiresbuilding strong interaction between teacher and student, as they "develop a research-oriented approach to learning". Building strong affective relationships with students would give teachers additional learning capacities that can foster learning from a range of student interests and their strengths. According to Hallinan (2008), learning is a cognitive and social process, as well as a psychological process. He reports that "research has shown that students who want school have higher academic achievement."

5. Conclusion and recommendation

A review of the literature shows the different disciplines of researchers, who have examined all the effects that building a strong teacher-student relationship has on the learning environment. While the emphasis on test scores, to determine the effect of teaching and learning, has been prevalent in the last decade. (No Child Left Behind Act, 2001). Thus, there is ample evidence from several sources to show that building a strong relationship with students contributes greatly to a successful learning environment. This study also shows how participants create a specially designed learning environment that has a positive effect on student learning. Study participants use the relationships that the teacher creates with students to improve the learning environment. Regarding the relationship between teachers and students, Marzano & Marzano (2003) warn not to be left as a causal relationship. They recommend that by using research-supported strategies, teachers can influence the dynamics of their classrooms and build strong teacher-student relationships, which will support achievements in the learning process. Through the study were created new opportunities to gain in-depth knowledge of teacher-student interaction and teacher thinking, which has a positive impact on the learning environment. Sarason (1999) states that the starting point of all learning is to know the minds and hearts of the students it teaches. So, even this study managed to evidence that the essence of a strong teacher-student relationship revolves around the effects of this relationship on teaching and learning that takes place in the classroom.

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Utilization of Maintenance and Other Operating Expenses (MOOE) in Relation to Students' Academic Performance

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Abstract

This research used the descriptive method to determine the extent of utilization of Maintenance and Other Operating Expenses (MOOE) in relation to Students' Academic Performance in the Public Elementary Schools of Bayawan City Division, Negros Oriental for SY 2018-2019. The quantitative data were gathered from 68 teachers' league presidents and 68 school heads. Also, the researcher conducted a survey questionnaire. Descriptive method was used in this study. The statistical tools used in the analysis of the data were percentage, mean, weighted mean, and spearman rank correlation coefficient. The study found out that the extent of utilization of the Maintenance and Other Operating Expenses (MOOE) as perceived by the teachers' league presidents and school heads was "high" in terms of the following aspects: (a) school operations and development; (b) teachers' welfare and development and (c) students' welfare and development. In addition, it was also found out that the level of students' academic performance is at a "very satisfactory" level. Lastly, findings revealed that there is a significant relationship between the extent of utilization of the Maintenance and Other Operating Expenses (MOOE) and students' academic performance.

Keywords: Maintenance and Other Operating Expenses (MOOE), Students' Academic Performance, School Operations and Development, Teachers' Welfare and Development, Students' Welfare and Development

Introduction

DepEd Order No. 13, s. 2016 or the Implementing Guidelines on the Direct Release and Use of Maintenance and Other Operating Expenses (MOOE) Allocations of Schools, including Other Funds Managed by Schools was issued to deepen the decentralization of education management (Gempes & Ochada, 2018). In this connection, the Department of Education continues to upgrade

its services to enhance teaching standards and learning outcomes of the Filipino learners. One of the reforms is the transference of responsibilities on school to manage their operations and resources for school development so as to develop an environment that facilitates continuous improvement. Moreover, DepEd embarked on number of reform programs to ensure that Filipino children have equal opportunity and better access to educational opportunities for their holistic growth and development (Atinc & Read, 2017).In fact, the government backed up these reforms with a substantial increase in the basic education sector investment. Hence, between 2010 up to 2018, spending and funding for public education continues to increase in real terms. In line with this, Gempes and Ochada (2018) further revealed that as the school ages and enrolment increases, heightened demand for maintenance services of facilities and structure arises as an addition to the growing number of school personnel and operating expenses.

Al-Samarrai (2016) in turn provided detailed evidence on the extent to which these systems are effective in handling key items of public spending. The findings of the study provided a snapshot of the availability and quality of key education inputs at the school level and evaluated whether these resources are distributed equitably across schools. Gempes and Ochada (2018) further revealed that proper allocation, implementation and utilization of MOOE fund by the school heads should promote transparency and involvement of teachers in financial planning should as well be observed. Therefore, as MOOE serves as a fund provision for schools' maintenance and operations, teachers should be centrally involved in MOOE allocation and utilization. In addition, it has been noted that basic and supplementary budgets are necessary to provide the school with the per pupil allocation of funding to help aid continually its different operations.

In view thereof, the researcher being a school head himself would like to shed light on the matter by assessing the level of effectiveness of the utilization of Maintenance and Other Operating Expenses (MOOE) to manage public education resources focusing on the areas of school operations, teachers' welfare, and pupils' development. In specific, this aims to comprehensively assess the systems that manage and govern the use of public funding for the ultimate benefit of Filipino learners who nonetheless deserve better access to basic education services.

Research Design

The study utilized the descriptive-correlational research design which was used to relate the two variables. According to Gonzales and Calderon (2015), it is the research design that deals with the present condition. Moreover, according to Cooper, et al. (2014) this could be done by creating a profile of a group of problems, people, or events. Such studies involve the collection of data and the number of times the researcher observes a single event or characteristics. Thus, this may involve relating the interaction of two or more variables.

In this investigation, the focus was on the extent of utilization of MOOE in relation to students' academic performance. Descriptive research was used to obtain information concerning school operation and development, teachers' welfare and development, and students' welfare and development and to describe what exists with respect to the variables or conditions identified herein. Descriptive research is often used as a pre-cursor to more quantitative research designs, the general overview giving some valuable pointers as what variable are worth testing quantitatively (USC Libraries, 2015).

Research Environment

The locale of the study is the Public Elementary Schools of Bayawan City Division. Generally, the Public Elementary Schools of Bayawan City Division are assigned with elementary school principals, head teachers, and teachers-in-charge who served as both school administrators and school-based supervisors. In addition, the division is administered and headed by a Schools Division Superintendent with the assistance of the Assistant Schools Division Superintendent, Curriculum and Instruction Division (CID) Chief Supervisor, School Governance and Operations Division (SGOD) Chief Supervisor, Division Education Program Supervisors, and Public Schools District Supervisors who used to constantly monitor the Public Elementary Schools especially in the areas of curriculum implementation, instructional supervision, institutional organizatios, school administration, and financial operations.

Research Respondents

The respondents of the study were the 68 Public Elementary School Heads with Teacher-in-Charge, Head Teacher, and Elementary School Principal leadership designations as well as the 68 Teachers' League Presidents of the 10 Districts Bayawan City Division for school year 2018-2019.

Research Instruments

To determine the extent of utilization of Maintenance and Other Operating Expenses (MOOE) in relation to students' academic performance, a self-made questionnaire was used.

Part I aimed to gather personal information of the respondents based on the selected variables such as age, length of service, highest educational attainment, and average monthly income. The second part is the questionnaire proper regarding the extent of utilization of Maintenance and Other Operating Expenses (MOOE) in terms of the following areas: school operations and development, teachers' welfare and development, and pupils' welfare and development. The items in the questionnaire were taken from researcher's reading of books, journals, electronic media and conducted researches.

Research Procedure

The researcher asked permission from the concerned authorities, and secure the necessary endorsements before floating the questionnaires to gather the needed data. A letter of permission to conduct the study was given to the Schools Division Superintendent of the Division of Bayawan City requesting permission to allow the researcher to conduct the study in the selected Public Elementary Schools of Districts 1-10. Upon approval, copies of the approved letter were given to the assigned Public Schools District Supervisors and also to the school heads and teachers of the participating schools to allow the researcher to administer the questionnaire to the identified research respondents. Hence, copies of questionnaires were reproduced and distributed to the respondents and were personally distributed by the researcher which enabled him to explain the purpose of the study. The accomplished questionnaires were retrieved immediately after every administration and as soon as the respondents have answered all the required information. The respondents were further assured that their answers will be dealt with strict confidentiality.

Findings

Table 1. Profile of the Teachers' League Presidents

Teachers' League Presidents			
Variable Grouping	**Classification**	**Frequency**	**Percentage**
Age	Younger (Below 35 yrs. old)	28	41.2
	Older (35 yrs. old and Above)	40	58.8
	Total	**68**	**100**
Length of Service	Shorter (Below 9 yrs.)	32	47.1
	Longer (9 yrs. and above)	36	52.9
	Total	**68**	**100**
Highest Educational Attainment	Lower (Bachelor's Degree and MA Units)	30	44.1
	Higher (MA-CAR, PHD, PHD Units)	38	55.9
	Total	**68**	**100**
Average Monthly Income	Low Income (Below Php25,000)	32	47.1
	High Income (Php25,000 and Above)	36	52.9
	Total	**68**	**100**

The profile of the respondents as to age, length of service, highest educational attainment, and average family income is presented in Table 1. It shows that when the teachers were grouped according to age, 28 or 41.2 percent are younger below 35 years old of age and 40 or 58.8 percent are older or 35 years old and above.

As regard to length of service, 32 or 47.1 percent have shorter length of teaching experience with below 9 years while 36 or 52.9 percent have longer years in the service for 9 years and above.

As to highest educational attainment, 33 or 44.1 percent have bachelor's degree or MA Units while 38 or 55.9 percent obtained an MA with completed academic requirement and doctoral units or doctoral degree holder.

As to average monthly income, 32 or 47.1 percent whose income is below PhP 25,000 and 36 or 52.9 percent have high income for PhP 25, 000 and above.

The teachers' league presidents as respondents of the study were mostly older, have longer length of service, with higher educational attainment, with higher educational attainment.

Table 2. Profile of the School Heads

School Heads			
Variable Grouping	**Classification**	**Frequency**	**Percentage**

Age	Younger (Below 37 yrs. old)	34	50.0
	Older (37 yrs. old and above)	34	50.0
	Total	**68**	**100**
Length of Service	Shorter (Below 9yrs)	30	44.1
	Longer (9 yrs and above)	38	55.9
	Total	**68**	**100**
Highest Educational Attainment	Lower (Bachelor's Degree and with MA Units)	32	47.1
	Higher (MA-CAR, with PHD Units, PHD)	36	52.9
	Total	**68**	**100**
Average Monthly Income	Low Income (Below Php26,747)	34	50.0
	High Income (Php 26,747 and Above)	34	50.0
	Total	**68**	**100**

Table 2 depicts the school heads' profile items which are categorized as to age, length of service, highest educational attainment, and average family income. It shows that when the teachers were grouped according to age, 34 or 50 percent are younger below 37 years old of age and 34 or 50 percent are also older or 37 years old and above.

As regards to length of service, 30 or 44.1 percent have shorter length of teaching experience with below 9 years while 38 or 55.9 percent have longer years in the service for nine years and above. As to highest educational attainment, 32 or 47.1 percent have bachelor's degree or MA Units while 36 or 52.9 percent obtained an MA with completed academic requirement and doctoral units or doctoral degree holder.

As to average monthly income, 34 or 50 percent whose income is below PhP 26,747 and 34 or 50 percent also have high income of PhP 26, 747 and above.

Table 3. Extent of Utilization of Maintenance and Other Operating Expenses (MOOE) as assessed by the Teachers' League Presidents and School Heads themselves in terms of School Operation and Development

	School Operation and Development	**Teachers' League Presidents**		**School Heads**	
		Mean	**Interpretation**	**Mean**	**Interpretation**
1	1 MOOE is utilized to finance the purchase of office equipment, tools, and other school supplies for school operations and administrative works.	3.82	High Extent	4.28	High Extent
2	2 MOOE is utilized to finance the reproduction of school reports and other school forms.	3.84	High Extent	4.31	High Extent
3	3 MOOE is utilized to finance the provision of materials needed in informing stakeholders on	3.87	High Extent	4.15	High Extent

	the conduct of different school events and activities.				
4	4 MOOE is utilized to finance the construction of school infrastructures.	3.81	High Extent	3.87	High Extent
5	5 MOOE is utilized to finance repairs to improve the necessary basic amenities and to meet the requirements for child friendly school system.	4.10	High Extent	4.32	High Extent
6	6 MOOE is utilized to finance the conduct of DepEd advocacies like the promotion of inclusive education.	4.03	High Extent	4.31	High Extent
7	7 MOOE is utilized to finance environmental advocacies like Solid Waste Management (SWM) Programs.	3.82	High Extent	4.03	High Extent
8	8 MOOE is utilized to finance the procurement of materials needed for community partnerships like Disaster Risks Reduction Management (DRRM).	4.04	High Extent	4.15	High Extent
9	9 MOOE is utilized to finance the provision of communication services and internet access for better basic education services.	4.21	High Extent	4.43	High Extent
1	10 MOOE is utilized to finance repairs the provision of safety and basic janitorial services for the school welfare.	4.16	High Extent	4.34	High Extent
	Overall Mean	**3.97**	**High Extent**	**4.21**	**High Extent**

Extent of Utilization of Maintenance and Other Operating Expenses (MOOE) as assessed by the Teachers' League Presidents and School Heads themselves in terms of School Operation and Development

Table 3 displays the extent of utilization of Maintenance and Other Operating Expenses (MOOE) as assessed by the Teachers' League Presidents and School Heads themselves in terms of School Operation and Development. As reflected in the table, the Teachers' League Presidentsobtained an overall mean of 3.97 while the school heads garnered an overall mean of 4.21 which both denote a verbal equivalent of "very high" extent for both categories of respondents.

As shown in the table, the item which obtained the highest weighted mean is item number 9, "MOOE is utilized to finance the provision of communication services and internet access for better basic education services" with a "high" extent of utilization as assessed by both set of respondents in school operation and services. This is supported by Kaguri et al. (2014) as financial management has been given emphasis in order to manage all raised and allocated finances and to ensure and to keep track that there is a proper, adequate and accountable utilization of resources budgeted for education in the right manner.

On the other hand, the item number 4, "MOOE is utilized to finance the construction of school infrastructures" obtained the lowest mean among the rest of the items. In line with this, Merano (2017) put forward that it is undeniable that every school accomplishment depends on the way a school head manages school funds given by the government, such as the Maintenance and Other Operating expenses (MOOE) which could only be released depending on the availability of funds in the central office and if the priority needs of the school is identified and reported.

Extent of Utilization of Maintenance and Other Operating Expenses (MOOE) as assessed by the Teachers' League Presidents and School Heads themselves in terms of Teachers' Welfare and Development

Table 4 shows the extent of utilization of Maintenance and Other Operating Expenses (MOOE) as assessed by the Teachers' League President and School Heads themselves in terms of Teachers' Welfare and Development which both denote a "high" extent verbal equivalent as respectively shown by overall means of 3.97 and 4.32 for the teachers' league presidents and school heads themselves.

As assessed by the school heads, item number 5, "MOOE is utilized to finance the reproduction of teacher-made test papers during school-based testing programs" obtained the highest weighted mean of 4.46 interpreted as "high" extent while item number 10 which is "MOOE is utilized to finance travelling expenses, meals, accommodation and incidental allowances of teaches in the conduct of DepEd Initiated Activities" garnered the highed weighted mean as perceived by the teachers' league presidents.

This imply that school heads as financial managers prioritize the needs of both the learners and the teachers as two important keyplayers of the educational system to promote access and equity, quality and excellence as well as relevance and responsiveness. In affirmation to this, teachers must be consulted about their needs for their learners to be provided with better access to basic education services (Atinc & Read, 2017; Comighud, 2019).

Table 4. Extent of Utilization of Maintenance and Other Operating Expenses MOOE) as assessed by the Teachers' League Presidents and School Heads themselves in terms of Teachers' Welfare and Development

	Teachers' Welfare and Development	**Teachers' League Presidents**		**School Heads**	
		MMean	**Interpretation**	**MMean**	**Interpretation**
1	MOOE is utilized to finance teachers' training activities for pedagogical retooling and professional development.	4.04	High Extent	4.31	High Extent
2	MOOE is utilized to finance expenses for seminars and workshops of Whole Brain Learning System (WBLS) Writers.	3.85	High Extent	4.29	High Extent
3	MOOE is utilized to finance the provision of instructional materials like CGs,	3.85	High Extent	4.35	High Extent

	TGs and other supplemental materials needed.				
4	MOOE is utilized to finance the purchase of ICT resources and educational equipment.	3.82	High Extent	4.24	High Extent
5	MOOE is utilized to finance the reproduction of teacher-made test papers during school-based testing programs.	3.99	High Extent	4.46	High Extent
6	MOOE is utilized to finance trainings of coaches and officiating officials for athletic meets and sports events.	3.96	High Extent	4.31	High Extent
7	MOOE is utilized to finance training of teachers in research undertakings and technological advancements.	4.00	High Extent	4.22	High Extent
8	MOOE is utilized to finance training of teachers on basic life support and first aid for DRRM purposes.	4.03	High Extent	4.40	High Extent
9	MOOE is utilized to finance training of teachers on guidance and counseling as well as child protection policies.	4.01	High Extent	4.31	High Extent
10	MOOE is utilized to finance travelling expenses, meals, accommodation and incidental allowances of teaches in the conduct of Dep Ed Initiated Activities.	4.21	High Extent	4.41	High Extent
	Overall Mean	**4.97**	**High Extent**	**4.32**	**High Extent**

Table 5. Extent of Utilization of Maintenance and Other Operating Expenses MOOE) as assessed by the Teachers' League Presidents and School Heads themselves in terms of Students' Welfare and Development

Students' Welfare and Development	**Teachers' League Presidents**		**School heads**	
	Mean	**Interpre-ta-tion**	**Mean**	**Interpre-tation**
1 MOOE is utilized to finance the conduct of house-to-house campaigns and community mapping to increase school enrolment.	4.01	High Extent	4.06	High Extent
2 MOOE is utilized to finance the conduct of campaigns and advocacies to promote inclusive education for students.	3.90	High Extent	4.13	High Extent
3 MOOE is utilized to finance the purchase of learning materials deemed useful in the teaching–learning activities.	4.03	High Extent	4.35	High Extent

4 MOOE is utilized to finance the production of remedial reading and intervention materials to enhance students' literacy skills.	4.07	High Extent	4.35	High Extent
5 MOOE is utilized to finance students' registration fees and other expenses for participation in different contests.	3.94	High Extent	4.22	High Extent
6 MOOE is utilized to finance the purchase of sports equipment needed by the students in their participation in sports academies/activities.	3.87	High Extent	4.00	High Extent
7 MOOE is utilized to finance students' participation in the nation of heroes events and other youth encampments.	3.97	High Extent	4.25	High Extent
8 MOOE is utilized to finance students' participation in scouting activities, athletic meets and other sports events.	4.00	High Extent	4.24	High Extent
9 MOOE is utilized to finance basic safety and janitorial security services for students' welfare.	4.13	High Extent	4.21	High Extent
10 MOOE is utilized to finance the purchase of materials needed for recognition activities and graduation exercises.	4.26	High Extent	4.47	High Extent
Overall Mean	**4.01**	**High Extent**	**4.22**	**High Extent**

Extent of Utilization of Maintenance and Other Operating Expenses (MOOE) as assessed by the Teachers' League Presidents and School Heads themselves in terms of Students' Welfare and Development

Table 6 discloses the extent of utilization of Maintenance and Other Operating Expenses (MOOE) as assessed by the Teachers' League President and School Heads themselves in terms of Students' Welfare and Development as to which both set of respondents obtained overall means of 4.01 and 4.22 respectively denoting a "very high" extent verbal equivalent.

Item number 10, "MOOE is utilized to finance the purchase of materials needed for recognition activities and graduation exercises" got the highest mean of 4.26 and 4.47 as respectively assessed by the teachers' league president and school heads interpreted as "high" extent. Based on this findings, it could be inferred that school heads allocate financial budget not only to answer the learning needs of the pupils or students but also to give recognition on their academic achievement as part of personal growth and holistic development. In support to this, Kapur (2018) put emphasis on the needs to recognize academic achievements through recognition activities and graduation exercises. Hence, it has been proven that financial allocations influence academic achievement (Andaya, 2014; Comighud & Arevalo, 2020).

On the other hand, item number 6, "MOOE is utilized to finance the purchase of sports equipment needed by the students in their participation in sports academies/activities" obtained the lowest mean due to minimal extra curricular activities conducted for students' physical development.

Table 6. Level of Learners' Academic Performance

Academic Performance		
District	**Mean**	**Interpretation**
A	88.57	Very Satisfactory
B	91.57	Outstanding
C	86.50	Very Satisfactory
D	85.17	Very Satisfactory
E	86.72	Very Satisfactory
F	89.25	Very Satisfactory
G	86.33	Very Satisfactory
H	84.14	Very Satisfactory
I	88.57	Very Satisfactory
J	85.50	Very Satisfactory
Overall Mean	**87.23**	**Very Satisfactory**

As gleaned on Table 6 is the level of learners' academic performance. The table shows that the Grade 6 learners got the overall weighted mean of 87.23 which is interpreted as very satisfactory.

For any educational institute, learners are the most important asset. Schools have no value without learners. Economic and social development of a country is directly associated with academic performance of students. The students' academic performance plays a vital role in creating the finest quality who will become leader and manpower of a particular country, consequently responsible for the country's social and economic development (Malik et al, 2016).

Table 7. Comparative Analysis on the Extent of Utilization of Maintenance and Other Operating Expenses (MOOE) as assessed by the Teachers' League Presidents in the Area of School Operation and Development when grouped according to Variables

School Operation and Development							
Variables	**Categories**	**N**	**Mean Rank**	**Mann-Whitney**	**Sig. Level**	***p*-value**	**Interpretation**
Age	Younger	28	36.73	497.50		0.434	**Not Significant**
	Older	40	32.94				
Length of Service	Shorter	32	39.39	419.50		0.053	**Significant**
	Longer	36	30.15				
Highest Educational Attainment	Lower	30	29.68	425.50	0.05	0.073	**Not Significant**
	Higher	38	38.30				
Average Monthly Income	Low income	32	38.86	436.50		0.085	**Not Significant**
	High Income	36	30.62				

It is reflected in Table 7 that there is no significant difference on the extent of Utilization of Maintenance and Other Operating Expenses (MOOE) as assessed by the Teachers' League Presidents when grouped according to variables of age, highest educational attainment and average monthly income. In terms of age, the *p*-value is 0.434, highest educational attainment is 0.073, and average monthly income is 0.085 which are all greater than the 0.05 level of significance. However, significant difference exist in terms of length of service. It could be inferred that teachers' league presidents with more tenure status attended more to their work functions. This is supported by the study of Comighud (2019) as she shared the findings that teachers' length of service serve as their motivation accomplishing different work loads in the area of school operations and development to better serve the clienteles of their schools in adherence to DepEd's vision and mission as a learner-centered public institution.

Table 8. Comparative Analysis on the Extent of Utilization of Maintenance and Other Operating (MOOE) as assessed by the Teachers' League Presidents in the Area of Teachers' Welfare and Development when grouped according to Variables

		Teachers' Welfare and Development					
Variables	**Categories**	**N**	**Mean Rank**	**Mann-Whitney**	**Sig. Level**	***p*-value**	**Interpretation**
Age	Younger	28	33.32	527.00	0.05	00.680	**Not Significant**
	Older	40	35.32				
Length of Service	Shorter	32	35.23	552.50		00.772	**Not Significant**
	Longer	36	33.85				
Highest Educational Attainment	Lower	30	28.92	402.50		00.038	**Significant**
	Higher	38	38.91				
Average Monthly Income	Low income	32	33.88	556.00		00.805	**Not Significant**
	High Income	36	35.06				

It is presented in Table 8 that there is no significant difference on the extent of Utilization of Maintenance and Other Operating Expenses (MOOE) as assessed by the Teachers' League Presidents in the area of Teachers' Welfare and Development when grouped according to variables of age, length of service, and average monthly oncome. In terms of age, the *p*-value is 0.680, length of service is 0.772, and average monthly income is 0.805 which are all greater than the 0.05 level of significance regarded as not significant. However, variable on highest educational attainment is significant with a *p*-value of 0.038 regarded as significant. The current findings concur to the studies of Ramirez (2018), Baguio (2018) and Agir (2019) who all revealed that the educational qualification is an important predictor of the teachers' league presidents' competence especially on the area instructional skills, efficiency and ffectiveness.

Table 9. Comparative Analysis on the Extent of Utilization of Maintenance and Other Operating Expenses (MOOE) as assessed by the Teachers' League Presidents in the Area of Students' Welfare and Development when grouped according to Variables

Students' Welfare and Development							
Variables	**Categories**	**N**	**Mean Rank**	**Mann-Whitney**	**Sig. Level**	***pp*-value**	**Interpretation**
Age	Younger	28	30.52	448.50		00.164	**Not Significant**
	Older	40	37.29				
Length of Service	Shorter	32	32.52	512.50		00.434	**Not Significant**
	Longer	36	36.26				
Highest Educational Attainment	Lower	30	30.17	440.00	0.05	00.108	**Not Significant**
	Higher	38	37.92				
Average Monthly Income	Low income	32	32.00	496.00		00.325	**Not Significant**
	High ncome	36	36.72				

It is presented in Table 34 that there is no significant difference on the extent of Utilization of Maintenance and Other Operating Expenses (MOOE) as assessed by the Teachers' League Presidents in the area of Students' Welfare and Development when grouped according to variables of age, length of service, highest educational attainment and average monthly income.

In terms of age, the *p*-value is 0.164, length of service is 0.434, highest educational attainment is 0.108, and average monthly income is 0.325 which are all greater than the 0.05 level of significance. It could be inferred that regardless of those variables, teachers' league presidents value students' welfare and development. Hence, teachers' effectiveness is not associated with age, experience, and highest educational attainment which says to vary at all levels as teachers perform their assigned duties especially in recognizing students' diversity and providing a motivating environment for them to learn (Kini & Podolsky, 2016; Ashford, 2017 ; Comighud & Arevalo, 2020).

Table 10. Comparative Analysis on the Extent of Utilization of Maintenance and Other Operating Expenses (MOOE) as assessed by the School Heads in the area of School Operations and Development when grouped according to Variables

School Operation and Development							
Variables	**Categories**	**N**	**Mean Rank**	**Mann-Whitney**	**Sig. Level**	***p*-value**	**Interpretatio**
Age	Younger	28	33.82	555.00		0.777	**Not Significa**
	Older	40	35.18				
Length of Service	Shorter	32	31.47	479.00		0.259	**Not Significa**
	Longer	36	36.89				
Highest Educational Attainment	Lower	30	27.84	363.00	0.05	0.009	**Significant**
	Higher	38	40.42				

Average Monthly Income	Low income	32	29.37	403.50		0.032	**Significant**
	High Income	36	39.63				

Analysis of the statistics disclosed that the *p*-value in terms of age is 0.777 and length of service is 0.259 while for highest educational attainment is 0.009 and average monthly income is 0.032 as reflected in Table 10. Based on the results, there is no significant difference on the extent of Utilization of Maintenance and Other Operating Expenses (MOOE) as assessed by the school heads in the area of school operations and development when grouped according to variables of age and length of service while the null hypothesis in the highest educational attainment and average monthly income is rejected. In line with this, Cańete (2019) noted that regardless of age and experience of being a school head, it does matter as to their level of competencies in the area of educational management pertaining to school operations and development.

Table 11. Comparative Analysis on the Extent of Utilization of Maintenance and Other Operating Expenses (MOOE) as assessed by the School Heads in the area of Teachers' Welfare and Development when grouped according to Variables

		Teachers' Welfare and Development					
Variables	**Categories**	**N**	**Mean Rank**	**Mann-Whitney**	**Sig. Level**	***p*-value**	**Interpretatio**
Age	Younger	28	36.85	498.00		0.324	**Not Significar**
	Older	40	32.15				
Length of Service	Shorter	32	37.17	490.00		0.321	**Not Significar**
	Longer	36	32.39				
Highest Educational Attainment	Lower	30	32.59	515.00	0.05	0.451	**Not Significar**
	Higher	38	36.19				
Average Monthly Income	Low income	32	35.31	550.50		0.735	**Not Significar**
	High Income	3	30.62				
		36					

Analysis of the statistics depicted that the *p*-value in terms of age is 0.324, length of service is 0.321, highest educational attainment is 0.451 and average monthly income is 0.735 as presented in Table 11. Therefore the null hypothesis which says that there is no significant difference on the extent of Utilization of Maintenance and Other Operating Expenses (MOOE) as assessed by the school heads in the area of teachers' welfare and development when grouped according to variables is not rejected.

This is supported by the findings of Secong (2014) explained that school heads' length of leadership experience, age, highest educational attainment, and average family income in the area of finances have negative relationships and therefore do not indicate significant connectedness to the management styles of the school heads.

Table 12. Comparative Analysis on the Level of Effectiveness of Utilization of Maintenance and Other Operating Expenses (MOOE) as assessed by the School Heads in the area of Students' Welfare and Development when grouped according to Variables

		Students' Welfare and Development					
Variables	**Categories**	**N**	**Mean Rank**	**Mann-Whitney**	**Sig. Level**	***pp*-value**	**Interpretation**
Age	Younger	28	32.03	494.00		00.301	**Not Significant**
	Older	40	36.97				
Length of Service	Shorter	32	34.03	556.00		00.862	**Not Significant**
	Longer	36	34.87				
Highest Educational Attainment	Lower	30	32.28	505.00	0.05	00.382	**Not Significant**
	Higher	38	36.47				
Average Monthly Income	Low income	32	31.85	488.00		00.268	**Not Significant**
	High Income	3	35.06				
		36					

Analysis of the statistics depicted that the *p*-value in terms of age is 0.301, length of service is 0.862, highest educational attainment is 0.382 and average monthly income is 0.268 as findings shared in Table 12. Therefore the null hypothesis which says that there is no significant difference on the extent of Utilization of Maintenance and Other Operating Expenses (MOOE) as assessed by the school heads in the area of students' welfare and development when grouped according to variables is not rejected.

It could inferred that regardless of school heads' age, length of service, highest educational attainment, and average family income in terms of their finances is not a determining factor on how they foster students' support for the latters' welfare and development. In support, Butalid (2019) shared that school heads whether younger or older, novice or experience, and with higher or lower educational attainment have the same level of engagements with the experienced leaders in the aspect of educational planning.

Table 13. Significant Relationship between the Extent of Utilization of Maintenance and Other Operating Expenses (MOOE) and the Academic Performance of the Students

Correlates	**N**	**Rho**	**Level of Significance**	***p* - value**	**Interpretation**
Extent of Utilization of Maintenance and Other Operating Expenses (MOOE)	68	0.844			

Level of Academic Performance of the Students	68		0.05	0.000	**Significant**

Table 13 presents the significant relationship between the extent of utilization of Maintenance and Other Operating Expenses (MOOE) and the academic performance of the students.

Since the r-computed value is 0.844 which is greater than the *p*-value of 0.000 at 0.05 level of significance, the null hypothesis which states that there is no significant relationship between the extent of utilization of Maintenance and Other Operating Expenses (MOOE) and the academic performance of the students is rejected.

It implies that the extent of utilization of Maintenance and Other Operating Expenses (MOOE) has an influence on the academic performance of the students. The result is supported by Torcende (2018) shedding light on the allocated funds for public schools that can be spent on activities and necessities that support learning programs. He shared the findings on how MOOE funds serve as mechanism to improve students' academic performance.

Conclusions

On the bases of the foregoing findings of the study, the researchers arrived at the following conclusions:

The Teachers' League Presidents as respondents of the study were mostly older, have longer length of service, with higher educational attainment and with higher family monthly income. On the other hand, for the school heads, there was an equal distribution of the respondents according to age categorized as younger and older, have longer length of leadership experience, higher educational attainment, and an equal number also represents the average monthly income categorized into low and high income groups.

The extent of utilization of Maintenance and Other Operating Expenses (MOOE) in the areas of school operation and development, teachers' welfare and development, and pupils' welfare and development are all high. It means that both the teachers' league presidents and the school heads perceived a high extent of utilization of school finances on the above stated areas as centered upon school improvement, employee engagement and performance management. It also means that teachers' league presidents have high regard and value on the effective management and utilization of the school finances and that financial activities are dealt most effectively when both the administrative and academic personnel are involved in the process.

The Maintenance and Other Operating Expenses (MOOE) fund was properly managed and utilized. The response conforms to the idea that effective execution of financial policy and management procedures had been implemented to ensure that the school finances are managed effectively and efficiently.

The level of the academic performance of the students are described to be very satisfactory. It means that students are well-supported on the different classroom activities and school engagements through the use of school financial resources and that teachers were consulted about their needs for their learners to be provided with better access to basic education services.

There is no significant difference on the extent of utilization of Maintenance and Other Operating Expenses (MOOE) in the area of School Operation and Development when the Teachers'

League Presidents and School Heads are grouped and compared according to the age, highest educational attainment and average family income while variable on length of service is found to be significant. It can be inferred that shorter number of teaching experience or longer length of leadership experience equate to instructional effectiveness for the teachers and managerial competence for the school heads.

There is no significant difference on the extent of utilization of Maintenance and Other Operating Expenses (MOOE) in the area of Teachers' Welfare and Development when the Teachers' League Presidents and School Heads are grouped and compared according to the aforementioned variables. It means that regardless of the profile items, both set of respondents equipped and capacitate themselves in the areas of personal growth and professional development as well as school management and administrative related engagements to better deliver basic educational services as keyplayers of the educational system.

There is no significant difference on the extent of utilization of Maintenance and Other Operating Expenses (MOOE) in the area of Students' Welfare and Development when the Teachers' League Presidents and School Heads are grouped and compared according to the aforementioned variables. It could be inferred that regardless of the profile items, the teachers' league presidents and school heads work together in order to realize the vision, mission, goals and objectives of the Department of Education as a learner-centered public institution.

Relational analysis revealed that there is significant relationship between the extent of utilization of Maintenance and Other Operating Expenses (MOOE) and level of academic performance of the students. It means that as financial management capacity is an important possession of a school head, its utilization and management largely affects the welfare of school operations to effectively deliver the basic services of the Department of Education, teachers who are keyplayers of the educational institution, and learners and primary recipient of quality education as the future competent human resources of the nation . This financial management includes tasks in order to manage all raised and allocated funds in a particular school. It is the concern of a particular educational institution to ensure and to keep track that there is a proper, adequate and accountable utilization of resources budgeted for education.

The problems encountered by the school heads covered the areas of school repairs of infrastures, Solid Waste Management (SWM) Practices environmental advocacies, and purchase of necessary equipments for the Disaster Risk and Reduction Management (DRRM) Projects under school operations and development. In the area of teachers' welfare and development, problems encountered include training of teachers in research undertakings and technological advancements while items on the purchase of sports equipment needed by the students in their participation in sports academies/activities as well as conducting community mapping and house-to-house campaigns to increase school enrolment were noted under students' welfare and development.

The problems encountered by the teachers' league presidents include the repair or construction of school infrastructures as well as promoting SWM advocacies in the area of school operation and development. Moreover, in the area of teachers' welfare and development, the teachers' league presidents encountered problems on how MOOE is utilized to finance the purchase of ICT resources and educational equipment and MOOE is utilized to finance the provision of instructional materials like CGs, TGs and other supplemental materials needed.

Recommendations

In the light of the findings and conclusions of the study, the following recommendations are advanced.

In the area of school operation and development, the Maintenance and Other Operating Expenses (MOOE) should be effectively utilized to finance school operations and administrative works. Its effective utilization should be centered on the promotion of access and equity, quality and excellence, and relevance and responsiveness of basic education services. In the accomplishments of school operations across access and equity, it must be manifested through Project Lifeline which focuses on the promotion of inclusive education. Also, the quality and relevance should be sought through Project Hold especially on how MOOE is utilize to finance the purchase of office equipment, tools, and other school supplies for school operations and administrative works. In addition, in governance, it is manifested through Project 4As: Assist, Assess, Award, and Accredit, a program for public schools focusing on the utilization of MOOE to finance the repairs of school infrastructures. All of these programs can be done by the school heads of the public schools in coordination with the different stakeholders of the institution as well as monitoring and evaluation of the Schools Governance and Operations Division of the Department of Education.

In the area of teachers' welfare and development, the Maintenance and Other Operating Expenses (MOOE) effective financial management should be sustained in order to facilitate teachers' training activities for pedagogical retooling and professional development, research undertakings and technological advancements, and the conduct of DepEd Initiated Activities for teachers' empowerment. These can be realized through Project Care and Project Inquire, school programs and projects of the school heads and the human resource management office anchored on the capacitating teachers to better perform their assigned duties and responsibilities in the workplace environment especially focusing on the conduct of research and use of technologies to promote instructional effectiveness and learners' achievement.

In the area of students' welfare and development, Maintenance and Other Operating Expenses (MOOE) should be used to finance the learners' holistic growth as this aspect should be promoted as student academic performance measurement has also received considerable attention in previous research. In access, this is manifested through House-to-Heart Campaign which aims to increae the enrolment of school aged children. Also, in quality and excellence, it is promoted through Project Know and Project Read, project inititiatives on honing learners to be literates and numerates. In addition, Project Sports Academy and Project Youth Lead are under Program Heroes which shall promote learners' leadership and engagement skills for their holistic growth and development. These projects can be initialized by the school heads with the help of chairpersons and coordinators in the specific field.

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